

JOURNEYING THROUGH SATISFACTION: A CASE STUDY OF KSRTC BUS SERVICES IN KERALA

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Abstract: This study explores the factors influencing passenger satisfaction with Kerala State Road Transport Corporation (KSRTC) bus services, focusing on two prominent bus stands – Thrissur and Chalakudy – in the central region of Kerala, India. Data from a sample of 200 passengers were collected through structured interviews conducted during August to September 2017. Respondents, comprising 74 females and 126 males, represented diverse demographics, including students, working individuals, and others, with nearly 70% below the age of 35. Utilizing a 5-point Likert scale, respondents rated various aspects of KSRTC services, with average score analysis used to evaluate service quality satisfaction. The findings indicate a generally positive attitude towards KSRTC among passengers, with a preference for its services, especially for long trips. However, passengers expressed concerns regarding the timing of bus services, punctuality, cleanliness, and employee behaviour. The study underscores the importance of addressing these concerns to enhance passenger satisfaction and improve overall service quality within the KSRTC system.

Index Terms: KSRTC, Passenger Satisfaction, Bus Services, Kerala, Service Quality.

INTRODUCTION

Public transportation plays a crucial role in facilitating the daily commute of millions of individuals worldwide. The Kerala State Road Transport Corporation (KSRTC) stands as a testament to the evolution of public transportation in India, tracing its roots back to the early developments in the transport industry. Established on 15th March 1965 by the Government of Kerala under the Road Transport Corporation Act of 1950, KSRTC emerged as one of the oldest and most enduring state-run bus transportation services in the country. On 1st April 1965, KSRTC was officially established, marking a significant milestone in the state's transportation history. Today, KSRTC stands as a lifeline, connecting the diverse regions and communities of Kerala through its extensive network of public bus services.

Understanding the factors that influence passenger satisfaction with KSRTC services is paramount for enhancing the quality of transportation and ensuring the well-being of commuters. Against the backdrop of its rich history and enduring legacy, KSRTC faces the dual challenges of maintaining operational efficiency and enhancing passenger satisfaction amidst financial constraints and evolving customer expectations. Considering these challenges, this study endeavours to explore the factors influencing passenger satisfaction with KSRTC bus services in Kerala, aiming to provide valuable insights and recommendations for improving service quality, optimizing resources, and ensuring the long-term sustainability of this vital public transportation system.

LITERATURE REVIEW

(Gajendran, 2012) aimed to assess passenger satisfaction with bus transport services, particularly focusing on the quality of services provided by State Express Transport Corporation (SETC), Tamil Nadu State Transport Corporation (TNSTC), and private omnibus transport companies in Tamil Nadu, with a specific focus on Chennai. Through ongoing research, this study sought to evaluate changes in passenger satisfaction

levels, providing insights into the diverse attitudes of bus passengers towards the services offered by these transport entities.

(Archana & Subha, 2012) investigated how service quality impacts passenger satisfaction in air travel. It examined the dimensions of service quality that influenced satisfaction among passengers in international flights, based on data from 270 respondents across economy, business, and premium classes. The study identified three main dimensions: in-flight service, in-flight digital service, and back-office operations. Among these, factors like cuisines, seat comfort, and safety are crucial for in-flight service quality, while personal entertainment stands out in digital service quality. Online ticket booking is highlighted in back-office operations. Additionally, the study indicated variations in passenger satisfaction across different airlines based on service delivery.

(Antonucci, Crocetta, d'Ovidio, & Toma, 2012) utilized a Structural Equation Model (SEM) following exploratory factorial analysis to assess passenger satisfaction with a local public transport service. It aimed to understand the influence of service characteristics on perceived quality. The findings revealed that passengers prioritize service organization, delivery punctuality, regularity, and short waiting times. Other significant factors include bus safety, reliability, comfort, cleanliness, and staff professionalism. Sub-sample analysis suggested the model's consistency across different residence areas and service usage frequencies, with partial consistency across age groups, employment statuses, usage time slots, and reasons for use. However, the model failed to maintain consistency across gender or education levels.

(Nwachukwu, 2014) examined passenger satisfaction with public bus transport services in Abuja, Nigeria, aiming to identify influencing factors. A survey conducted between February and July 2011 involved 300 randomly selected users across 10 bus stop areas. Using a self-rated questionnaire, data was gathered on overall satisfaction and influencing factors. Analysis methods included descriptive statistics, correlation, principal component, and regression analyses. Results indicated overall dissatisfaction among passengers. Principal Component Analysis (PCA) extracted four key factors influencing satisfaction, explaining 83.87 percent of the variance. Comfort emerged as the most significant factor, followed by accessibility, adequacy, and bus stop facilities. Recommendations were provided to enhance public bus transport services in Abuja based on these findings.

(Sanjay, 2016) This study conducted in Lucknow, India, pursues three main objectives: evaluating passenger satisfaction with public bus transport services, identifying key service quality attributes influencing satisfaction, and determining the relative importance of these attributes for service quality enhancements. A survey conducted between May and July 2014 targeted five major bus stops, with 148 respondents randomly selected to provide insights via a self-rated questionnaire. Analysis techniques included principal component analysis and descriptive analysis. Findings revealed widespread dissatisfaction among passengers. Principal component analysis extracted five key factors affecting satisfaction, with comfort and safety identified as the most influential. Other significant factors include capacity adequacy, cleanliness, design, and accessibility. The study offered valuable insights for transport authorities to address service gaps and improve passenger satisfaction, potentially increasing public bus transport usage.

(Shen, Xiao, & Wang, 2016) focused on the importance of maintaining high-quality services in urban rail transit systems to bolster economic vitality and alleviate traffic congestion by encouraging public transportation usage over private cars. It introduced a satisfaction evaluation model inspired by the American Customer Satisfaction Index (ACSI) to gauge passenger satisfaction with urban rail transit in China. Utilizing Structural Equation Modelling (SEM) with Partial Least Squares (PLS) estimation, the study established an evaluation indicator system to measure satisfaction levels. It quantified passenger satisfaction through a satisfaction index and employed an IPA matrix to highlight service strengths and weaknesses. Through a case study on Suzhou rail transit line 1, the study compared four models to confirm the reliability of the proposed model and validated the causal relationship between passenger satisfaction and influencing factors.

RESEARCH GAP

While studies on passenger satisfaction with public transportation services abound, there exists a notable research gap concerning the specific context of Kerala State Road Transport Corporation (KSRTC) and its challenges in managing expenses while maintaining service quality and passenger satisfaction. Limited

empirical research directly addresses the interplay between financial constraints, operational efficiency, and passenger satisfaction within KSRTC, highlighting the need for empirical research that identifies factors influencing passenger satisfaction and explores innovative strategies for KSRTC to enhance service quality, optimize resources, and navigate financial challenges effectively.

RESEARCH PROBLEM

Amidst financial challenges and operational constraints, Kerala State Road Transport Corporation (KSRTC) faces the pressing issue of declining passenger satisfaction and its implications for service quality, ridership, and financial sustainability. Despite being a vital lifeline for millions of commuters in Kerala, KSRTC's ability to meet the evolving needs and expectations of passengers remains uncertain. Against this backdrop, the research problem can be formulated as follows:

"How can Kerala State Road Transport Corporation (KSRTC) enhance passenger satisfaction with its bus services amidst financial constraints and operational challenges, thereby improving service quality, increasing ridership, and ensuring long-term financial sustainability?"

OBJECTIVES OF STUDY

Based on the discussions regarding the research problem and gap, the objectives of the study can be framed to address the pressing issues faced by Kerala State Road Transport Corporation (KSRTC) and to contribute towards enhancing service quality, and passenger satisfaction. Here are the objectives:

1. To analyse the current level of passenger satisfaction with KSRTC bus services in Kerala, focusing on key dimensions such as service quality, reliability, comfort, and accessibility.
2. To identify the factors influencing passenger satisfaction with KSRTC bus services, including but not limited to operational efficiency, affordability, safety, and convenience.
3. To explore innovative strategies and solutions for KSRTC to enhance service quality, optimise resources, and improve passenger satisfaction amidst financial constraints and operational challenges.
4. To provide actionable recommendations for policymakers, transport authorities, and stakeholders to address the identified issues, enhance the overall quality of KSRTC services, and ensure long-term financial sustainability.

METHODOLOGY

Sample Collection and Respondents: For this study, a sample of 200 passengers was collected from two prominent KSRTC bus stations – Thrissur and Chalakudy. Thrissur and Chalakudy serve as major transportation hubs in the central part of Kerala, connecting various regions and catering to a diverse range of passengers. By selecting these locations, the study captures a representative sample of passengers traveling within and across the central region, thereby ensuring the generalisability of findings to a broader population.

Sampling Method: The sampling approach involved the random selection of passengers at different times of the day, ensuring representation across various travel scenarios and passenger profiles. By adopting a random sampling technique, the study aimed to minimise selection bias and ensure the generalisability of findings to the broader population of KSRTC passengers in Kerala.

Period of Study: August – September 2017

Data Collection: Data collection took place during August to September 2017, utilising a structured questionnaire designed to capture passengers' perceptions and experiences with KSRTC bus services. The questionnaire comprised a series of statements phrased in the form of Likert-scale items, allowing respondents to indicate their level of agreement or satisfaction on a scale ranging from 1 ("highly dissatisfied") to 5 ("highly satisfied").

Survey Administration: The survey was administered to passengers at the Chalakudy and Thrissur bus stations, with trained interviewers conducting face-to-face interviews to collect responses. The choice of face-

to-face interviews facilitated direct interaction with passengers, enabling researchers to clarify any queries and ensure accurate data capture.

Data Analysis: Upon completion of data collection, the collected responses were subjected to rigorous analysis to derive meaningful insights into passenger satisfaction with KSRTC bus services. Average score analysis was employed to evaluate service quality satisfaction, with scores assigned based on respondents' ratings on the Likert scale.

By employing a systematic and robust methodology, this study aimed to provide a comprehensive understanding of passenger satisfaction with KSRTC bus services in Kerala, offering valuable insights for enhancing service quality, improving operational efficiency, and fostering long-term sustainability within the KSRTC system.

DATA ANALYSIS AND INTERPRETATION

table 1 profile of respondents (passengers)

Attributes	Distribution	No. of Respondents	Percentage
Gender	Male	126	63
	Female	74	37
Age	18-25	86	43
	25-35	58	29
	35-50	41	20.5
	Above 50	15	7.5
Occupation	Student	95	47.5
	Working	63	31.5
	Others	42	21

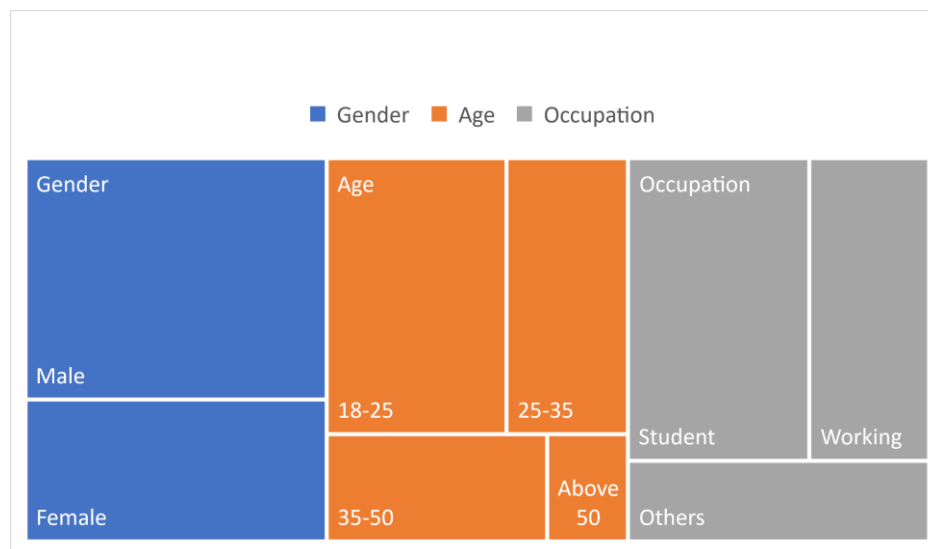


figure 1. profile of respondents (passengers)

The table and figure provide a comprehensive overview of the profile of passenger respondents participating in the study, categorized by gender, age, and occupation. Gender Distribution indicates that male passengers (63%) represented a slightly higher proportion of the sample compared to female passengers (37%), with males constituting approximately two-thirds of the total respondents.

In the case of Age Distribution, majority of respondents belonged to the younger age groups, with nearly half (43%) falling within the 18-25 age bracket. The proportion of respondents decreased progressively with increasing age, with the smallest proportion in the above 50 age category. It consisted of 7.5% only.

Occupation Distribution shows that, nearly half of the respondents identified as students (47.5%), indicating a significant representation of the student population in the sample. Working individuals constituted the second largest group (31.5%), followed by respondents categorized as "others," which may include unemployed individuals, retirees, or individuals engaged in other activities.

Overall, the table provides valuable insights into the demographic composition of the sample, highlighting the distribution of respondents by gender, age, and occupation. These demographic characteristics are essential for understanding the diversity of perspectives and experiences among passengers participating in the study.

table 2. comparative responses on services offered by KSRTC and private bus operators

Variable	KSRTC	Percentage	Private Bus Service	Percentage
Travel Comfort	148	74	52	26
Service Time Keeping - Punctuality	96	48	104	52
Long Travel Preferences	158	79	42	21
Accessibility to Daily Travel	32	16	168	84
Ease of Getting Concession	76	38	124	62
Fair Treatment to Students	148	74	52	26
Fair Treatment to Old aged	124	62	76	38
Fair Treatment to Differently Abled	136	68	64	32
Quality of Driving	172	86	28	14

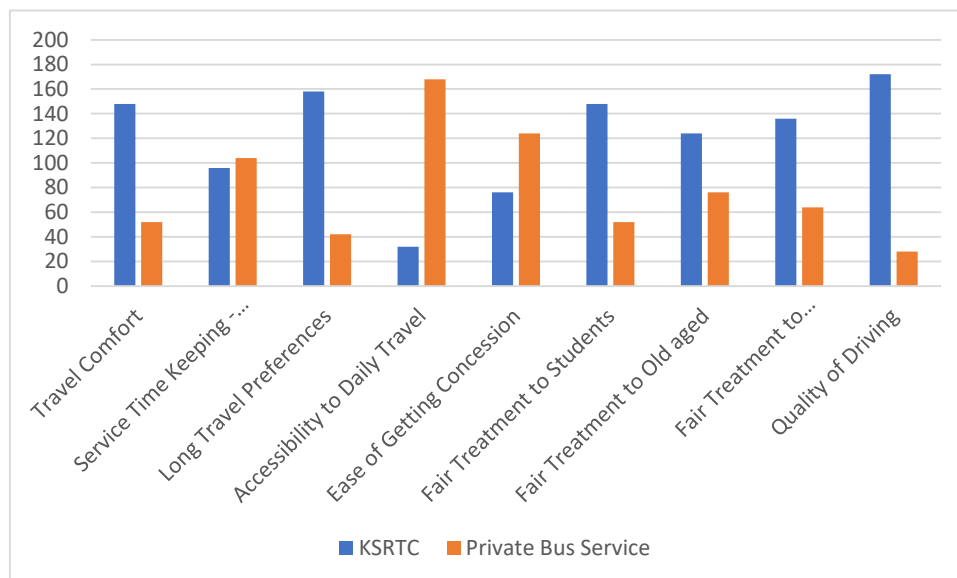


figure 2. comparative responses on services offered by KSRTC and private bus operators

The table and figure present the number of passenger responses regarding various aspects of the services offered by Kerala State Road Transport Corporation (KSRTC) and Private Bus Operators. 74% of respondents perceive KSRTC to provide better travel comfort compared to private bus operators. Private bus operators are perceived to be slightly better in terms of punctuality compared to KSRTC, as indicated by the higher number of responses (52%) favouring private bus services in this aspect.

KSRTC is significantly preferred for long-distance travel, as evidenced by the higher number of responses favouring KSRTC over private bus services in this category. 79% respondents favour KSRTC for long distance travel. But Private bus services are perceived to be more accessible for daily travel compared to KSRTC, as indicated by the higher number of responses (84%) favouring private bus services in this aspect.

Private bus services are perceived to offer greater ease in obtaining concessions compared to KSRTC, as indicated by the higher number of responses favouring private bus services in this category. Still, KSRTC is perceived to provide better fair treatment to students, old-aged individuals, and differently-abled passengers compared to private bus operators, as evidenced by the higher number of responses favouring KSRTC in these categories.

KSRTC is perceived to have better quality of driving compared to private bus operators, as indicated by the significantly higher number of responses favouring KSRTC in this aspect. Overall, the table provides insights into passenger perceptions regarding various aspects of service offered by KSRTC and private bus operators, highlighting areas of strength and areas for improvement for both modes of transportation.

table 3. perception of respondents on poor financial performance of KSRTC

Poor Financial Performance of KSRTC due to	No. of respondents	Percentage
High Operating Cost	20	10
Improper Service Time	46	23
Internal Mismanagement	98	49
Poor Condition of Buses	36	18
Total	200	100

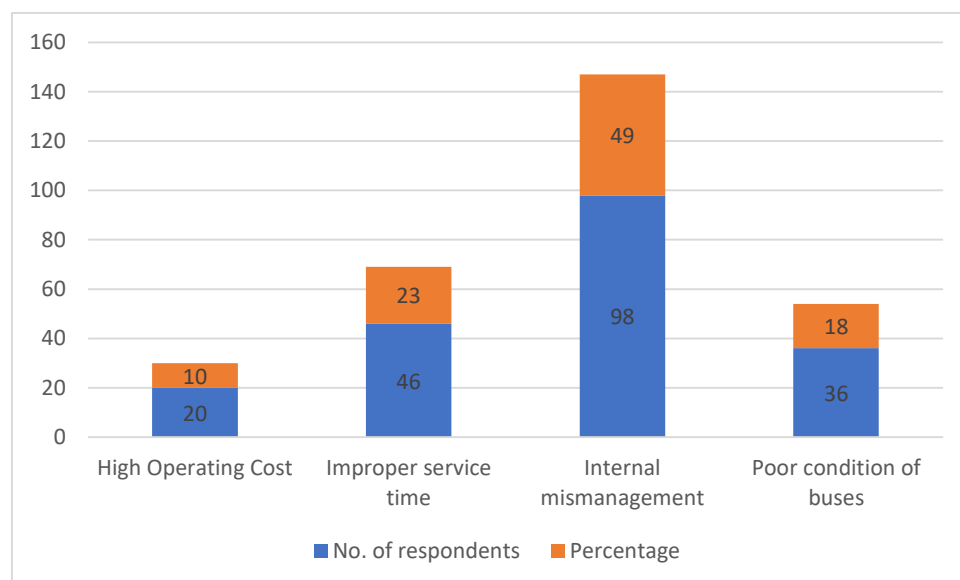


figure 3. perception of respondents on poor financial performance of KSRTC

The table presents the perception of respondents regarding the reasons for the Kerala State Road Transport Corporation's (KSRTC) failure to make a profit. Most respondents (49%) attribute KSRTC's failure to make a profit to internal mismanagement. This suggests concerns regarding organizational efficiency, governance, and decision-making processes within KSRTC. A significant proportion of respondents (23%) believe that improper service time is a key reason for KSRTC's inability to make a profit. This indicates that punctuality and reliability of service delivery play a crucial role in passenger satisfaction and financial viability. A notable proportion of respondents (18%) identify the poor condition of buses as a contributing factor to KSRTC's financial challenges. This underscores the importance of fleet maintenance and infrastructure investment in ensuring service quality and operational efficiency. A minority of respondents (10%) attribute KSRTC's failure to make a profit to high operating costs. This suggests that a portion of respondents perceive cost management as a contributing factor to KSRTC's financial challenges.

Overall, the data suggest that internal mismanagement is perceived as the primary reason for KSRTC's failure to make a profit, followed by concerns related to improper service time, the poor condition of buses, and high operating costs. Addressing these challenges requires comprehensive strategies aimed at enhancing operational efficiency, improving service quality, and optimizing resource utilization within KSRTC.

table 4. overall satisfaction level of respondents

Attributes	Variables	Mean Score
Physical Condition of Bus	Internal spacing and seat arrangement	3.365
	Luggage Space	
	Comfortable Seats and upholstery	
	Cleanliness	
Operational Efficiency	Safety and security	4.105
	Availability of substitute buses in times of emergency	
	Replacement of old buses	
	Bus fair and service charges	
Employee Behaviour	Staff professionalism	2.77
	Electric strike and sudden stoppage of service	
	Response to telephone calls and enquiry	
	Allowing passengers to get in and get down comfortably (Passenger Treatment)	
Other Facilities	Toilet and drinking Water	2.515
	Waiting room with required facilities	
	Complaint redressal mechanism	
	Online ticket booking	

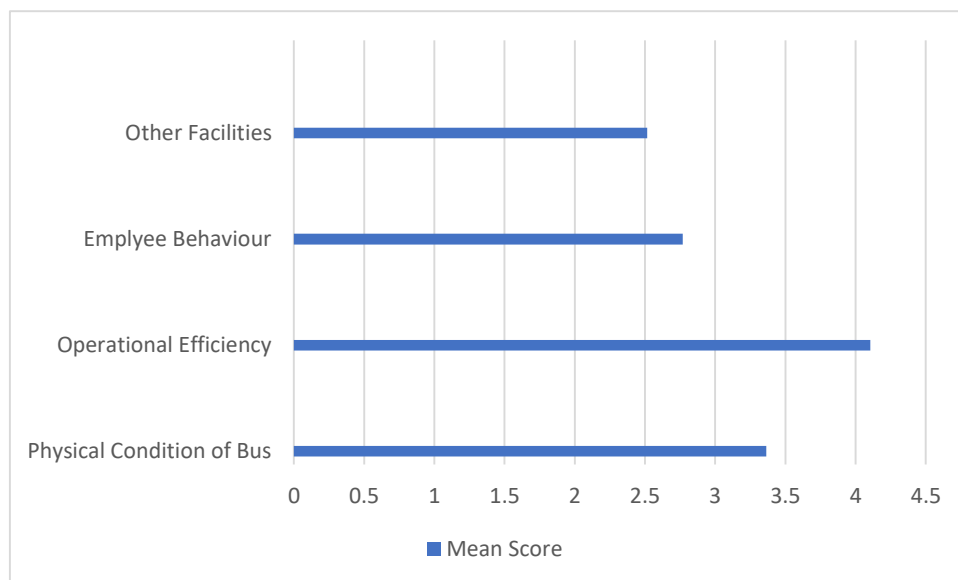


figure 4. overall satisfaction level of respondents

The table presents the mean scores derived from the analysis of data collected using a 5-point Likert scale, categorising respondents' satisfaction levels across four main service factors related to Kerala State Road Transport Corporation (KSRTC) services.

Physical Condition of the Bus (Mean Score: 3.365): The mean score for the physical condition of the bus factor indicates a moderate level of satisfaction among respondents. While it suggests that passengers are generally content with aspects such as internal spacing and seat arrangement, luggage space, comfortable seats and upholstery, and cleanliness, there may be room for improvement in these areas to enhance overall passenger experience and comfort during travel.

Operational Efficiency (Mean Score: 4.105): The mean score for operational efficiency is notably higher, indicating a high level of satisfaction among respondents. This suggests that passengers are highly satisfied with factors related to safety and security, availability of substitute buses in times of emergency, replacement of old buses, and bus fare and service charges. These findings reflect positively on KSRTC's operational practices and service delivery standards.

Employee Behaviour (Mean Score: 2.77): The mean score for employee behaviour is moderate, indicating mixed perceptions among respondents. While there may be satisfaction with staff professionalism, there are concerns regarding responsiveness to telephone calls and inquiries, as well as facilitating passenger movement and passenger treatment within buses. Addressing these issues through training and improvement initiatives can enhance passenger satisfaction in this aspect.

Other Facilities (Mean Score: 2.515): The mean score for other facilities is relatively lower, suggesting lower levels of satisfaction among respondents. While respondents may express some degree of satisfaction with facilities such as toilet and drinking water provisions, waiting room amenities, complaint redressal mechanisms, and online ticket booking services, there are opportunities for improvement in these areas to meet passenger needs and expectations more effectively.

Overall, the interpretation of the mean scores highlights areas of strength and areas for improvement within KSRTC services. While operational efficiency receives high satisfaction ratings, there are opportunities to enhance passenger satisfaction in aspects related to the physical condition of buses, employee behaviour, and additional facilities provided by KSRTC. These insights can inform strategic decision-making and service improvement initiatives to enhance overall passenger satisfaction and experience with KSRTC services.

RESULT AND DISCUSSION

The study aimed to evaluate passenger satisfaction with Kerala State Road Transport Corporation (KSRTC) services across four main service factors: Physical Condition of the Bus, Operational Efficiency, Employee Behaviour, and Other Facilities. The analysis, conducted using a 5-point Likert scale, provided valuable insights into passenger perceptions and satisfaction levels within these areas.

Respondents exhibited a high level of satisfaction with 'operational efficiency', as evidenced by the notably high mean score of 4.105. Factors such as safety and security measures, availability of substitute buses during emergencies, replacement of old buses, and bus fare and service charges received positive feedback from passengers. These findings reflect positively on KSRTC's operational practices and service delivery standards.

The analysis revealed a moderate level of satisfaction among respondents regarding the physical condition of KSRTC buses, with a mean score of 3.365. While respondents expressed overall contentment with internal spacing, seat arrangement, luggage space, seating comfort, upholstery, and cleanliness, there are areas identified for potential improvement. Enhancements in these areas could lead to a more comfortable and pleasant travel experience for passengers.

The analysis indicated mixed perceptions among respondents regarding 'employee behaviour', with a moderate mean score of 2.77. While respondents acknowledged aspects of staff professionalism, concerns were raised regarding the responsiveness of staff to telephone calls and inquiries, as well as the treatment of passengers within buses. Addressing these concerns through training and improvement initiatives is crucial to enhance passenger satisfaction in this aspect.

Satisfaction levels with 'other facilities' provided by KSRTC were relatively lower, as reflected by a mean score of 2.515. While respondents expressed some satisfaction with facilities such as toilet and drinking water provisions, waiting room amenities, complaint redressal mechanisms, and online ticket booking services, there are evident opportunities for improvement in these areas to better meet passenger needs and expectations.

Overall, the analysis highlights areas of strength and areas for improvement within KSRTC services. While operational efficiency receives high satisfaction ratings, there are opportunities to enhance passenger satisfaction in aspects related to the physical condition of buses, employee behaviour, and additional facilities

provided by KSRTC. These findings underscore the importance of continuous efforts by KSRTC to address passenger needs, improve service quality, and enhance overall passenger satisfaction. By leveraging these insights, KSRTC can further strengthen its position as a reliable and preferred mode of transportation for commuters in Kerala.

RECOMMENDATIONS

Based on the findings and analysis of passenger satisfaction with Kerala State Road Transport Corporation (KSRTC) services, the following recommendations can be suggested to enhance overall service quality and improve passenger satisfaction:

Enhance Bus Maintenance and Cleanliness: Implement regular maintenance schedules to ensure that buses are well-maintained and in good condition. Strengthen cleaning protocols to maintain cleanliness standards within buses, including seating areas, aisles, and restrooms.

Improve Seating Comfort and Amenities: Upgrade seating arrangements and upholstery to enhance passenger comfort during travel. Ensure sufficient luggage space to accommodate passengers' belongings and improve convenience during journeys.

Optimize Operational Efficiency: Continue to prioritize safety and security measures to ensure the well-being of passengers. Maintain a robust system for the availability of substitute buses during emergencies to minimize disruptions in service.

Enhance Employee Training and Engagement: Provide comprehensive training programs for staff to enhance professionalism and customer service skills. Foster a culture of responsiveness and empathy among employees to address passenger inquiries and concerns promptly and effectively.

Expand Passenger Amenities and Facilities: Improve facilities such as waiting rooms and rest areas at bus stations to provide passengers with comfortable and convenient waiting experiences. Strengthen complaint redressal mechanisms to ensure that passenger feedback and grievances are promptly addressed and resolved.

Enhance Online Booking and Information Systems: Streamline online ticket booking platforms to make the process more user-friendly and accessible for passengers. Provide real-time information updates regarding bus schedules, routes, and service disruptions to enhance passenger convenience and transparency.

Conduct Regular Passenger Surveys and Feedback Sessions: Continuously monitor passenger satisfaction levels through regular surveys and feedback sessions to identify emerging trends and areas for improvement. Utilise passenger feedback to inform strategic decision-making and prioritise initiatives aimed at enhancing service quality and passenger experience.

CONCLUSION

Moving forward, it is imperative for KSRTC to prioritize initiatives aimed at addressing passenger concerns, enhancing service quality, and improving overall passenger satisfaction. By implementing recommendations such as enhancing bus maintenance, optimizing operational efficiency, and fostering employee engagement, KSRTC can further strengthen its position as a reliable and preferred mode of transportation for commuters in Kerala. Ultimately, the success of KSRTC hinges on its ability to adapt to changing passenger needs, innovate in service delivery, and continuously strive for excellence in providing safe, reliable, and comfortable transportation services to the people of Kerala. Through collaborative efforts and a commitment to customer-centric practices, KSRTC can continue to serve as a vital lifeline for the state's residents, facilitating connectivity, mobility, and economic development across the region.

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