ASSESSMENT OF PUBLIC TRANSPORT QUALITY AND RELIABILITY (LONG-DISTANCE BUS SERVICE) IN DHAKA, BANGLADESH

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A Thesis Paper Submitted to the Department of Civil Engineering, Daffodil International University, in Partial Fulfillment of the Requirements for the Degree of **Bachelor of Science in Civil Engineering**.

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APPROVAL

Towards completing the partially fulfilled requirements of the Bachelor of Science in Civil Engineering degree. This notification certifies that the following students, who are listed below, completed their thesis work on **"ASSESSMENT OF PUBLIC TRANSPORT QUALITY AND RELIABILITY (LONG-DISTANCE BUS SERVICE) IN DHAKA, BANGLADESH"** under my direct supervision in the Department of Civil Engineering at Daffodil International University's Faculty of Engineering.

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It is hereby declared that except for the contents where specific reference has been made to the work of others, the design contained in the thesis report is the result of a detailed research work carried out by the authors under the supervision of **Mr. Saurav Barua**, Assistant Professor, Department of Civil Engineering, Daffodil International University.

No part of this report has been submitted to any other university or other educational establishment for a degree, diploma or other qualification.

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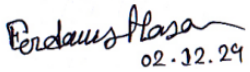

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We are also sincerely thankful to our group members, friends, and mates for their continuous encouragement, cooperation, and knowledge-sharing, which contributed significantly to the success of our research. Additionally, we appreciate Daffodil International University for giving us the opportunity and platform to undertake this research.

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DEDICATION

Dedicated

To

Our Parents & All Teacher

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ABSTRACT

This thesis investigates the quality and reliability of public transportation services in Dhaka Bangladesh, focusing specifically on long-distance bus services. Two major routes Dhaka to Rajshahi (route 1) and Dhaka to Chattogram (route 2) were selected due to their significance in connecting key urban areas and their high passenger volumes. A survey was conducted using a structured questionnaire distributed at the Dhaka Gabtoli terminal, capturing passenger feedback on satisfaction, frequency of service, affordability, comfort, safety, punctuality, availability of information and personal courtesy. Data collection occurred during peak travel times in the afternoon and evening, as well as on off-days, ensuring a diverse representation of passenger experiences.

The gathered data was meticulously analyzed using Excel, allowing for both quantitative and qualitative assessments of service quality. Findings reveal critical insights into common challenges faced by passengers, highlighting significant differences between the two routes. The study identifies areas for improvement and offers actionable recommendations to enhance the reliability and standard of public transportation in Bangladesh. By addressing these issues, this research aims to contribute to the development of more efficient and user-friendly transportation systems, ultimately supporting broader economic growth and mobility within the country.

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CHAPTER I

INTRODUCTION

1.1 General

In this thesis, the quality and reliability of public transportation in Bangladesh are assessed, with a focus on long-distance bus services. We polled people on two important routes “Dhaka to Rajshahi” (route 1) and “Dhaka to Chattogram” (route 2) in order to compile thorough information. These routes were selected because of the volume of passengers they carry as well as their importance in linking the nation's main cities and regions.

The purpose of the study was to get feedback from passengers regarding overall satisfaction, affordability, comfort, safety, and punctuality. By choosing these routes, it was possible to compare two different travel corridors, one serving the northwest and the other the southeast, giving researchers a more comprehensive understanding of how well public transportation performs across various geographic and economic zones.

We intend to uncover general problems and route-specific challenges by examining the data gathered from these two routes, and we will then provide ideas to improve the dependability and standard of public transportation in Bangladesh.

1.2 Scope of the Study

The scope of this study focuses on evaluating the quality and reliability of long-distance bus services on the Dhaka-Rajshahi and Dhaka-Cox’s Bazar routes, with an emphasis on key indicators such as service frequency, punctuality, comfort, cleanliness, safety, convenience of boarding points, information availability, staff behavior, and fare levels. By examining passenger experiences, operator practices, and terminal conditions, the study aims to identify gaps and challenges in these critical transportation corridors.

1.3 Objective

These studies' primary goals are as follows:

- To assess passenger satisfaction during long-distance travel on two distinct routes originating from Dhaka.

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1.4 Thesis Organizations

Chapter		Topic Cover
Chapter 1	:	Introduction
Chapter 2	:	Literature review
Chapter 3	:	Methodology
Chapter 4	:	Data analysis and discussion.
Chapter 5	:	Conclusion and recommendations.

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CHAPTER II

LITERATURE REVIEW

2.1 Introduction

Public transport quality and reliability are critical indicators in assessing the efficiency and user satisfaction of urban transit systems. It is an indicator for analysis Sustainable Urban Transportation Index (SUTI) for Dhaka. From SUTI indicator 4: Public Transportation Quality and Reliability we will identify the required fields of improvement and assist policy maker and planners to take appropriate measures. For those who commute every day, reliability and quality are two crucial considerations. A dependable public transportation system is one that keeps to its timetable, has buses that arrive on time, and provides accurate information about its routes, bus fares, and bus frequency. However, quality can also be ensured by offering cleanliness, comfort, and safety, as well as by the conduct of service providers.

By examining eight parameters SUTI Indicator 4 focuses on reliability and quality elements. An overview of the reliability and quality of Dhaka City's public transportation system would be provided by the percentage of persons who are satisfied with these factors.

2.2 SUTI Indicator 4: Key Aspects

According to the SUTI Mobility Assessment Report (2018), public transport quality and reliability in Dhaka were evaluated based on the following eight dimensions:

1. Frequency of service
2. Punctuality
3. Comfort and cleanliness
4. Safety of vehicles
5. Convenience of bus stops/stations
6. Availability of information
7. Personal courtesy
8. Fare levels

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2.3 Defining Public Transport Quality and Reliability

a) Reliability is about compliance to schedules, frequency, and minimizing disruptions.

b) Quality includes comfort, cleanliness, safety, fare levels, and operator courtesy.

Public transportation quality and reliability include a number of factors, such as overall service efficiency, price, comfort, safety, and timeliness. Hensher et al. (2003) state that these elements frequently affect passenger satisfaction and that service dependability has a big influence on travelers' experiences. According to studies like those by Eboli and Mazzulla (2012), passenger expectations are influenced by comfort, timeliness, and reliability, underscoring the significance of perceived service quality. In the context of long-distance bus services in underdeveloped countries, where operational inefficiencies and infrastructure limitations are common, these factors are especially pertinent.

2.4 Challenges in long Distance Bus Service in Developing Countries

According to research by Gwilliam (2008), the public transportation system in Bangladesh and many other developing nations suffers difficulties such inadequate infrastructure, regulatory inadequacies, and a lack of investment. This is also true for long-distance bus services, which frequently function in unsafe and subpar circumstances.

2.5 Safety Concerns in Public Transport

When evaluating public transit systems, safety is a major consideration. According to the World Bank (2016), low- and middle-income nations like Bangladesh have serious road safety problems, particularly incidents involving long-distance buses. Driver conduct, road conditions, and traffic law enforcement are important factors that determine safety in long-distance bus operations, according to studies by Hoque et al. (2005).

2.6 Service Quality in the Context of Bangladesh

Rahman et al. (2019) investigated the quality of intercity bus services in Bangladesh and discovered notable discrepancies in customer satisfaction with regard to

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promptness, cleanliness, and comfort. In a similar way, Hasan and Rabbani (2018) noted that travelers frequently encounter difficulties like overloaded buses, delayed departures, and a lack of essential facilities. These results highlight the necessity of a methodical strategy for raising service standards.

2.7 Reliability Factors in Long Distance Bus Service

The consistency of service delivery, including compliance to timetables and travel durations, is referred to as reliability in public transportation. According to Cervero (1998), BRT and MRT systems frequently perform better in this area than traditional buses. However, operational weaknesses, road infrastructure imperfections, and traffic congestion make long-distance bus services in Bangladesh unreliable. For instance, when Chowdhury et al. (2021) examined how urban congestion affected intercity bus timetables, they found that lines leaving from Dhaka experienced notable delays.

2.8 Passenger Expectations and Satisfaction

The success of public transportation networks is largely dependent on passenger satisfaction. A framework for assessing service quality based on factors like responsiveness, tangibles, assurance, empathy, and dependability is offered by Parasuraman et al.'s SERVQUAL model (1988). Studies such as those by Eboli and Mazzulla (2012) underscore the importance of perceived service quality, identifying factors like punctuality, comfort, and safety as pivotal elements influencing passenger satisfaction.

2.9 Methods for the Survey

To obtain thorough information, a survey on Bangladesh's public transportation system's dependability can be conducted using a variety of techniques. Here are a few successful strategies:

- Questionnaires
- Interviews
- Observational Studies
- Mobile Apps
- Social Media Monitoring
- Partnerships with Local Organizations

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Through the integration of these techniques, researchers can acquire a comprehensive comprehension of Bangladesh's public transportation system's reliability, identifying crucial concerns and opportunities for improvement.

2.10 Selected Routes for the Survey

For this survey, we selected the "Dhaka to Chattogram" and "Dhaka to Rajshahi" routes, two of the most important and high-traffic corridors in Bangladesh.

Reasons for Route Selection:

a) **Dhaka to Chattogram:** This route is one of the longest and most popular for long-distance travelers, especially for tourism. It experiences a high volume of passengers, particularly during holidays and vacation seasons. Surveying this route allows us to gather insights into long-haul travel, which includes factors like comfort, safety, and punctuality over extended journeys.

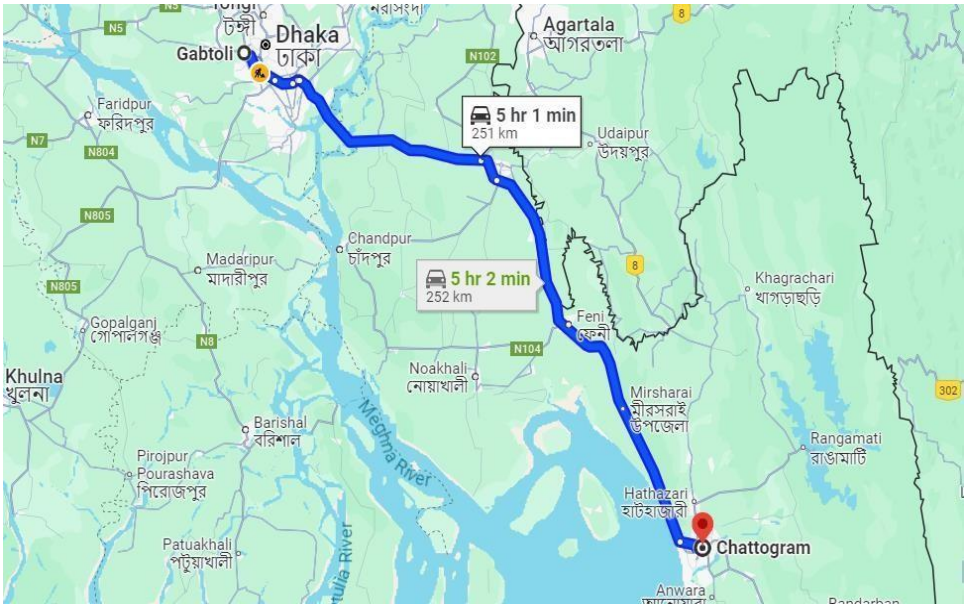

*Figure 2.1: National Highway N-1 (**Dhaka to Chattogram)***

b) **Dhaka to Rajshahi:** Serving the northwest region, this route is crucial for connecting Dhaka to key educational, administrative, and commercial centers. It sees a large number of daily commuters and long-distance travelers. By surveying

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this route, we aim to assess the public transportation needs and challenges faced by passengers in a different geographic and economic zone compared to Chattogram.

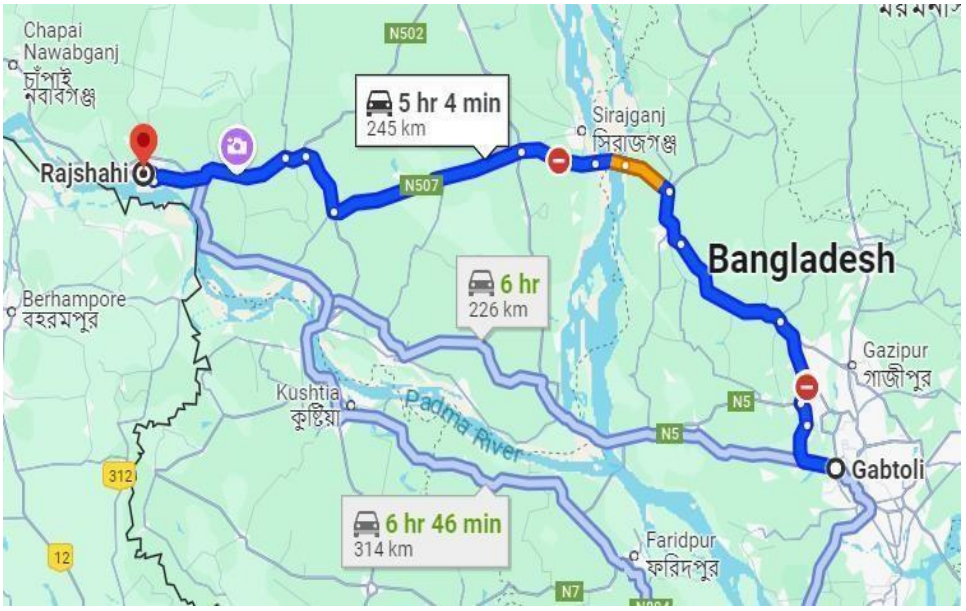

*Figure 2.2: National Highway N-6 (**Dhaka to Rajshahi)***

Due to their differing travel goals (tourist versus commuting), geographical locations, and passenger profiles, these two routes offer a wide range of statistics. This would enable us to compare the dependability, level of service, and happiness of passengers along Bangladesh's many transport routes.

2.11 Summery

According to the literature, improving the long-distance bus services' dependability and quality in Bangladesh necessitates a multifaceted strategy that takes passenger happiness, operational effectiveness, and safety into account. Service standards could be greatly raised by combining modern tools for real-time tracking and strengthening regulatory frameworks. By thoroughly examining the condition of long-distance bus services in Dhaka, Bangladesh, and making suggestions for long-term enhancements, this study seeks to further this expanding field of study.

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CHAPTER III

METHODOLOGY AND DATA COLLECTION

3.1 General

This study's methodology focuses on assessing the reliability and quality of long-distance bus services on the routes between Dhaka and Cox's Bazar and Dhaka and Rajshahi. A combination of field observations and passenger surveys will be used to gather data. Surveys will be used to learn how passengers feel about important factors. The state of the buses and terminals will be recorded by field observations. Both qualitative and quantitative methods will be used to examine the gathered data in order to find any gaps and provide useful suggestions.

3.2 Methodology

I looked over previous studies on my thesis topic to build a solid basis before starting this thesis. I chose the survey area and created the survey process based on these realizations. After that, information was gathered directly from travelers, thoroughly examined, and utilized to provide significant results that influenced the study's findings and conclusions.

3.3 Survey Period for Data Collection

We have selected two distinct times during the day the afternoon and the evening to gather data at bus terminals for this survey. In order to gather a more varied and representative sample of passengers, these hours were carefully chosen.

a) **Afternoon Period:** During this period, we can get input from passengers who might be going somewhere for business, employment, or other daytime obligations. The experiences of travelers who use public transit during regular business hours are reflected in it.
b) **Evening Period:** We can better record the experiences of travelers coming home from long-distance or work journeys by conducting the survey in the evening. This period of time is frequently linked to increased traffic and passenger volumes, offering important insights into peak travel times and the difficulties that travelers encounter.

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We aim to provide a greater understanding of the reliability and passenger satisfaction of public transportation at various times of the day by gathering data in the afternoon and evening. This method will assist in locating any problems that are time-specific, such as traffic jams, delays, or variations in service quality.

3.4 Survey Area Selection

For this survey, we have selected the Dhaka Gabtoli area as the primary location for data collection. This choice is strategic due to the significance of Gabtoli as one of the largest and busiest bus terminals in Dhaka, serving both short- and long-distance travelers.

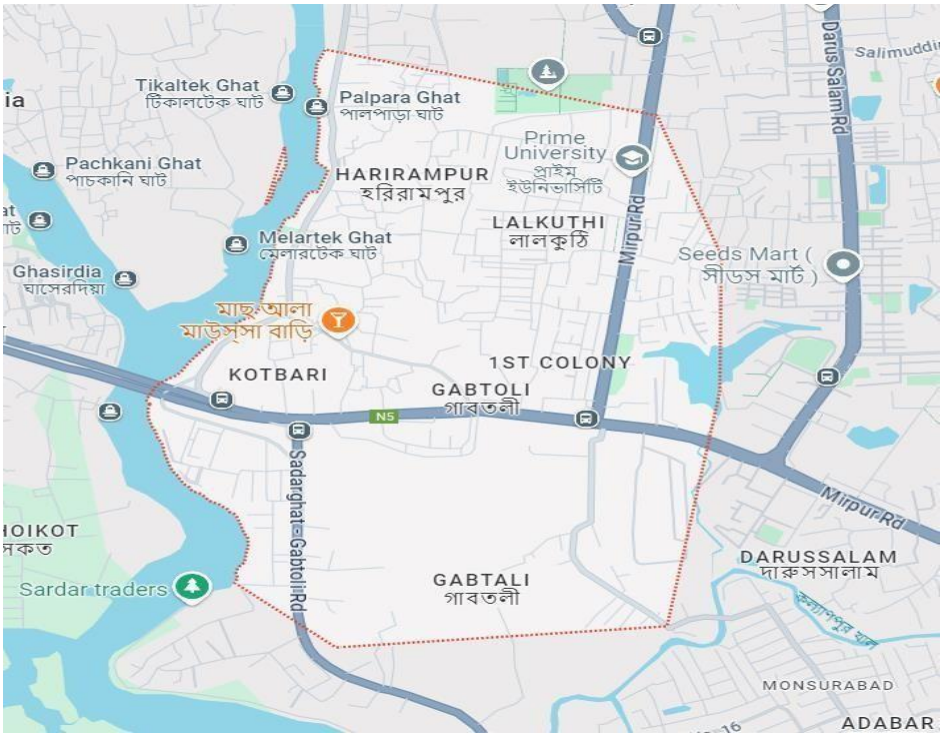

Figure 2.3: Gabtoli Bus Terminal

3.5 Bus Company Selections

We selected two long-distance bus companies for our survey. To ensure confidentiality and maintain their safety, I am referring to them as Company A and Company B. These companies were chosen based on their significant presence in the selected routes and their operational differences, which provide valuable insights into service quality, safety measures, and reliability.

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3.6 Methods of Data Collection

We have chosen to use the questionnaire approach for this study on Bangladesh's public transportation quality and reliability because it works well for compiling comprehensive, organized data from a large number of respondents. We can gather quantifiable data using this method on important topics like pricing, safety, comfort, and punctuality in addition to passenger happiness.

We can guarantee uniformity in the questions posed to various responders by employing a well-designed questionnaire, making it simple to compare the outcomes. It also makes it possible for participants to give candid feedback whether given online or in person at bus terminals in a timely manner. This approach can also reach a big sample size at a reasonable cost, guaranteeing the representation of a variety of viewpoints from various pathways and socioeconomic classes.

3.7 Survey Procedure

In order to make data collection in the field more efficient, we have developed a Google Form specifically for this survey on passenger satisfaction and public transit reliability. Utilizing a digital form has several benefits in terms of effectiveness, accessibility, and simplicity of analysis.

a) **Questionnaire Design:** The Google Form is composed of well-organized, understandable questions covering important topics including overall service quality, price, comfort, safety, and punctuality satisfaction. There are open-ended and multiple-choice questions to collect both qualitative and quantitative information.
b) **Convenience and accessibility:** Using a Google Form makes the process easier for participants as well as survey creators. The poll is easy for respondents to complete, and its digital format makes it available to a larger group of travelers. Additionally, it uses less paper and improves the sustainability of data collection.
c) **Instant Data Collection:** The information is automatically entered into a central database as soon as a participant submits their answers. This guarantees a quick turnaround for results by enabling instantaneous review and analysis.

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d) **Data security and privacy:** All responders' privacy and anonymity are protected by the way the Google Form is configured. No personally identifiable information is gathered, and the answers are kept safe.

3.8 Survey Questions

Public transport quality and reliability

Public transport quality and reliability are essential pillars of any thriving urban transportation system. They encompass various factors that directly impact the experience of commuters, the efficiency of a city's mobility network, and the overall sustainability of urban environments.

pavel47-425@diu.edu.bd Switch account

Not shared

* Indicates required question

Route *

- ◯ Dhaka-Chittagong (Shyamoli-Paribahan)
- ◯ Dhaka-Rajshahi (Hanif-Paribahan)

Gender *

- ◯ Male
- ◯ Female

Punctuality (সময়ানুবর্তিতা)

	Very (খুব)	Partly (আংশিকভাবে)	Neutral (নিরপেক্ষ)
Satisfied (সন্তুষ্ট)	◯	◯	◯
Dissatisfied (অসন্তুষ্ট)	◯	◯	◯
Neutral (নিরপেক্ষ)	◯	◯	◯

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Comfort and Cleanliness (আরাম এবং পরিচ্ছন্নতা)

	Very (খুব)	Partly (আংশিকভাবে)	Neutral (নিরপেক্ষ)
Satisfied (সন্তুষ্ট)	○	○	○
Dissatisfied (অসন্তুষ্ট)	○	○	○
Neutral (নিরপেক্ষ)	○	○	○

Safety of Vehicles (যানবাহনের নিরাপত্তা)

	Very (খুব)	Partly (আংশিকভাবে)	Neutral (নিরপেক্ষ)
Satisfied (সন্তুষ্ট)	○	○	○
Dissatisfied (অসন্তুষ্ট)	○	○	○
Neutral (নিরপেক্ষ)	○	○	○

Frequency of Service (সময়সূচীর নির্ভরযোগ্যতা)

	Very (খুব)	Partly (আংশিকভাবে)	Neutral (নিরপেক্ষ)
Satisfied (সন্তুষ্ট)	○	○	○
Dissatisfied (অসন্তুষ্ট)	○	○	○
Neutral (নিরপেক্ষ)	○	○	○

Convenience of Bus Stops or Stations (বাস স্টপ বা স্টেশনের সুবিধা)

	Very (খুব)	Partly (আংশিকভাবে)	Neutral (নিরপেক্ষ)
Satisfied (সন্তুষ্ট)	○	○	○
Dissatisfied (অসন্তুষ্ট)	○	○	○
Neutral (নিরপেক্ষ)	○	○	○

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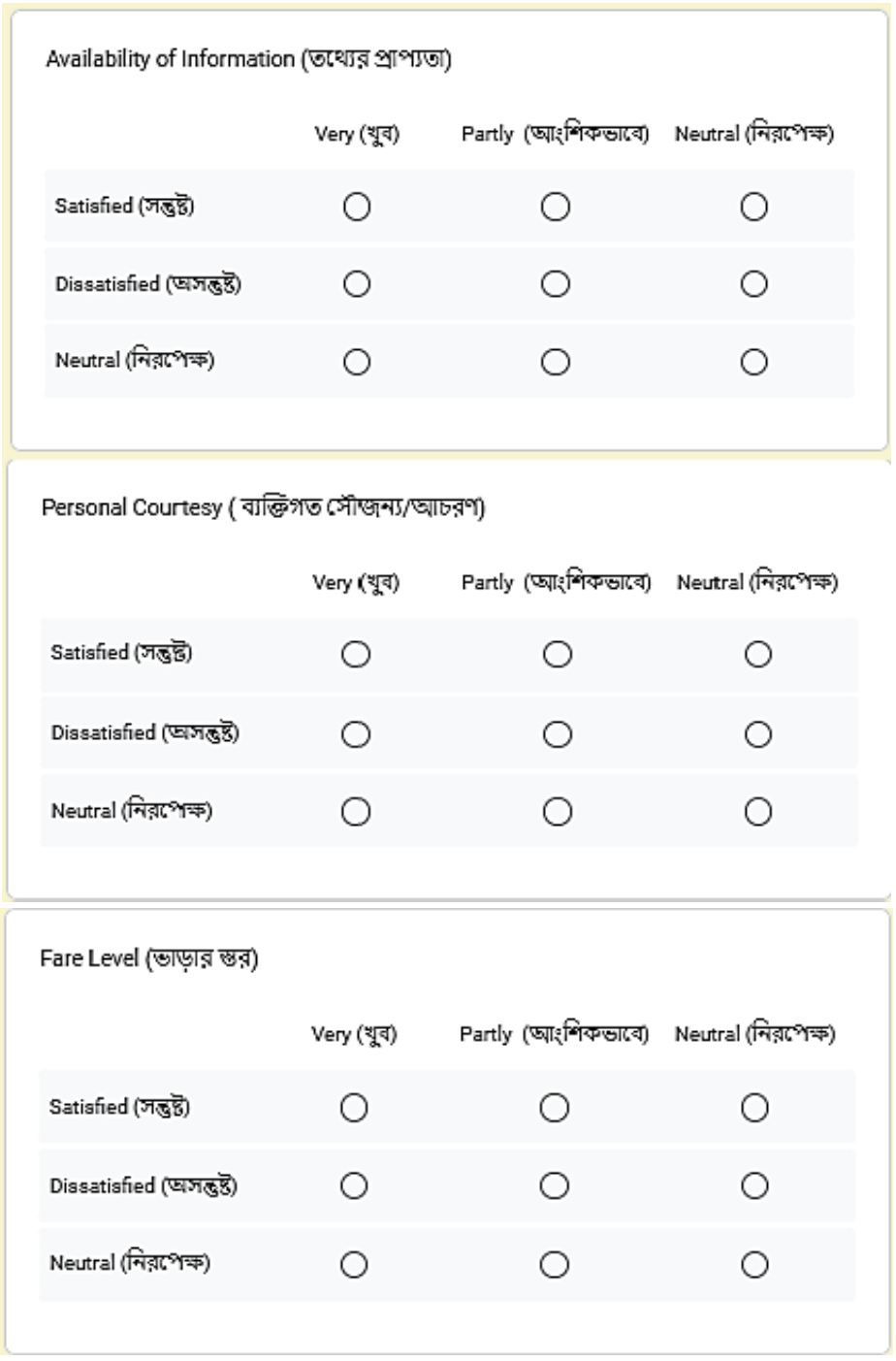

Figure 2.4: All survey questions in a row.

We improve survey process efficiency by utilizing a Google Form, which makes field data gathering easy, precise, and fast. This approach will assist us in compiling thorough data on Bangladesh's public transportation system's dependability and level of service.

3.9 Ethical Considerations

Every participant is informed of the purpose of the study as well as their rights to anonymity and confidentiality. Before conducting surveys and interviews, informed

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permission is requested. The study responds to ethical guidelines to protect each participant's rights and dignity.

3.10 Data Collection Histories

Conducting surveys during afternoons and evenings after university allowed us to gather insights during peak travel hours, capturing commuter experiences with traffic and service reliability. Surveys on off-days provided perspectives from passengers traveling for leisure or family visits, offering a balanced view of public transportation performance across both weekday and weekend travel patterns.

The combination of weekday and off-day data collection ensures that the survey results are comprehensive and reflect a wide range of passenger experiences under varying traffic conditions and service demands.

3.11 Summery

For our survey on public transportation reliability in Bangladesh, we utilized a questionnaire method administered through a Google Form to ensure efficient and consistent data collection. The form was designed to gather quantitative data on passenger satisfaction, safety, comfort, affordability, and punctuality, as well as qualitative insights through open-ended questions. To capture a diverse range of passenger experiences, we conducted the survey in the Dhaka Gabtoli terminal, a major transportation hub serving both short- and long-distance travelers.

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CHAPTER IV

DATA ANALYSIS AND DISCUSSION

4.1 General

In this thesis, the survey findings were carefully arranged and interpreted using Microsoft Excel for data analysis. This stage is essential for deriving relevant conclusions and spotting variations in the reliability, quality, and satisfaction of the services provided to passengers on the chosen routes. The use of Excel enabled efficient organization of the data, allowing for clear visualization of trends and patterns. Additionally, statistical tools within the software facilitated a deeper analysis, enhancing the credibility of the results. Ultimately, this thorough examination of the data provides a solid foundation for making informed recommendations for improving public transportation services.

4.2 Data Analysis

This indicator's data was gathered via a field survey. Both on board and at bus stops, the survey was carried out. Individuals who frequently utilize public transportation were asked to respond to questions about the contributing variables. During the process of interviewing 64 passengers regarding the eight aspects of this indicator, 22 of them were female.

After the data collection, all the data were being statistically analyzed. The total number of responses in each individual factor was calculated. Then weighted average of all the aspects along with the percentage of satisfaction was calculated.

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4.3 Data Analysis Table

Table 4.1: Data Analysis Table

Data Table										
Dimensions	Dissatisfied			Neutral	Satisfied			Responses	Average Score	Percentage of satisfaction
	Very	Neutral	Partly		Partly	Neutral	Very			
	1	2	3	4	5	6	7			
Frequency of Service	2	3	4	5	26	5	19	64	5.2	74.30 %
Punctuality	1	1	5	4	32	5	16	64	5.3	75.70 %
Comfort and Cleanliness	5	1	8	7	28	5	10	64	4.7	67.10 %
Safety of Vehicles	4	1	10	5	22	8	14	64	4.9	70%
Convenience of Bus Stops or Stations	4	0	4	3	24	5	24	64	5.4	77.10 %
Availability of Information	0	2	9	6	22	8	17	64	5.2	74.30 %
Personal courtesy	2	3	5	6	28	5	15	64	5.0	71.43 %
Fare Level	7	1	8	4	26	10	8	64	4.6	65.70 %
Total	25	12	53	40	208	51	123	389	5.0	71.95 %

Source: **SUTI Mobility Assessment Report (2018)**

All of the data were statistically analyzed once they were collected. It was determined how many responses there were overall for each specific aspect. Next, the percentage of satisfaction and the weighted average of every aspect were determined. This data collection method provided valuable insights into the passenger's experiences and satisfaction levels. The survey included questions focused on various factors, such as

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punctuality, comfort, cleanliness, and safety. By engaging directly with passengers, we ensured that their voices were accurately represented in the findings.

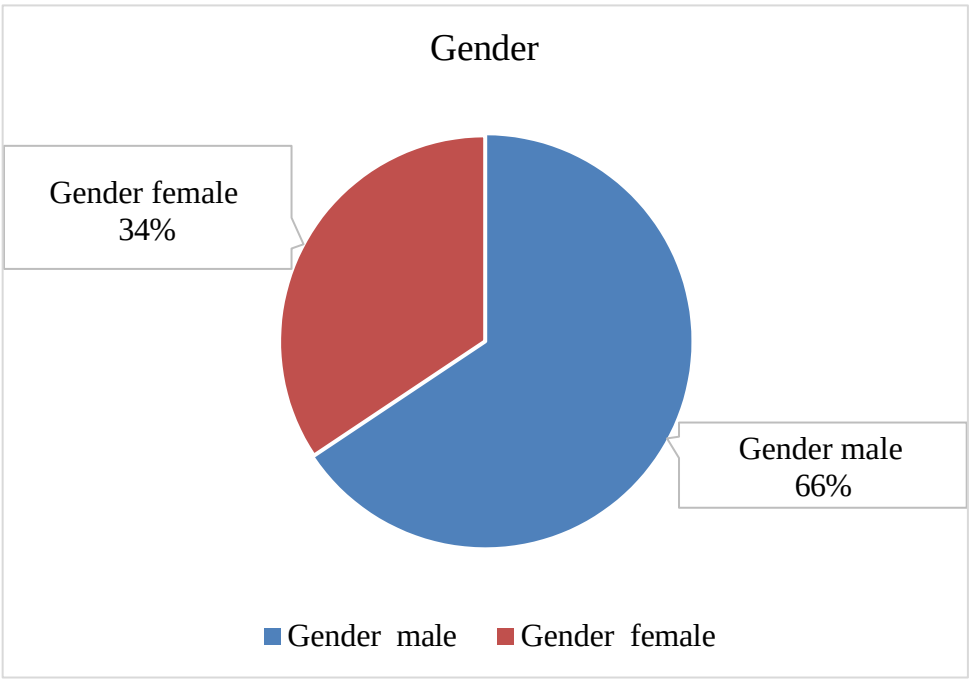

Figure 4.1: Gender ratio of all respondents.

Findings:

- From the pie chart, we can see that 34% of respondents are female.
- 66% of respondents are male.
- Out of the 64 respondents, 22 of them are female.

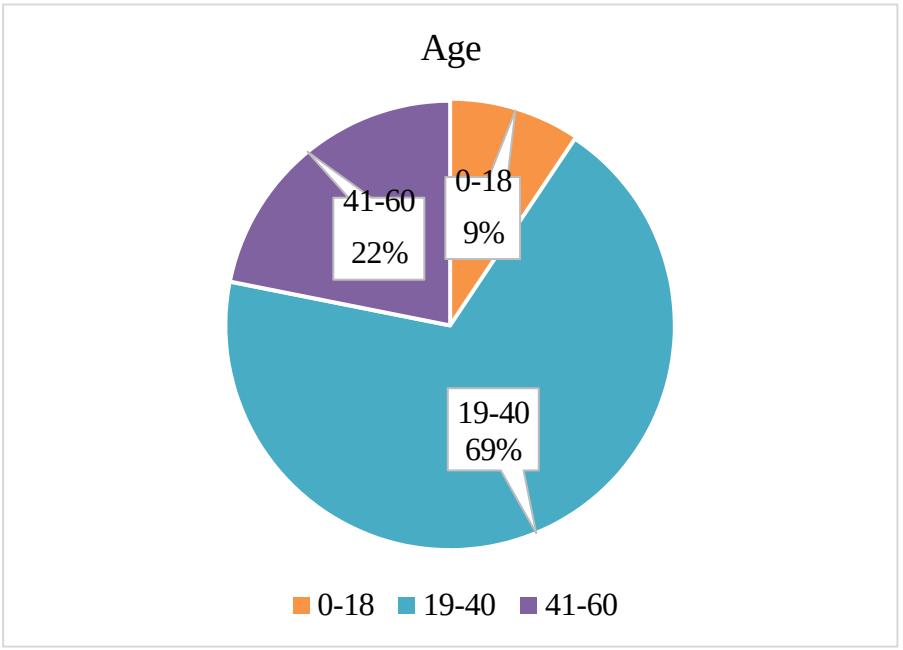

Figure 4.2: Age groups of the respondents.

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Findings:

- From the above pie chart, 9% of people are aged 0 to 18.
- 69% of people are aged 19 to 40.
- 22% of people are aged 41 to 60.

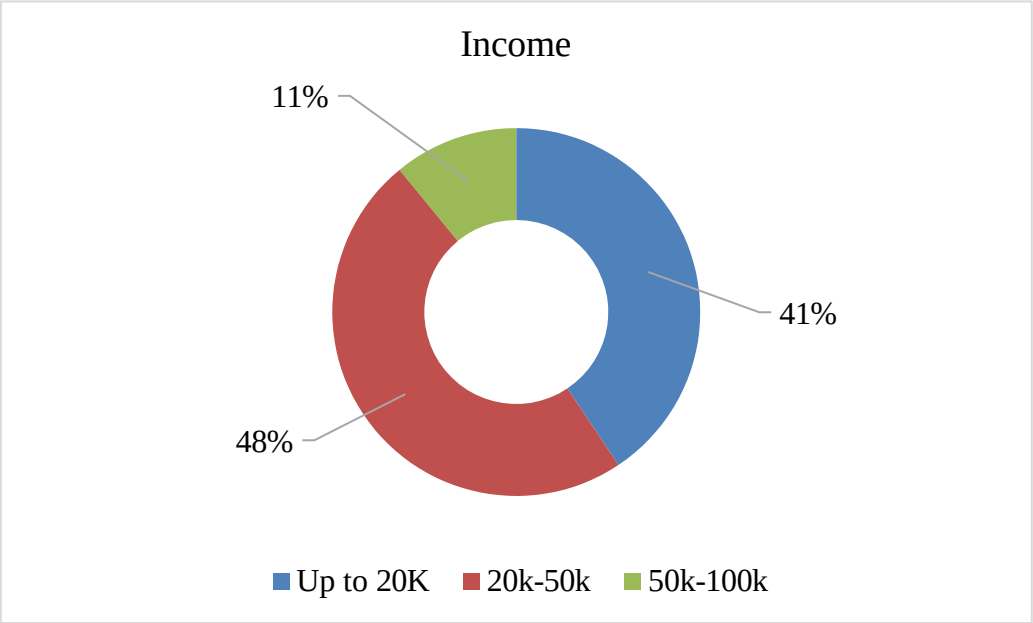

Figure 4.3: Average Monthly Income of the respondents.

Findings:

- From the above pie chart, we can see that 48% of people have an income between 20,000 and 50,000.
- 41% of people have an income of up to 20,000.
- 11% of people have an income between 50,000 and 100,000.

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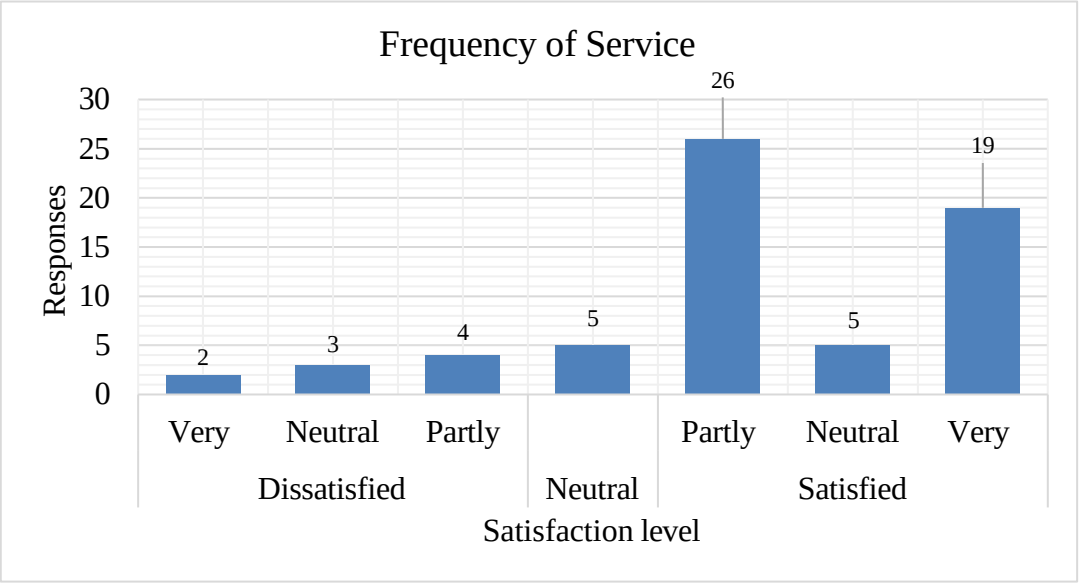

Figure 4.4: Satisfaction level in Frequency of service of the respondents

Findings:

- The highest proportion of respondents, around 40%, are somewhat satisfied with the frequency of service.
- The second highest proportion, around 15%, are very satisfied.

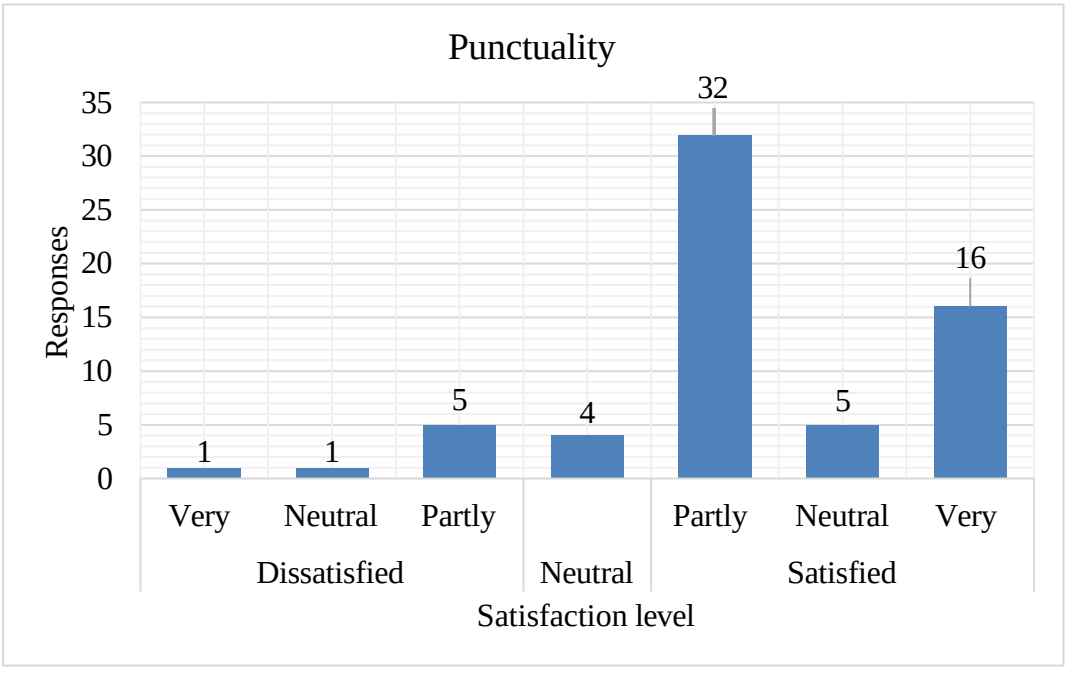

Figure 4.5: Satisfaction level in Punctuality of the respondents

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Findings:

- Around 50% of people are somewhat satisfied with punctuality, which includes 32 respondents.
- We can see that nearly 8% of people are somewhat dissatisfied with punctuality.

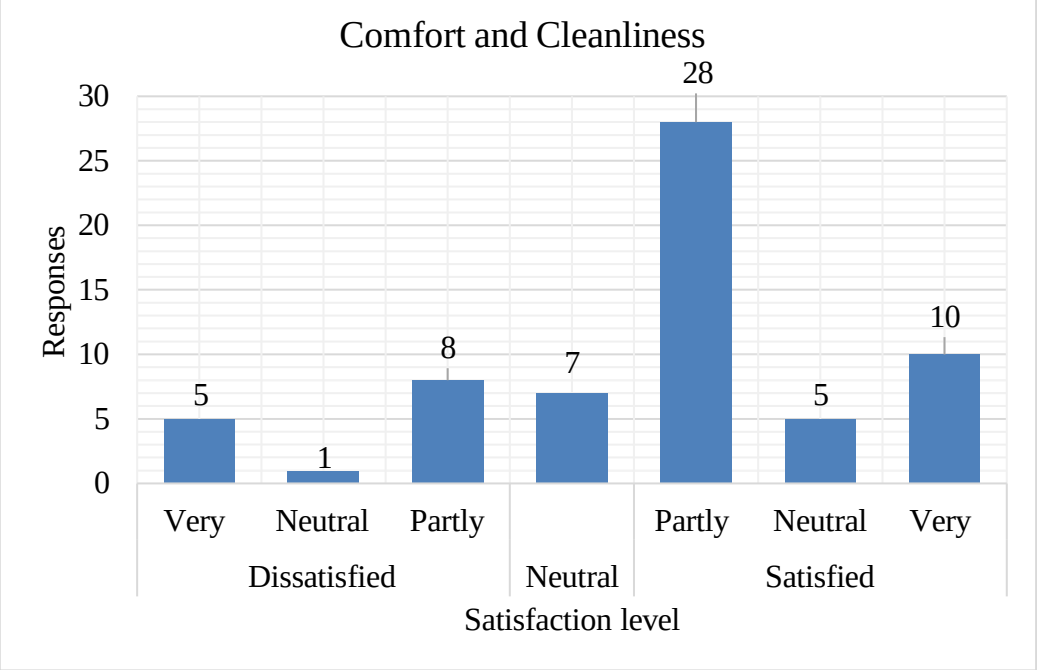

Figure 4.6: Satisfaction level in Comfort and cleanliness of the respondents

Findings:

- Around 7% of people are very dissatisfied with comfort and cleanliness, which includes 5 respondents.
- More than 43% of people are somewhat satisfied, with 28 out of 64 respondents expressing this view.

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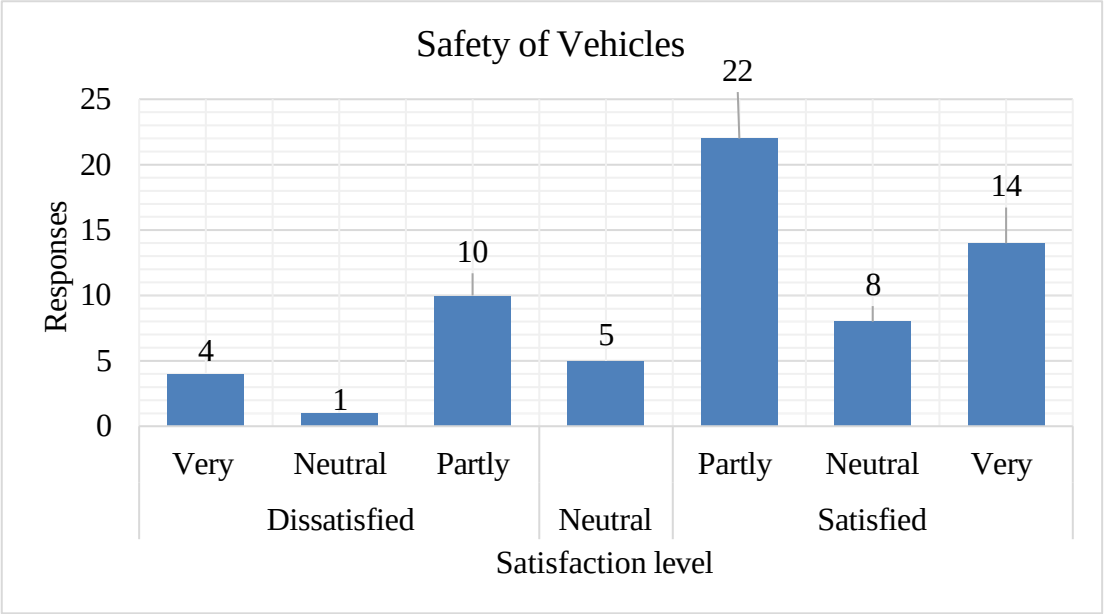

Figure 4.7: Satisfaction level in Safety of vehicles of the respondents

Findings:

- We find that nearly 16% of people are somewhat dissatisfied with the safety of vehicles.
- Around 34% of people are somewhat satisfied with the safety of vehicles.

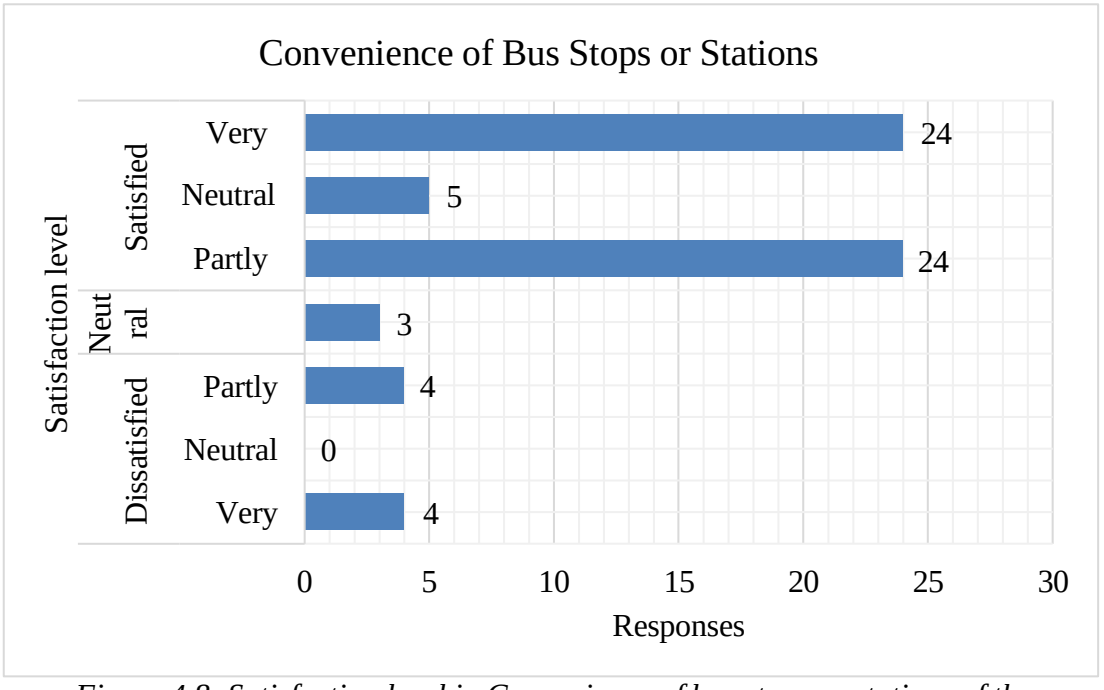

Figure 4.8: Satisfaction level in Convenience of bus stops or stations of the respondents

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Findings:

- We can see that 37% of people are either very or somewhat satisfied with the convenience of bus stops and stations.
- More than 6% of people are very dissatisfied with the convenience of bus stops.

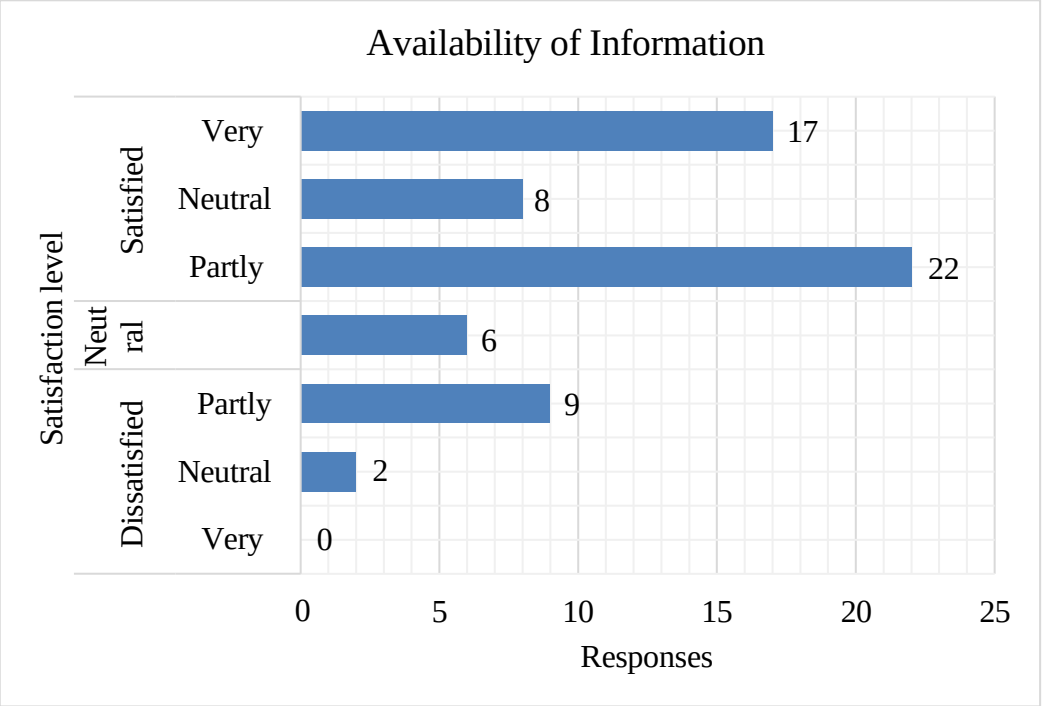

Figure 4.9: Satisfaction level in Availability of Information of the respondents

Findings:

- The data shows that more than 34% of people are somewhat satisfied with the availability of information.
- Less than 15% of people are somewhat dissatisfied with the availability of information.

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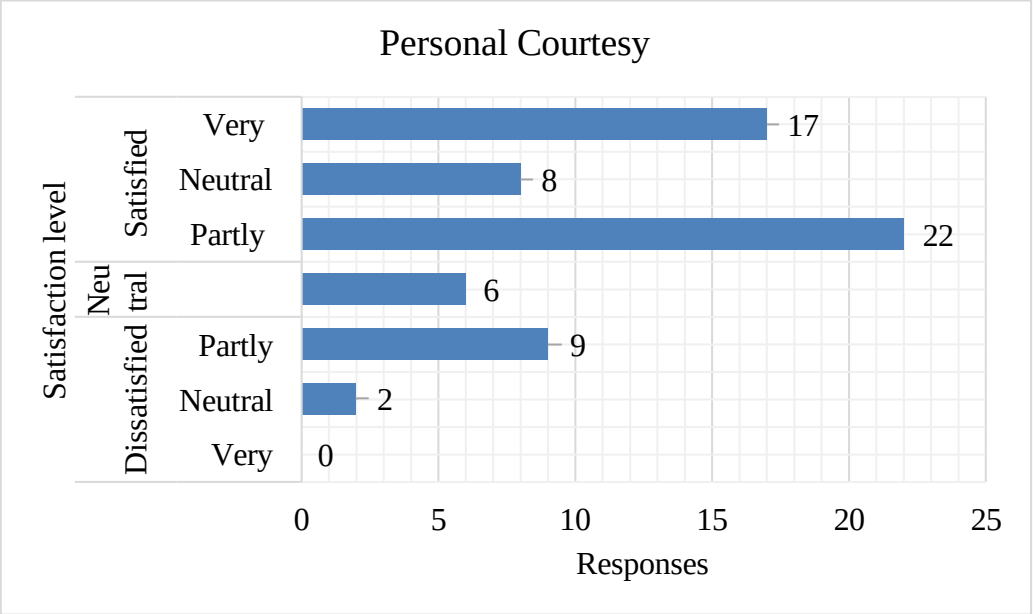

Figure 4.10: Satisfaction level in Personal Courtesy of the respondents

Findings:

- From the data, we can see that 26% of people are very satisfied, and 34% are somewhat satisfied with personal courtesy.
- More than 14% of people are somewhat dissatisfied with personal courtesy.

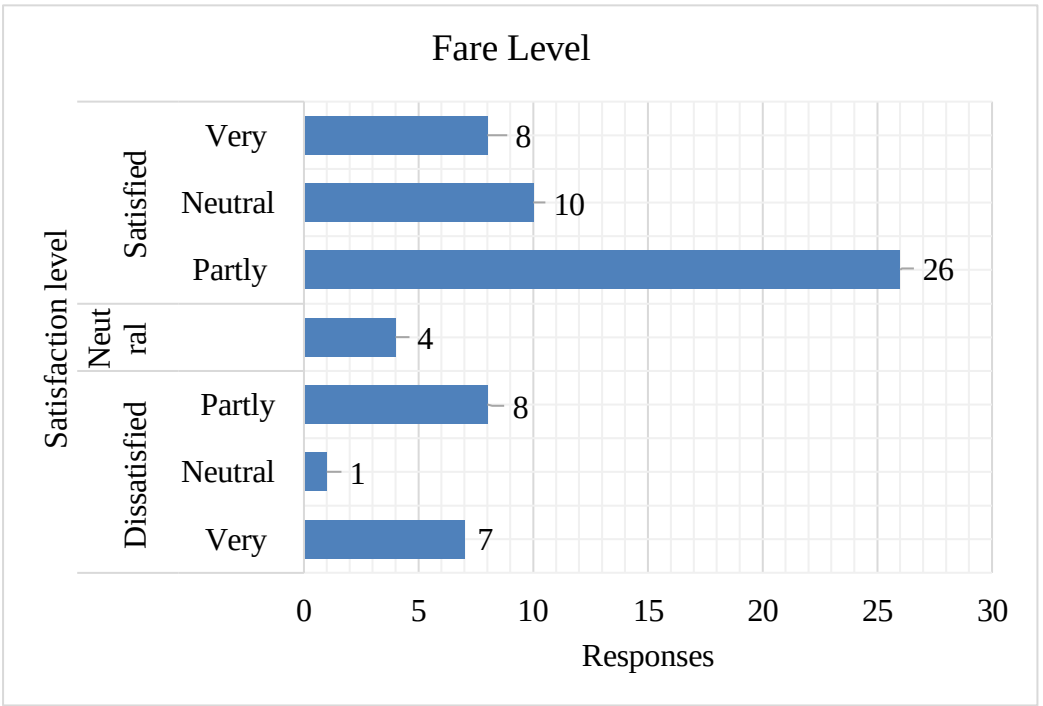

Figure 4.11: Satisfaction level in Fare level of the respondents

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Findings:

- The chart shows that more than 10% of people are very dissatisfied with the fare level.
- It also indicates that no more than 11% of people are very satisfied with the fare level.
- Additionally, we can see that nearly 41% of people are somewhat satisfied with the fare level.

4.4 Summery

From the data analysis report we can find more than 60% peoples are satisfied about the punctuality but they are less satisfied about the fare level. They are also less satisfied about the transports comfort and cleanliness. They are strongly satisfied about convenience of bus stops or stations but it occurs delay for the passengers in their travel time.

After analyzing the data, it was found that passengers on Route 1 (Dhaka to Rajshahi) have a higher level of dissatisfaction compared to those on Route 2 (Dhaka to Chattogram). However, passengers on Route 2 (Dhaka to Chattogram) report lower levels of satisfaction than those traveling on Route 1 (Dhaka to Rajshahi).

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CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 General

This chapter consolidates the findings of the research on the quality and reliability of long-distance bus services in Dhaka, Bangladesh. It provides a comprehensive evaluation of the current state of public transportation, highlights critical gaps in service quality and reliability, and proposes actionable recommendations for improvement. Furthermore, this chapter outlines potential avenues for future research, ensuring the continuous development of public transportation systems in Bangladesh.

5.2 Conclusion

The results of the research reveal that passenger's satisfaction with long-distance bus services in Dhaka, Bangladesh, is not entirely consistent. More than 60% of travelers expressed satisfaction with service punctuality, suggesting that following timetables is a good thing. However, issues with comfort and hygiene, as well as worries about fare levels, draw attention to areas that require improvement. Although the bus stop's accessibility and convenience were warmly accepted, travel delays indicate outside variables that may be influencing the dependability of the schedule. These results highlight important areas for improving the reliability and quality of services.

5.3 Recommendations

Future research should focus on the following

- Include additional routes for a broader geographic study.
- Study environmental and traffic impacts on service reliability.
- Study how things like weather and traffic affect service.

Exploring these aspects can provide deeper insights into the challenges and opportunities for improving long-distance bus services in Bangladesh.

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REFERENCES

1. Cervero, R. (1998). *The Transit Metropolis: A Global Inquiry*. Island Press.
2. Chowdhury, T., Alam, B., & Rahman, S. (2021). *Impact of urban traffic congestion on intercity bus service reliability.* Bangladesh Transport Journal.
3. Eboli, L., & Mazzulla, G. (2012). *Performance indicators for an objective measure of public transport service quality.* European Transport.
4. Gwilliam, K. (2008). *A review of issues in developing public transport systems in developing countries.* World Bank Policy Research Working Paper
5. Hasan, M. A., & Rabbani, M. (2018). *Assessment of intercity bus service quality in Bangladesh: A passenger perspective*. International Journal of Public Transport.
6. Hensher, D. A., Stopher, P., & Bullock, P. (2003). *Service quality—developing a service quality index in the provision of commercial bus contracts.* Transportation Research Part A: Policy and Practice.
7. Hoque, M. S., Hossain, M., & Azad, A. K. (2005). *Road safety management practices in Bangladesh.* World Transport Policy & Practice, 11(2), 18-25.
8. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). *SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality.* Journal of Retailing, 64(1), 12-40.
9. Rahman, M. S., Alam, M. S., & Habib, M. (2019). *Passenger satisfaction with intercity bus services in Bangladesh: An empirical analysis.* Journal of Transportation Research.
10. SUTI Mobility Assessment Report (2018). *Sustainable Urban Transport Index for Dhaka, Bangladesh.*
11. World Bank (2016). *Road safety in low- and middle-income countries: Addressing challenges and priorities.* World Bank Report.

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APPENDIX

Gender of survey participants:

Survey data	Gender		
	Male	Female	Total
Number of respondents	42	22	64

Income of survey participants:

Survey data	Income	Number of respondents
	Up to 20K	26
	20k-50k	31
	50k-100k	7
	Total	64

Age of survey participants:

Survey data	Age	Number of respondents
	0-18	6
	19-40	44
	41-60	14
	Total	64

Feedback comments of survey respondents:

Survey data	Feedback Comments
	Need more improvement
	Lack of literate supervisor
	Bus fare should be reduced
	Service should be improved
	Traffic jam should be reduced
	Good

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Collected responses to compare satisfaction levels:

Survey criteria data-1	**Frequency of service**	Responses	Satisfied	Dissatisfied
	Route 1-Dhaka-Rajshahi	32	27	4
	Route 2-Dhaka-Chattogram	32	24	7
Survey criteria data-2	**Punctuality**	Responses	Satisfied	Dissatisfied
	Route 1-Dhaka-Rajshahi	32	28	5
	Route 2-Dhaka-Chattogram	32	26	3
Survey criteria data-3	**Comfort and cleanliness**	Responses	Satisfied	Dissatisfied
	Route 1-Dhaka-Rajshahi	32	22	9
	Route 2-Dhaka-Chattogram	32	22	6
Survey criteria data-4	**Safety of vehicles**	Responses	Satisfied	Dissatisfied
	Route1-Dhaka-Rajshahi	32	20	10
	Route 2-Dhaka-Chattogram	32	24	5
Survey criteria data-5	**Convenience of bus stops and stations**	Responses	Satisfied	Dissatisfied
	Route 1-Dhaka-Rajshahi	32	28	3
	Route 2-Dhaka-Chattogram	32	23	5
Survey criteria data-6	**Availability of information**	Responses	Satisfied	Dissatisfied
	Route 1-Dhaka-Rajshahi	32	23	7
	Route 2-Dhaka-Chattogram	32	24	4
Survey criteria data-7	**Personal courtesy**	Responses	Satisfied	Dissatisfied
	Route 1-Dhaka-Rajshahi	32	24	7
	Route 2-Dhaka-Chattogram	32	24	2
Survey criteria data-8	**Fare level**	Responses	Satisfied	Dissatisfied
	Route 1-Dhaka-Rajshahi	32	20	12
	Route 2-Dhaka-Chattogram	32	24	3

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Some bus services and fare level of route 1:

Route 1	
Dhaka-Rajshahi (247 km)	
Bus services	
AC Bus services	**Fare level (BDT)**
Hanif Enterprise	1000 TK
Desh Travels	1400 TK
Grameen Travels	1400 TK
National Travels	1400 TK
Tuhin Elite	1400 TK
Non-AC services	**Fare level (BDT)**
Hanif Enterprise	700 TK
Desh Travels	700 TK
Grameen Travels	700 TK
National Travels	700 TK
Shyamoli Paribahan	700 TK
Akota Paribahan	700 TK

Some bus services and fare level route 2:

Route 2	
Dhaka- Chattogram (253 km)	
Bus services	
AC Bus services	**Fare level (BDT)**
Shohagh Elite	1400 TK
Green Line	1600 TK
Saintmartin Paribahan	1800 TK
Shyamoli Paribahan	1400 TK
Imperial Express	1600 TK
Hanif Paribahan	1400 TK
Royal Travels	800 TK
Non-AC services	**Fare level (BDT)**
Hanif Enterprise	680 TK
Soudia	680 TK
Ena	670 TK
Unique	700 TK
Shyamoli Paribahan	680 TK
Saintmartin	750 TK
Road master	1100 TK

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Pictures during data collection:

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