



CHAPTER ONE

INTRODUCTION

Chapter One

Introduction

1.1 Introduction

From the beginning of human journey on this earth transportation became an essential part of our life. Transportation is important because it facilitates trade, exchange and travel. Without effective transportation, regions are largely isolated from each other. Effective, affordable transportation also plays a role in letting people move to new areas. Passenger transport refers to the total movement of passengers using inland transport on a given network. Examples of public transport include buses, trolleybuses, trams and passenger trains, rapid transit like as (metro/ subway/ underground, etc.) and ferries. Public transport between cities or countries is dominated by airlines, coaches, and intercity rail. High-speed rail networks are being developed in many parts of the world.

Urban public transit differs distinctly among Asia, North America, and Europe. In Asia, profit-driven, privately-owned and publicly traded mass transit and real estate conglomerates predominantly operate public transit systems. In North America, municipal transit authorities most commonly run mass transit operations. In Europe, both state-owned and private companies predominantly operate mass transit systems, Public transport services can be profit-driven by use of pay-by-the-distance fares or funded by government subsidies in which flat rate fares are charged to each passenger. Services can be fully profitable through high user ship numbers and high fare box recovery ratios, or can be regulated and possibly subsidized from local or national tax revenue. Fully subsidized, free of charge services operate in some towns and cities.



Fig 1.1: New York City Subway, the world's largest rapid transit system by number of stations



Fig 1.2: Shanghai Metro is the largest rapid transit system in the world by route length.



Fig 1.3: Trolza trolleybus in Moscow – operating the world's largest trolleybus system

The different modes of transport are air, water, and land transport, which include rail, road and off-road transport. Other modes also exist, including pipelines, cable transport, and space transport.

The ship is the earliest form of transportation to have a significant effect on trade, and ships still play a crucial role in transporting large quantities of goods. Ships can operate on nothing more than the wind, mitigating the needs for engines in the earliest designs.

The train revolutionized modern business, and it helped create the modern world. Before the invention of the steam engine, goods had to be transported in small amounts. The cost of purchasing foreign goods was simply too high for many to afford, and goods that could not be shipped by boat were prohibitively expensive for most of the middle class.

The Bus services use buses on conventional roads to carry numerous passengers on shorter journeys. Buses operate with low capacity (compared with trams or trains), and can operate on conventional roads, with relatively inexpensive bus stops to serve passengers.

The Airplane has made long-distance transportation a reality for many, and people are able to travel across nations and around the world for relatively low costs. While travel by rail is still popular, airplanes are credited with making trans-Atlantic and trans-Pacific travel a reality. While airplane tickets can be expensive, they pale in comparison to the cost of crossing an ocean by boat, and planes take only hours instead of weeks or even months to get to their destination.



Fig 1.4: Air France Airlines

1.2 BUS TERMINALS:

A bus terminal is a public place from where buses routes starts or ends, at where vehicles stop, turn, reverse, and wait before departing on their return journeys. This is also a place where passengers board and alight from vehicles.



Fig 1.5: Greyhound Bus Terminal—Manhattan in 1939

DUNDY, BISHOPSWORTH & BRISTOL										
TO BRISTOL										
	A.M.					P.M.				
Dundy Chapel	—	—	8.55	10.35	12.5	3.20	4.40	6.5	8.50	—
Dundy Church	—	—	8.57	10.37	12.5	3.22	4.42	6.7	8.52	—
Hairpin Corner	8.45	8.0	9.40	11.0	12.10	3.25	4.45	6.10	8.40	—
Valley View	8.45	8.0	9.40	11.0	12.10	3.25	4.45	6.10	8.40	—
Bishopsworth, E.T. Inn	8.55	8.0	9.47	11.7	12.17	3.32	4.52	6.17	8.47	—
Bedminster Tram Terminus	8.50	8.10	9.50	11.15	12.24	3.35	4.55	6.24	8.54	—
Ashton Avenue	7.30	8.10	9.50	11.15	12.24	3.40	5.00	6.24	8.54	—
Prince Street	7.10	8.25	10.0	11.25	12.35	3.50	5.10	6.35	9.05	—
										Sat. only
FROM BRISTOL										
	A.M.					P.M.				
Prince Street	7.15	8.30	10.10	12.40	2.45	4.05	5.15	6.40	9.00	12.10
Ashton Avenue	7.30	8.35	10.15	12.45	2.50	4.10	5.20	6.45	9.05	12.15
Bedminster Tram Ter.	7.20	8.45	10.20	12.50	3.00	4.15	5.25	6.50	9.10	12.20
Bishopsworth, E.T. Inn	7.30	8.45	10.25	12.55	3.05	4.20	5.30	6.55	9.15	12.25
Valley View	7.30	8.45	10.25	12.55	3.05	4.20	5.30	6.55	9.15	12.25
Hairpin Corner	7.40	8.55	10.35	13.05	3.10	4.25	5.35	7.00	9.20	12.30
Dundy Church	7.40	8.55	10.35	13.05	3.10	4.25	5.35	7.00	9.20	12.30
Dundy Chapel	—	—	10.40	1.40	3.15	4.30	5.40	7.10	9.30	12.40
										Sat. only
FARES										
	Dundy Chapel	Hairpin Corner	Valley View	Bishopsworth	Bedminster	Ashton Avenue	Prince Street			
Dundy Chapel	—	2d.	2d.	2d.	2d.	2d.	2d.	2d.	2d.	2d.
Hairpin Corner	2d.	—	2d.	2d.	2d.	2d.	2d.	2d.	2d.	2d.
Valley View	2d.	2d.	—	2d.	2d.	2d.	2d.	2d.	2d.	2d.
Bishopsworth, E.T. Inn	2d.	2d.	2d.	—	2d.	2d.	2d.	2d.	2d.	2d.
Bedminster Tram Ter.	2d.	2d.	2d.	2d.	—	2d.	2d.	2d.	2d.	2d.
Ashton Avenue	2d.	2d.	2d.	2d.	2d.	—	2d.	2d.	2d.	2d.
Prince Street	2d.	2d.	2d.	2d.	2d.	2d.	—	2d.	2d.	2d.
WORKMEN 5d. RETURN 10d. MONDAYS										
SCHOOL CHILDREN (only) 3.5d. use via Bedminster Bridge to Bedminster Street, returning 4.15 p.m. some roads.										

Fig 1.6: A public transport timetable for bus services in England in the 1940s and 1950s

1.3 Types of Bus Terminals:

There are the 3 types of Bus Stop terminals needed for sustainable transit solutions in Dhaka City:

1. Inter-City Bus Terminal.
2. Sub-Urban Bus Terminal.
3. Local Bus Terminal/Bus Station or Bus Stoppage.

1.3.1 Intercity bus terminal:

The intercity terminal is usually found in the downtown core and is accessible directly by local transit, taxi, and auto. An intercity bus service or intercity coach service also called a long-distance, express, over-the-road, commercial, long-haul, or highway bus or coach service, is a public transport service using coaches to carry passengers significant distances between different cities, towns, or other populated areas.



Fig 1.7: Inter-City Bus Terminal (Mahakhali)

1.3.2 Suburban Bus Terminal:

The suburban interstate terminal is a peripheral type designed to avoid the traffic congestion and heavy investment associated with central city and/or airport facilities. But Dhaka City has no regular suburban bus terminal facilities. But suburban bus terminals can be found other cities of Bangladesh



Fig 1.8: Jessore suburban bus terminal (picture from bdnews24)

1.3.3 Local Bus Terminal:

Bus services at a local bus terminal cater to routes whose starting and terminating points connect two different places in the same city. On these routes, buses stop to board and offload passengers at short intervals, usually about 0.5 km



Fig 1.9: Dhaka-Chaka Gulshan-local bus service



Fig 1.10: Hatir-Jheel Local Bus Service

1.4 Objective of the study:

1. To identify passengers facilities available in bus terminals.
2. To identify demand and capacity of buses.
3. To identify the regulation of loading/unloading and parking/repairing facilities for buses.
4. To compare bus terminal facilities among the selected bus terminals in Dhaka city.
5. To provide a proper guidelines for future improving bus terminal conditions to ensure safety and security and all standard facilities.



CHAPTER TWO

LITERATURE REVIEW

Chapter Two

Literature Review

2.1 General:

Bus terminals are one of the public terminals provided. It is established mainly for providing facilities for the users as a transit places from one place to another. The other meaning of bus terminal is off-street areas or buildings with stops for several bus routes. The accessibility of bus terminals is not only for human accessibility also with its proper planning and sufficient circulation of the buses. It is very important to have the best design and layout of bus terminals in order to make it accessible and more comfortable. Since bus terminals consist of various types of users, so that the design should be accessible and user friendly. The facilities of bus terminal such as ticket counters, signage and ramp for disables users should be considered in terms of its location.



Fig 2.1: Mahakhali Bus-terminal

2.2 Ancient Transportation:

The first form of transport was, of course, Shanks pony (the human foot!). However people eventually learned to use animals for transport. Donkeys and Horses were probably domesticated fewer than 4,000 to 3,000 BC. Camels were domesticated slightly later between 3,000 and 2,000 BC.

Meanwhile in 3,500 BC when the wheel was invented in Mesopotamia (present day Iraq). Very first wheels were made of solid pieces of wood lashed together to form a circle but after 2,000 BC they were made with spokes. In the 17th and 18th century, many new modes of transportation were introduced like as bicycles, trains, motor cars, trucks, airplanes, and trams. In 1906, the first personal car was introduced with an internal combustion engine. Many types of transportation systems such as boats, trains, airplanes, and automobiles are based on the internal combustion engine.



Fig 2.2: Ancient Rome Transportation (Internet Photo)

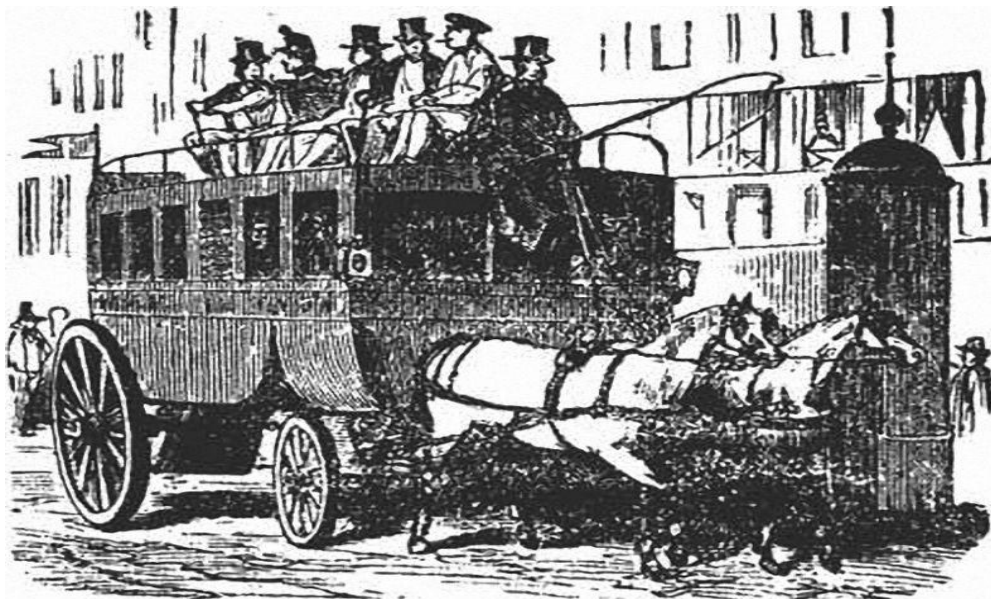


Fig 2.3: Parisian Omnibus, late nineteenth century



Fig 2.4: Early trolley car in Newton, Massachusetts



Fig 2.5: World's first trolleybus, Berlin 1882

2.3 Terminals and Stations:

Although both the terms bus terminal and bus station are being used synonymously, the latter is normally more accurate since in most cases there are some routes which pass through the station without terminating there. The term bus station is generally used for an off-road location with at least basic facilities for passengers, while a terminal is a fully developed bus station. In many cities the majorities of passengers starts and end their journeys at bus stations, and a significant proportion of operators' revenue may be collected at these points.



Fig 2.6: Mahatma Gandhi Bus Terminal, Hyderabad



Fig 2.7: Bus station in rural Russia

2.4 Elements of Stations and Terminals:

Bus stations and terminals are a significant element in the operation of bus services. Their design and location affect the efficiency of a transport system, and its impact on other road users. Some stations are regarded more as landmarks than as utilities, and as such are often of prestigious rather than practical design, which may detract seriously from their efficiency.

Local bus services in many towns and cities are centered on bus stations. Sometimes there are large stations in the central area, along with the smaller ones at the outer ends of the routes.

Bus stations may also be used for parking between journeys for buses which are away from their home bases. But generally they should not be regarded as long-term parking facilities.

2.5 Contribution Article:

Adiba Mahroze Hoque (2011), (BRTC INTERNATIONAL BUS TERMINAL) The project proposal by Bangladesh Road Transport Corporation (BRTC) is such a step towards urban & transport planning which would help facilitate commuter service, international travel by bus, along with efficient use of land. BRTC (Bangladesh Road Transport Corporation) International Bus terminal currently is very much under facilitated & unorganized, with no proper traffic management. More over there is no proper passenger facility, or proper arrival and departure bays & the terminal does not portray good image of Bangladesh to international passenger. The site is opposite Kamalapur Rail station, so both together it creates additional problem in traffic flow of the area. The proposal of the project is to design the international bus terminal at Motijheel with proper passenger facility, a bus service facility, which is able to handle more buses per hour and can accommodate more bus parking, along with a commercial building. In the proposal number of destinations is going increased to 9 inter-district routes and 5 international routes from 5 and 3 respectively. So the aim of this project is to design a bus terminal structure which caters to both inter-district and international buses and passenger and solve traffic flow problem of that area. This dissertation will describe the proposal of the terminal with elaboration of the background and proposed design consideration.

Rahman, Mitra, Yasmin and Esita (2008), had described (An Analysis on Existing Condition of Inter District Bus Terminals of Dhaka City), that study and analysis indicated the insufficient terminal facilities with respect to the increasing passengers demand. This was the reason of the poor operating of scheduled regulation and maintenance process of the terminals. This not so satisfactory condition is also imputable to an unsatisfactory arrangement of facilities, lack of information, highly costed ticket fares and method of payment, outstation of passenger shade by hawkers and illegal ticket counters, harassment by staffs, worst condition of waiting areas, toilets and over all every passenger facilities. The facilities for the staff are neither in acceptable position. The lack of coordination of the terminal maintenance authorities and the bus operators causes poor services to the passengers. These problems are exacerbated by an inability and/or extermination by officialdom to optimally enforce discipline adherence to whatever rules and regulations are in force and reluctant attitude towards the power solution of the problem.

T. Akter; S. Ahmed; R. Shobhan (2015), (Customers' Satisfaction in Bus Service Quality of Dhaka City), since last few decades the mobility levels have been elevated considerably across the world. For the strong growing of mobility, uses of personal and private vehicle have been progressing and at long last, it leads to overcrowding, sound & air pollution and social consequence. For eliminating this overcrowding traffic congestion and pollution, public transport or mass transit, is preferable

over private transport. Reported by Bangladesh Roads Transport Authority BRTA, 2012, only 3% among all registered motorized vehicles is self-possessed of buses which are inadequate for growing population of the capital Dhaka city. A questionnaire survey has been performed at bus stops of Shahabagh, Farmgate, and Science lab to identify, quality of bus services on passengers observation. It is observed from the survey that at present bus service does not provide standard services that may conform to passengers' expectancy. Quality services deal with bus stop and terminal facilities, quantity and quality of buses, bus stop sitting facilities, cleanliness, fare, information, safety and security, comfort, scope of complaints, door to door services etc. For increasing the use of public bus instead of personal or private car by improving bus service quality, this survey work has been conducted. Further suggestion has been given through this paper for improvement of service quality of public bus in Dhaka city.

MUDONGI MAURICE GEORGE (2016-2017), STUDY OF PASSENGERS FACILITIES IN MACHAKOSBUS STATION NIROBI, UNIVERSITY OF NAIROBI stated that Nairobi has a high population that continues to grow. Apart from meeting the urban transport needs of city commuters, it also acts as a national node for inter-city and upcountry transport. Long distance and local urban passengers therefore all need to be offered quality services and assured of best experience at the bus terminals. There are some improvements on the road infrastructure in Nairobi. The public transport vehicles have increased mainly because they are provided by the private sector who is motivated by the increased demand to buy more buses. In this case therefore, the two major components of the public transport system are being improved to meet the increasing demand, but the services at the terminals which complement these other two components are not to desirable standard. This study is therefore meant to study and propose measures that can be taken to ensure that passenger service at the Machakos Country Bus Station in Nairobi are of best quality to satisfy the users.

Robert L. Kuehne & Janis K. Becker (March 1987) (Michigan Intercity Bus Terminal/Station Study) Terminals are the gateways to intercity bus service and its market in Michigan and throughout the nation. They provide the user access to regular-route service offered by some 16 carriers in Michigan. At the same time, terminals are the intercity bus carriers' primary means of reaching their customers. These facilities will be inviting or repulsive to the user, an economic incentive or liability to the community, and economical or costly to the carrier. Terminals create an impression on the intercity bus passenger, community residents, and visitors. Community vitality is influenced in part by the quality of its intercity bus terminal. Adequate terminals at a reasonable cost are essential to the carriers intending to provide the intercity bus service.

Sigmund A. Brudevold (1951), (A bus terminal study for Tacoma, Washington) this thesis proposes a Union Bus Terminal to serve the suburban and long-distance bus needs of Tacoma, Washington. These needs now depend on twofold and completely inadequate stations. Goals of this project were to provide architectural surroundings which would both enhance downtown values and add attractiveness to bus transportation whereby it might be helped to increased importance. An increased emphasis on bus transportation is suggested as a means of alleviating traffic congestion throughout the Metropolitan area. The project program is based upon a study of existing bus transportation in the area from which increased future needs have been estimated. The site is a heretofore disused 300 by 280-foot block in a declining area near the city center. The building has a passenger level oriented toward a plaza and the downtown center beyond. Buses enter from a secondary street at the opposite side and circulate on a level beneath the upper passenger level. A restaurant, shops and concessions are included for the convenience of travelers and the financial well-being of the Terminal venture.

F. Rahman*, T. D. Chowdhury, Major M. T. Haque, M. R. Rahman, M. A. Islam, Analyzing Customer Satisfaction of Bus Service In Dhaka City, that thesis stated that Efficient operation of the public transport is a key factor for the improvement of living condition in Dhaka city. The environment as well as the service of bus transportation in Dhaka are extremely poor and can hardly meet the user's needs. The exploration of service quality of bus is necessary to provide a better service in future. In this research, customer satisfaction of bus users were analyzed based on users view towards quality, safety and security, and service provided by buses operating in Dhaka city. A questionnaire survey was conducted to five locations in Dhaka city. The result indicated that more than half of the respondents believed that the present condition of bus service is unsatisfactory. Regarding the safety and security condition, the main three reasons of dissatisfaction of passengers' are unsafe driving practices, poor boarding and alighting facilities and lack of law enforcing agencies surveillance. The service is unsatisfactory due to poor body and sitting arrangement of the buses and less comfort during travel. In spite of these negative views, users' possessed a positive attitude for buses which is low travel cost.



CHAPTER THREE

METHODOLOGY

CHAPTER THREE

METHODOLOGY

3.1 General:

Bus transportation is very important mode of transportation of a city. A bus terminal is defined as an area way from the general flow of road vehicle, which gives buses and coaches the freedom of movement to set down and pick up passengers in safety and comfort. Intercity, inter-district and sometimes international buses use this structure for the pickup and drop off of passengers. The terminal may be intended as a terminal station for a number of routes, or as a transfer station where routes continue. The number of bays for arrival and departure, number of bus parking all depends on the number of buses that terminal is serving and the per hour departure and arrival rate. Bus terminal platforms may be assigned to fixed bus lines, or variables in combination with a dynamic passenger information system. Sometimes this structure comes along with other commercial facilities which serve as a revenue generating source.

The Chennai Mofussil Bus Terminus or CMBT is the largest bus terminal in India, which located in Chennai, Tamil Nadu; is the largest bus Terminal in Asia. Spread over an area of 37 acres. The quality of pedestrian routes of access to a public transport system (PTS) is an important aspect for the choice of transport mode, which can be evaluated using some indicators such as accessibility, comfort, frequency, etc. The policies for urban sustainable mobility must reflect the design and management of mass transit systems, but also the judgment of users in terms of quality and perception of PTS. The purpose is to reassess slow mobility encouraging the intermodal mobility between pedestrian and public transport. Walking can be considered as an alternative mode of urban transport and a moment of a break from the chaos of modern life. Its role should be considered as an important element for a new model of structuring the city. Using geometrics a methodology for the assessment of accessibility to the PTS has been developed, that takes into account the quality of a pedestrian path to reach the bus stop. The distance between bus-stops, human energy expended to reach the stops of the PTS, etc, are some elements analyzed in this study. The qualitative and quantitative data of the pedestrian network access have been managed in a Geographic Information System (GIS), proving a valuable tool that can handle a large amount of spatial and heterogeneous data. The results can be of support both at the planning/strategic level that also helps the users, if inserted in the context of Web-GIS, making the integration between

pedestrian mobility and PTS competitive.

Dhaka is the over populated capital city of Bangladesh, with shortage of land and no organized transport planning. That's why planning of land uses, transport and road network is very essential for the suitable development of the capital.

3.2 Methodology of Study:

Methodology indicates to a systemic way of performing the study.

The method of performing the study here as follows:

- i. First step is to identify the goals
- ii. Then Selection of the study area.
- iii. Then primarily surveys are done.
- iv. After that, field surveys are performed.
- v. Now, data are collected from appropriate sources.
- vi. First survey includes on bus terminal survey and questionnaire survey.
- vii. At the end, by data analysis and surveying, Result, Discussion and Recommendation are provided

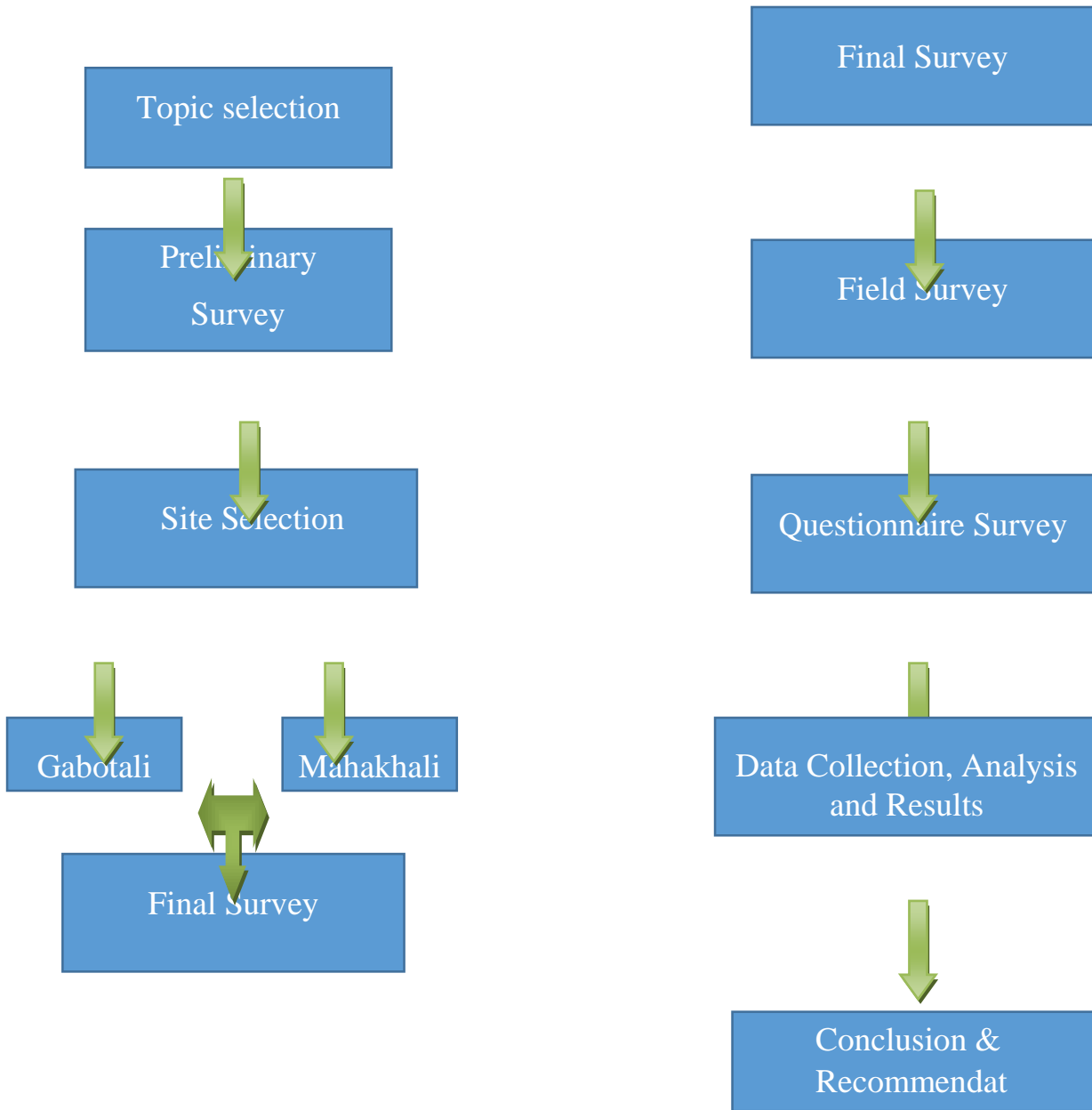


Fig 3.1: Flow chart for Methodology

3.3 Method of data collection:

Our survey mainly was:- Questionnaire survey

3.3.1 Questionnaire survey:

Some of the sample question we asked. We had taken many people's interview. Including passengers, drivers, management and self observation

Do the terminals are well facilitated?

Good	Average	Poor

Are there sufficient waiting place for heavy passengers?

Yes	No

Are passenger's waiting room well condition?

Good	Average	Poor

Do you feel comfortable in this bus terminal?

Yes	No

Are there available cafeterias, restaurants in this bus terminal?

Yes	No

Is the food quality good?

Good	Average	Poor

Are there available drinking water?

Yes	No

What do you think about the water quality?

Good	Average	Poor

Are there toilets available and well-conditioned?

Good	Average	Poor

Are there well condition available buses in this terminal?

Good	Average	Poor

What do you think about the ticketing system condition?

Good	Average	Poor

Are those buses on scheduled?

Yes	No

Do you feel the terminals are safe?

Yes	No

Ticket selling system-

Manual	Digital	Online

Is ticket price fair?

Yes	No

Waiting Rooms-

AC	Non AC

Information system

Boards	Telephone	Online	Personal Communication

Is there sufficient space for bus parking facilities?

Yes	No

Is there isolated space for workshops, fueling facilities and longtime stay?

Yes	No

Is there sufficient space for passenger's personal vehicles parking?

Yes	No

Is there sufficient Fire Extinguisher?

Yes	No

Is there enough lighting System in this terminal?

Yes	No

Is there separate Entry and Exit away for Bus operating?

Yes	No

What do you think about terminal cleanliness?

Good	Average	Poor

3.4 The study area:

Based on experience and present existing bus terminal condition, study area followed by:

Site 1:-

Gabotali Bus Terminal

Area: 800 m²

Established:

1945

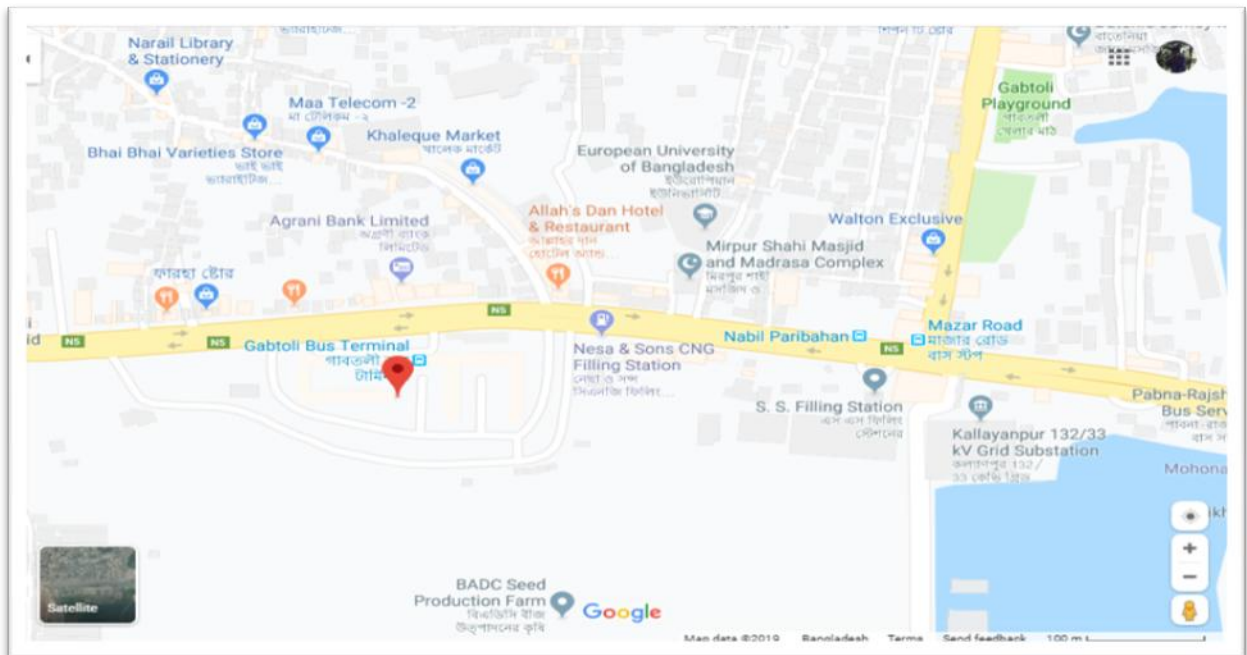


Fig 3.2: Gabotali Bus Terminal (picture taken from Google map)



Fig 3.3: Gabotali Bus Terminal
A Study On Passenger Facilities At Selected Bus Terminal In Dhaka

Site 2:-

Mahakhali Bus Terminal

Area: 36,400 m²

Established: 1984



Fig 3.4: Mahakhali bus terminal (picture taken from Google map)



Fig 3.5: Mahakhali bus terminal

a) Gabotoli Bus Terminal



Fig 3.6: Gabotoli Bus Terminal

b) Mahakhali Bus Terminal



Fig 3.7: Mahakhali Bus Terminal



Fig 3.8: Gabotali bus terminal



Fig 3.9: Mahakhali bus terminal



CHAPTER FOUR

DATA COLLECTION & ANALYSIS

CHAPTER FOUR

Data Collection & Analysis

4.1 Data Analysis:

We have collected data from the survey area. Then, on the basis of our data survey, we drag the pie chart and bar chart. We discussed the terminal condition and also compare all terminal condition and passenger facility.

4.2 Data Collection & Table:

Place: Gabtali Bus Terminal:

One of the busiest inter-district bus terminals in the capital is the Gabtali bus terminal. The Gabtali bus terminal was established in the 1945th. The size of this terminal is about 800 square meters. From there, buses depart from all the districts of North and South Bengal

Table 4.1: Do the terminals are well facilitated?

Good	Average	Poor
27	32	41

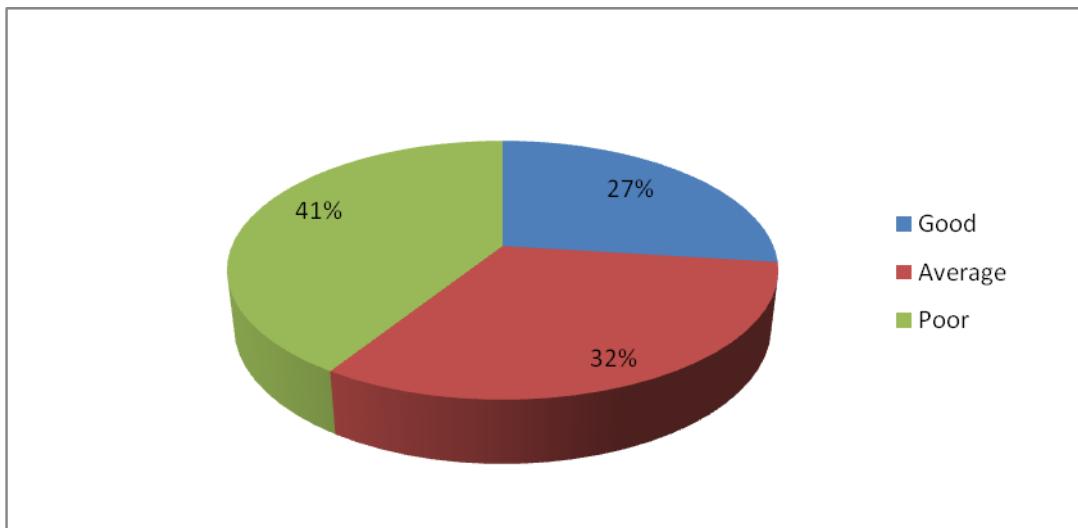


Fig 4.1: Terminal condition

In figure 4.1, we can see that 27% of people recommend that the overall condition of this terminal is good, 32% of people recommend that overall condition of this terminal is average and 41% of people recommend that overall condition of this terminal condition is poor.

Table 4.2: Are there sufficient waiting place for heavy passengers?

Yes	No
37	63

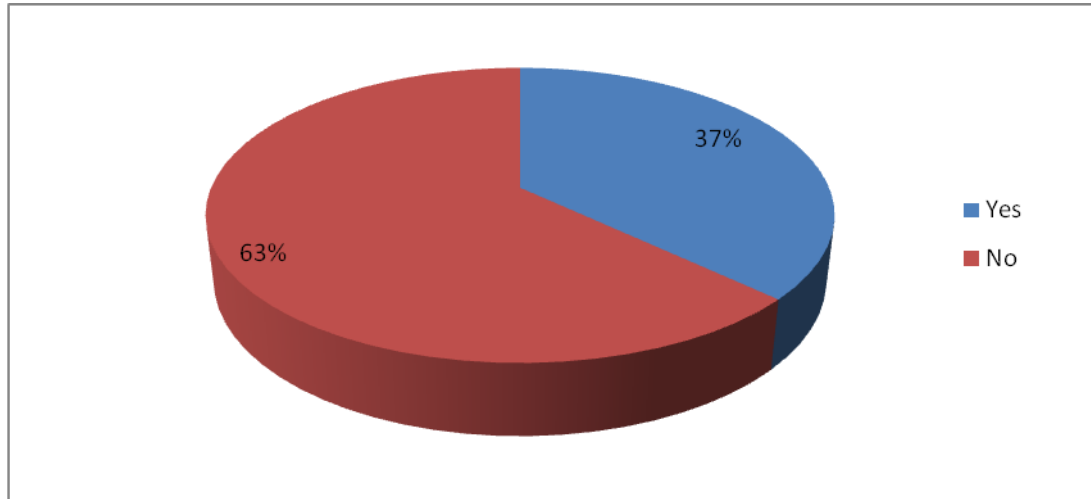


Fig 4.2: Passenger waiting place of this terminal

In figure 4.2, we can see that 37% of people recommend that this terminal waiting place for heavy passengers are sufficient but, 63% of people recommend that this terminal waiting place for heavy passengers are not sufficient.

Table 4.3: Are passengers waiting room well condition?

Good	Average	Poor
19	44	37

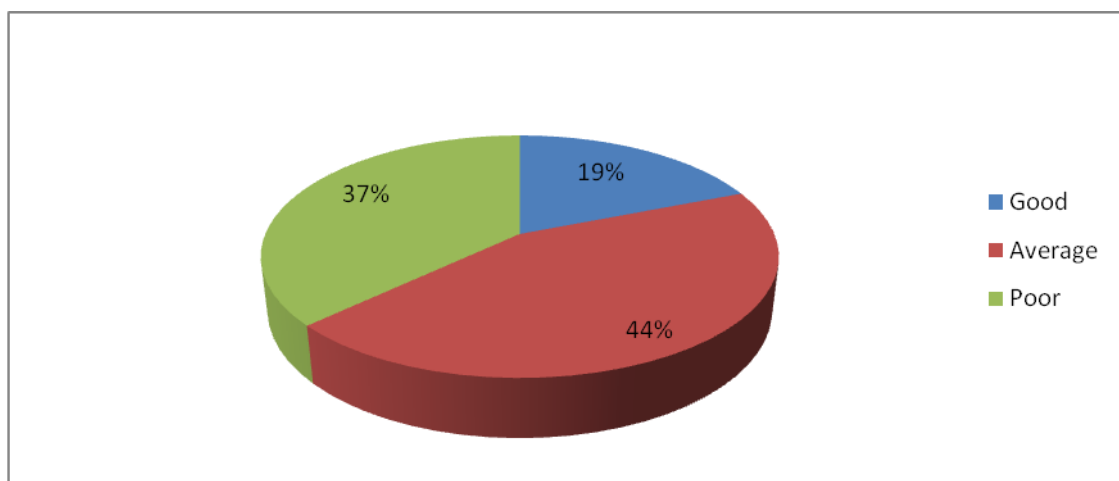
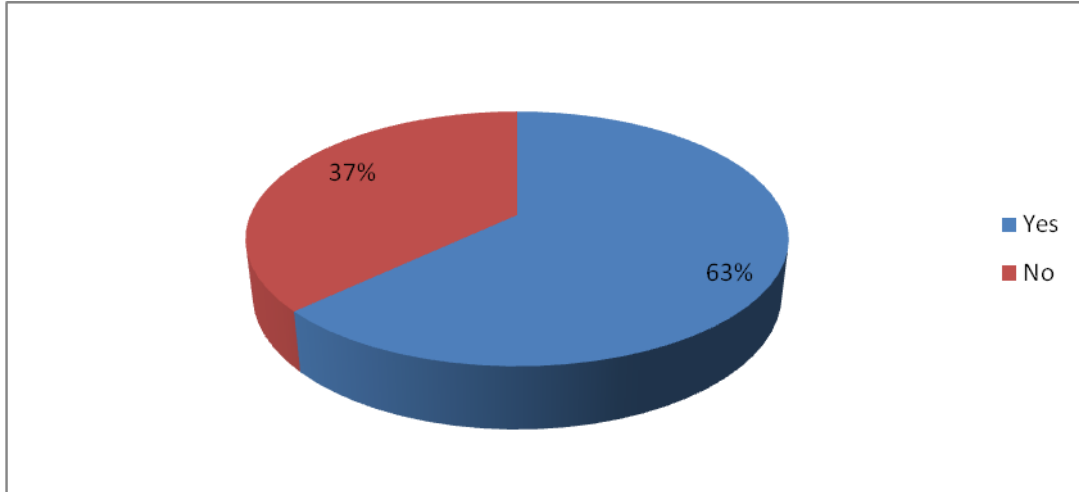


Fig 4.3: Waiting room condition of this terminal

In figure 4.3, we can see that 19% of people recommend that this terminal passengers waiting room condition is good, 44% of people recommend that this terminal passengers waiting room condition is average and 37% of people recommend that this terminal passenger waiting room condition is poor. Overall, terminal passenger waiting room condition is average.

Table 4.4: Do you comfortable in this bus terminal?

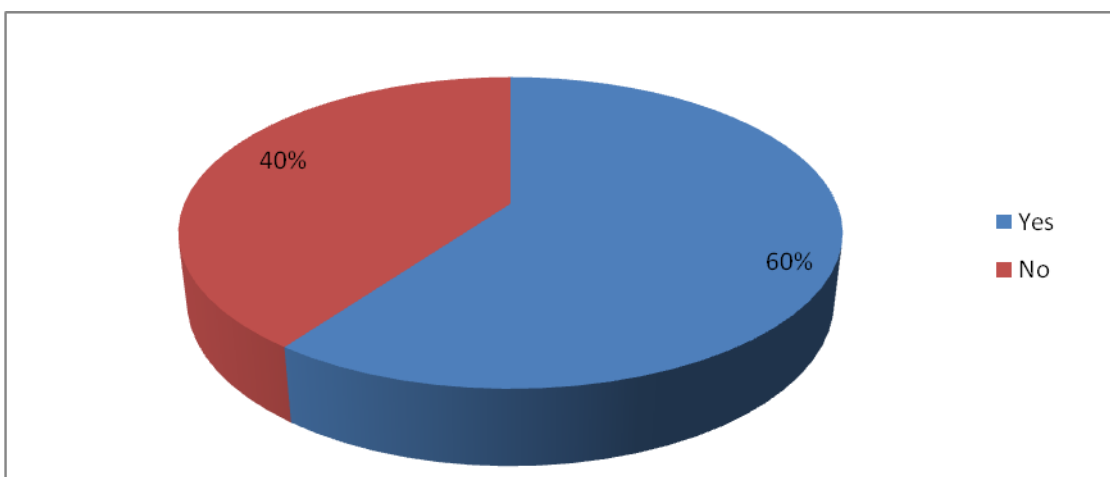
Yes	No
63	37

**Fig 4.4: Bus terminal comfortable condition**

In figure 4.4, we can see that 63% of people are comfortable in this bus terminal and on the other side 37% of people are not comfortable in this terminal. Overall passenger feel comfortable in this bus terminal though there're weather, sound pollution, snatcher etc

Table 4.5: Are there available cafeterias, restaurants in this bus terminal?

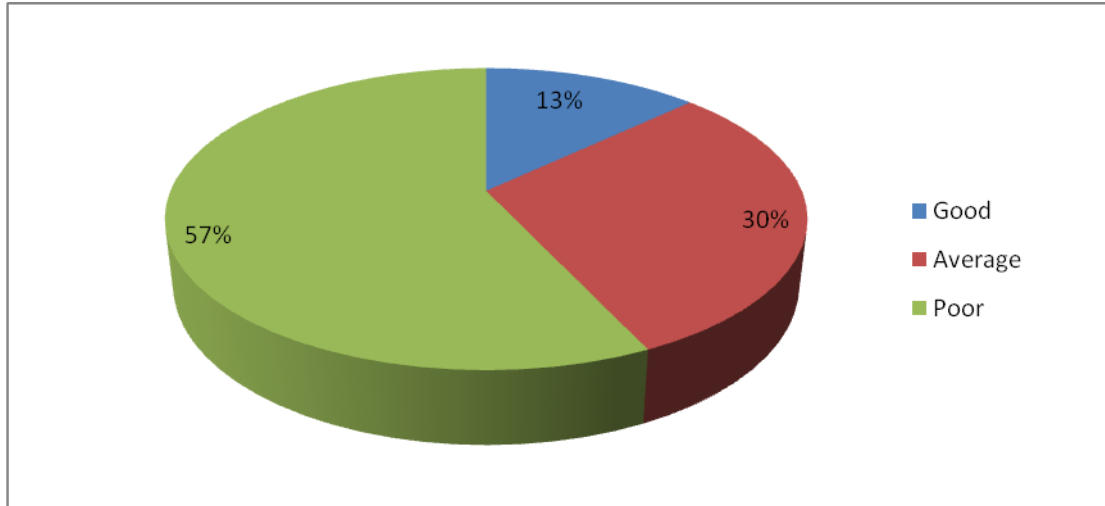
Yes	No
60	40

**Fig 4.5: Bus terminal restaurants**

In figure 4.5 we can see that 60% people are satisfied with restaurant and 40% don't think enough restaurants available in Gabtali bus terminal.

Table 4.6: Are the food qualities good?

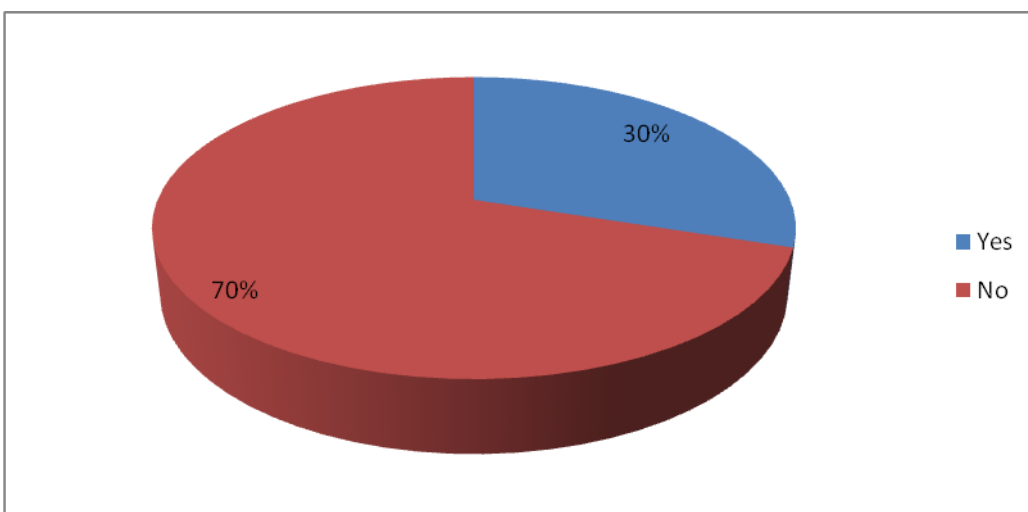
Good	Average	Poor
13	30	57

**Fig 4.6: Terminal food qualities**

In figure 4.6 where we can see that 13% of people recommend that there is available cafeteria in this terminal and food quality is good, 30% of people recommend that in this food quality is average in this terminal and 57% of people recommend that food quality is poor in this terminal. So there is not available best quality cafeteria, restaurant and their food quality are not good.

Table 4.7: Are there available drinking water?

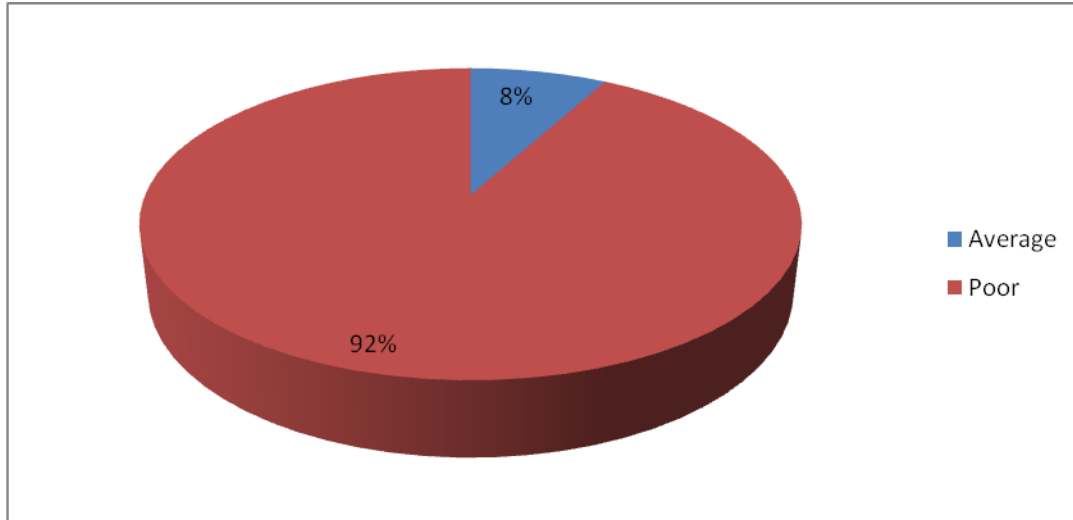
Yes	No
30	70

**Fig 4.7: Drinking Water**

From table 4.7 we can see 70% says there're no available drinking water, 30% say there're water in individual counters but that there is no available municipal drinking water but people can buy mineral water from nearest shop.

Table 4.8: What do you think about the water quality?

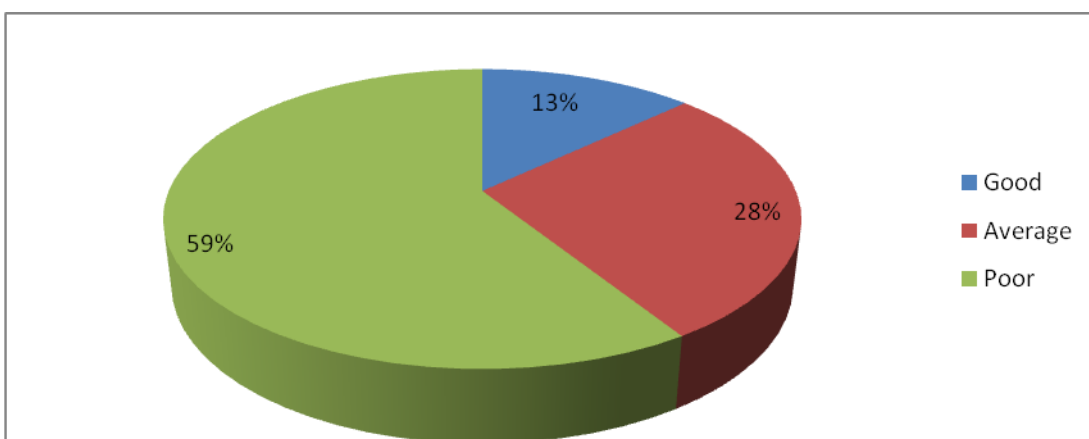
Good	Average	Poor
0	8	92

**Fig 4.8: Water Quality**

From table 4.7 and 4.8 we can see that there is no available municipal drinking water, people can buy mineral water from nearest shop and everyone considered the quality is good.

Table 4.9: Are there toilets available and well-conditioned?

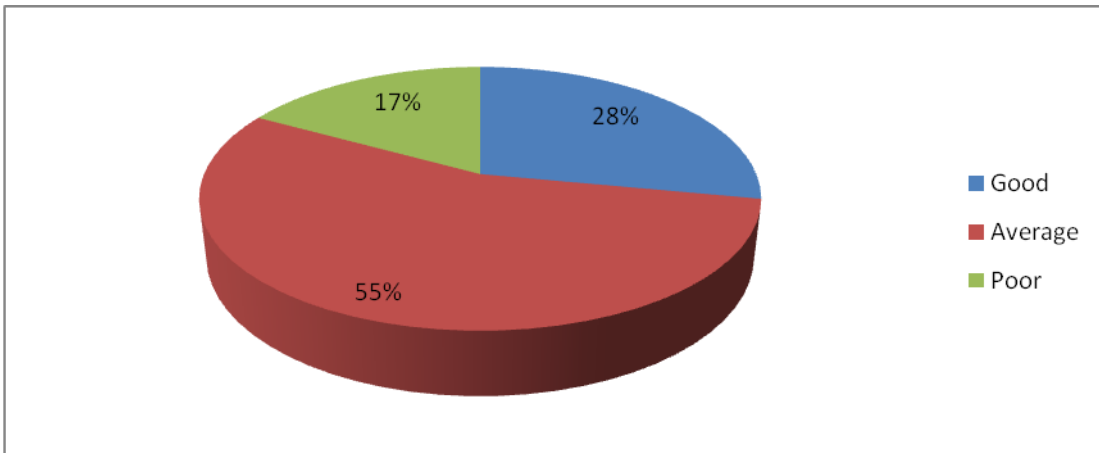
Good	Average	Poor
13	28	59

**Fig 4.9: Toilets condition of the terminal**

In figure 4.9, we can see that 13% of people recommend that these terminal toilets are available and well-conditioned, 28% of people recommend that these terminal toilets condition is average and 59% of people recommend that these terminal toilets condition is poor. Overall, terminal toilets are not available.

Table 4.10: Are there well condition available buses in this terminal?

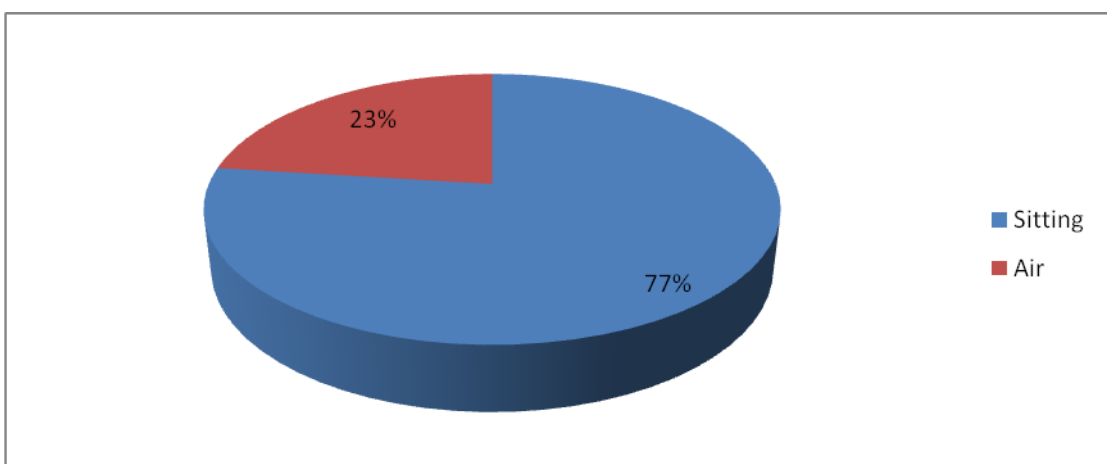
Good	Average	Poor
28	55	17

**Fig 4.10: Terminal available buses condition**

In figure 4.10, we can see that 28% of people recommend that there are available buses in this terminal and well condition in this terminal is good, 55% of people recommend that there are available buses in this terminal and well condition in this terminal is average and 17% of people recommend that there are available buses in this terminal and well condition in this terminal is poor.

Table 4.11: Waiting Rooms-:

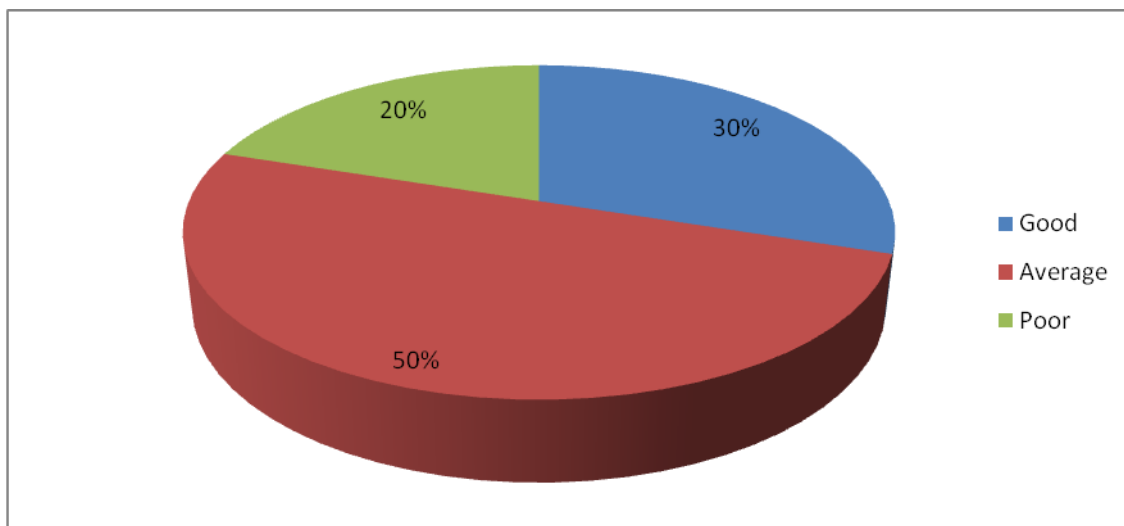
AC	Non AC
23	77

**Fig 4.11: Waiting lounge of the terminal**

In figure 4.11, we can see that 77% people recommend that this Waiting Rooms- is sitting accommodation.23% found A/C lounge in private bus counters

Table 4.12: What do you think about the ticketing system condition?

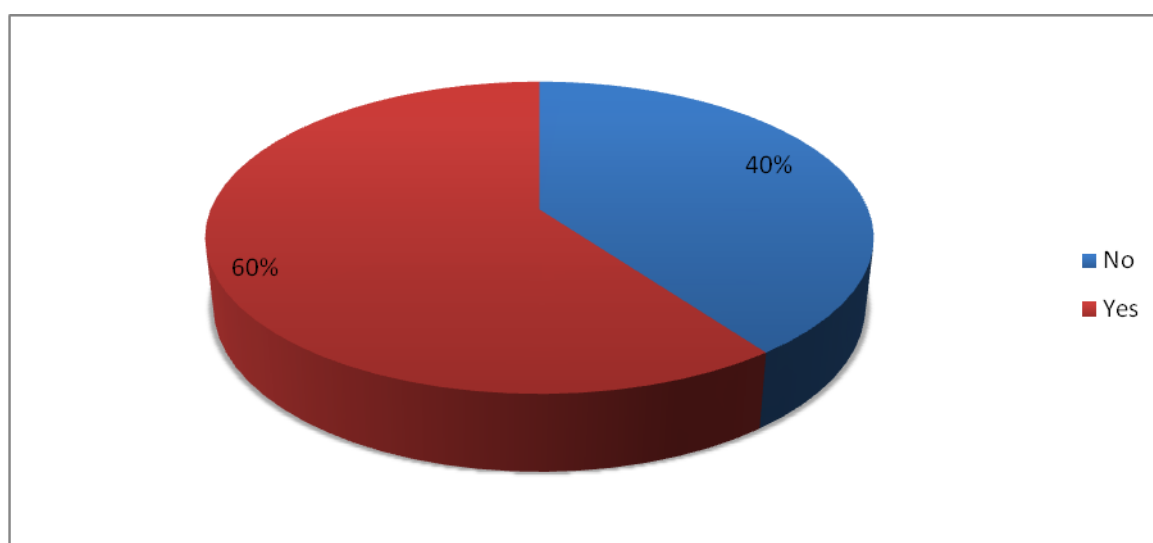
Good	Average	Poor
30	50	20

**Fig 4.12: Ticketing system of the terminal**

In figure 4.12, we can see that 30% of people recommend that there ticketing system is well condition in this terminal, 50% of people recommend that there ticketing system is average condition this terminal and 20% of people recommend that there ticketing system is poor condition in this terminal.

Table 4.13: Are there available scheduled buses?

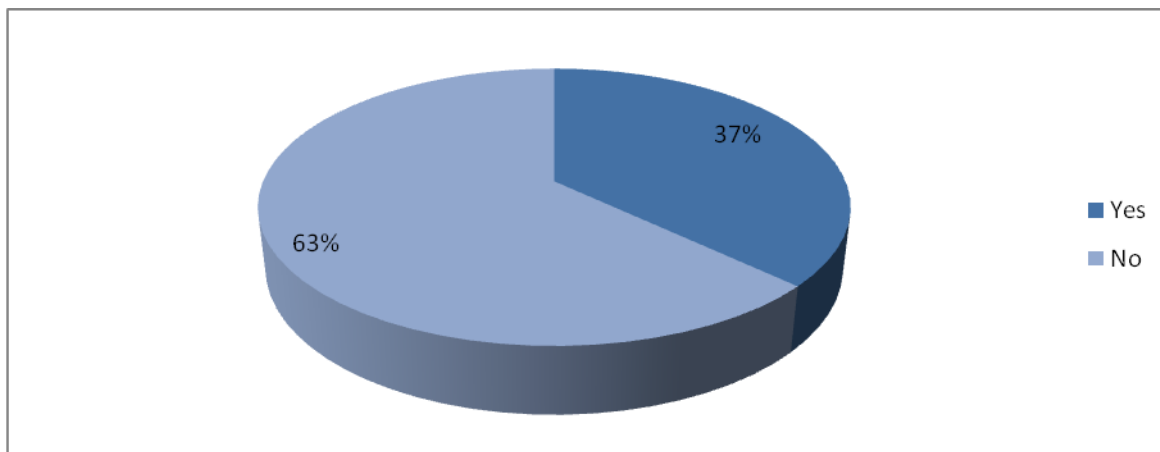
Yes	No
60	40

**Fig 4.13: Scheduled buses of the terminal**

In figure 4.13, we can see that 60% of people recommend that there is available scheduled bus 40% of people recommend that there is unavailable scheduled bus in this in this terminal.

Table 4.14: Do you feel the terminal is safe?

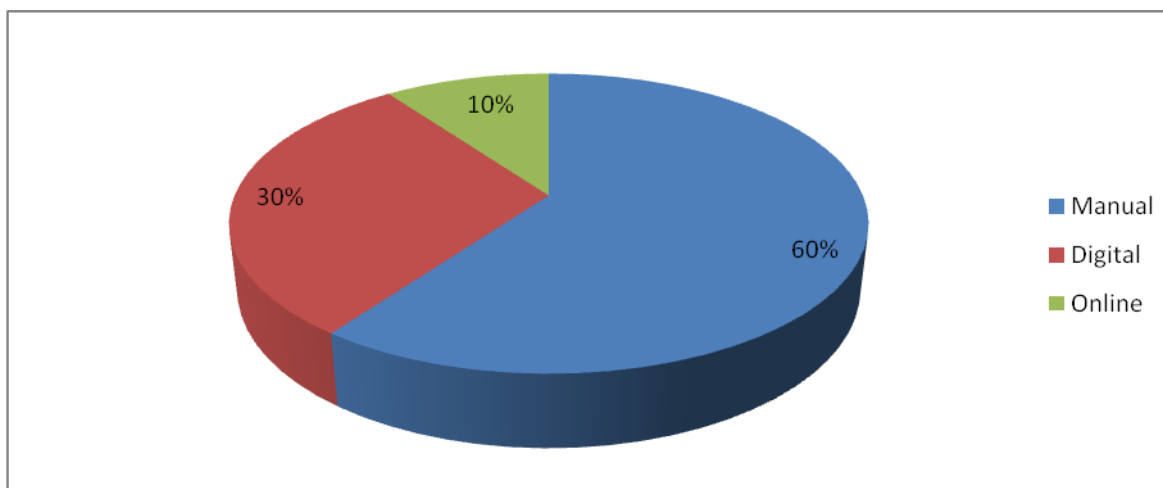
Yes	No
37	63

**Fig 4.14: Terminal safety condition**

In figure 4.14, we can see that 37% of people recommend that this terminal is safe for all people, 63% of people recommend that this terminal is unsafe for all people.

Table 4.15: Ticket selling system-

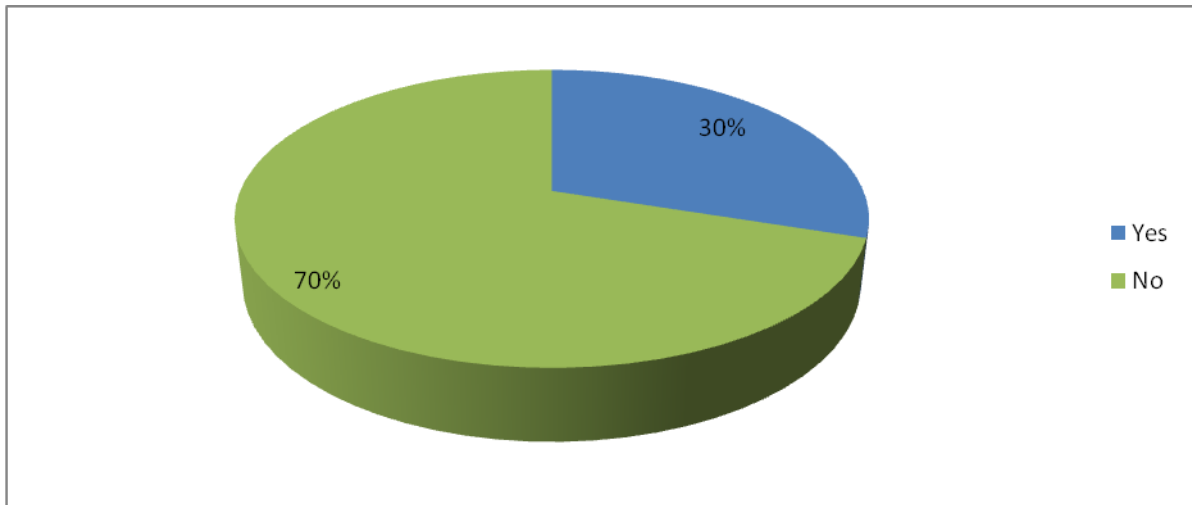
Digital	Manual	Online
30	60	10

**Fig 4.15: Ticket selling system of the terminal**

In figure 4.15, we can see that 60% of people recommend that their ticket selling system are manual in this terminal, 30% of people recommend that their ticket selling system are digital in this terminal, 10% of people recommended that they collect ticket from online.

Table 4.16: Is ticket price fair?

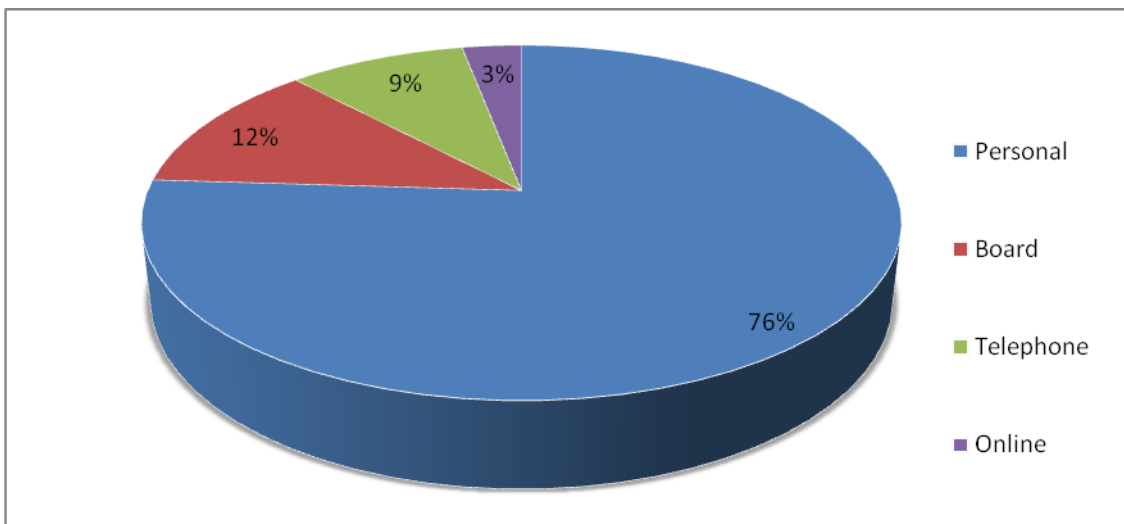
Yes	No
30	70

**Fig 4.16: Ticket price of the terminal**

In figure 4.16, we can see that 30% of people recommend that this terminal ticket price is fair, 70% of people recommend that this terminal ticket price is unfair. Overall, ticket price is not fair.

Table 4.17: Information system:

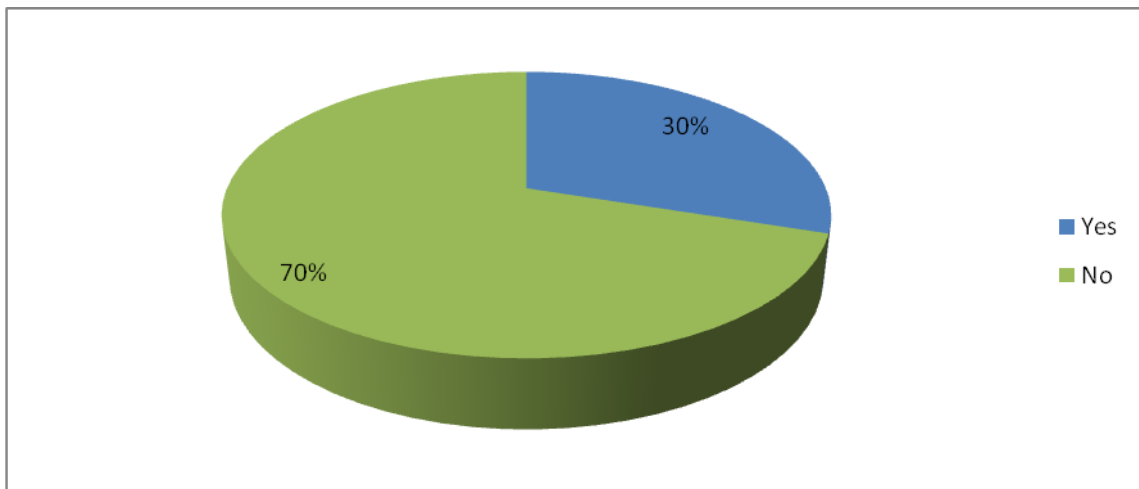
Boards	Telephone	Online	Personal Communication
12	09	03	76

**Fig 4.17: Information system of the terminal**

In figure 4.17, we can see that 12% of people recommend that they got information in this terminal over boards, 03% of people recommend that they got information in this terminal over online, 09% of people recommend that they got information in this terminal over telephone and 76% of people recommend that they got information in this terminal over personal communication.

Table 4.18: Is there sufficient space for passenger's personal vehicles parking?

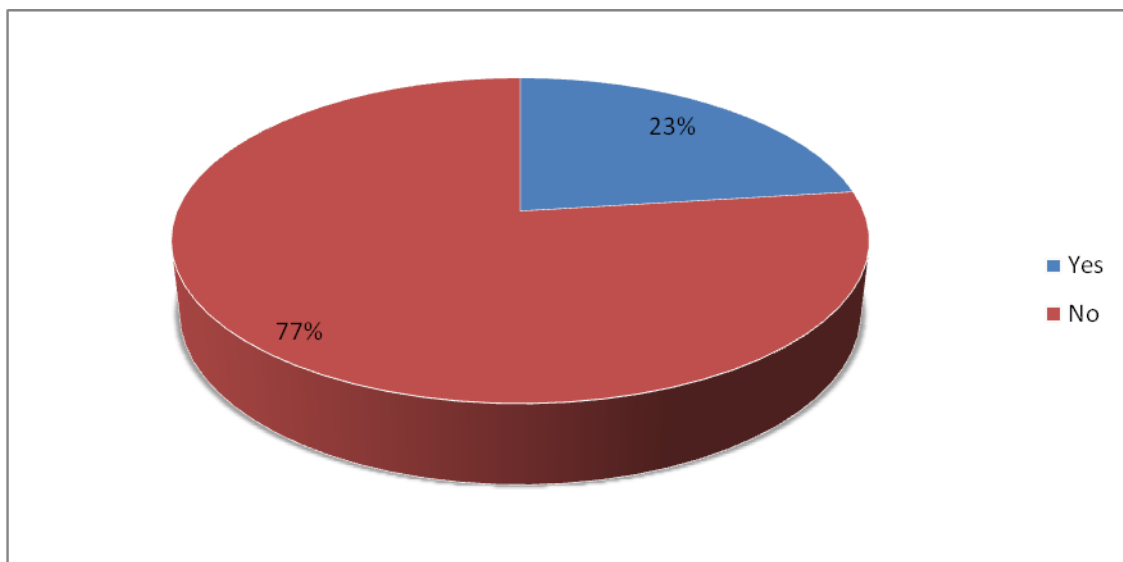
Yes	No
30	70

**Fig 4.18: Parking system of the terminal**

In figure 4.18, we can see that 30% of people recommend that they got parking facilities in this terminal. And rest of 70% thinks there aren't enough parking facilities

Table 4.19: Is there sufficient Fire Extinguisher?

Yes	No
23	77

**Fig 4.19: Fire Extinguisher system of the terminal**

In figure 4.19, we ask this question to passengers, terminal stuffs and management. It shows that only 23% of them think there are sufficient Fire Fighting facilities and 77% recommended that there needs more fire fighting facilities.

Table 4.20: Is there sufficient space for bus parking facilities?

Yes	No
80	20

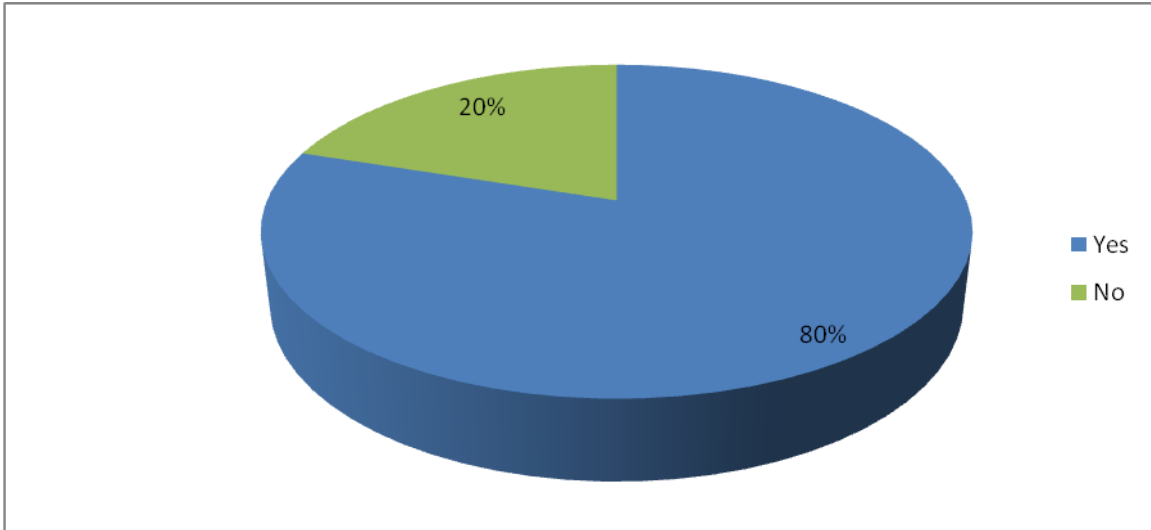


Fig 4.20: Bus parking system of the terminal

In figure 4.20, we ask this question to terminal bus stuffs 80% of them agree with there is sufficient parking place for buses.20% didn't agree with that. They thought only some big and renowned bus company and owner manipulated the parking system

Table 4.21: Is there isolated space for workshops?

Yes	No
100	00

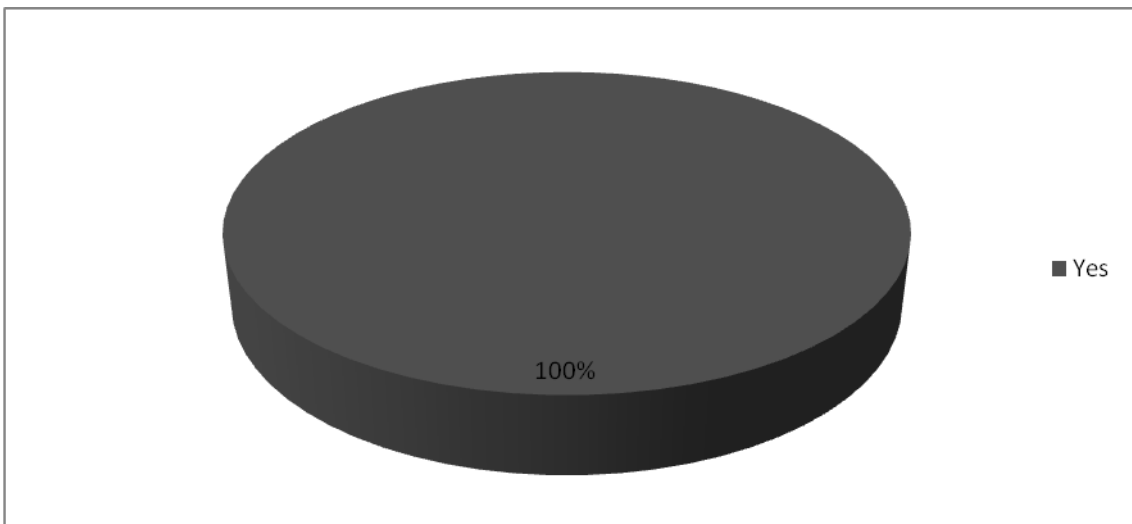


Fig 4.21: Isolated working space of the terminal

In figure 4.21, here again we ask this question to terminal stuffs and management and fortunately there's isolated workshops for normal and regular maintenance. 100% are agree with that

Table 4.22: Is there enough fueling facilities?

Yes	No
100	00

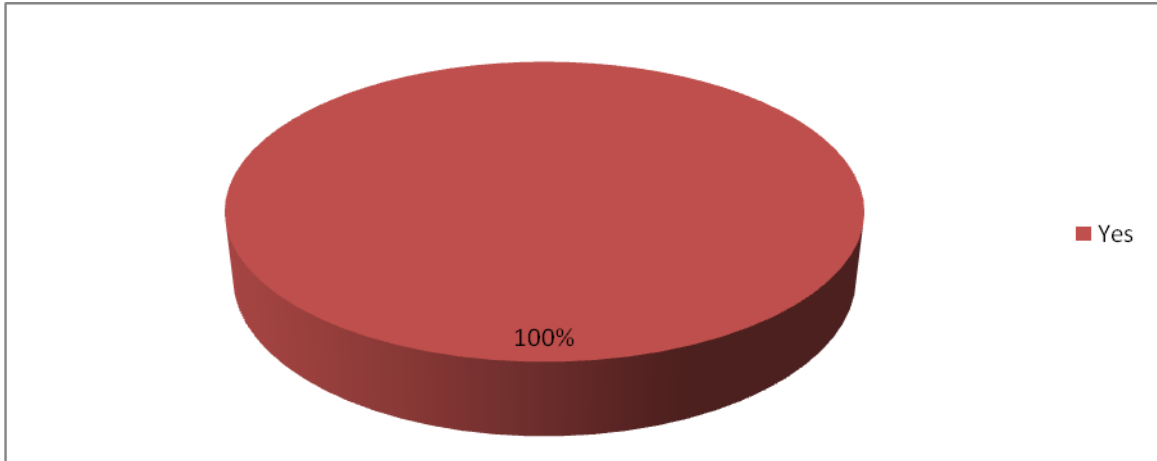


Fig 4.22: Fueling Facilities

In figure 4.22, passengers and management both are happy with fuelling facilities.

Table 4.23: Is there enough lighting System in this terminal?

Yes	No
32	68

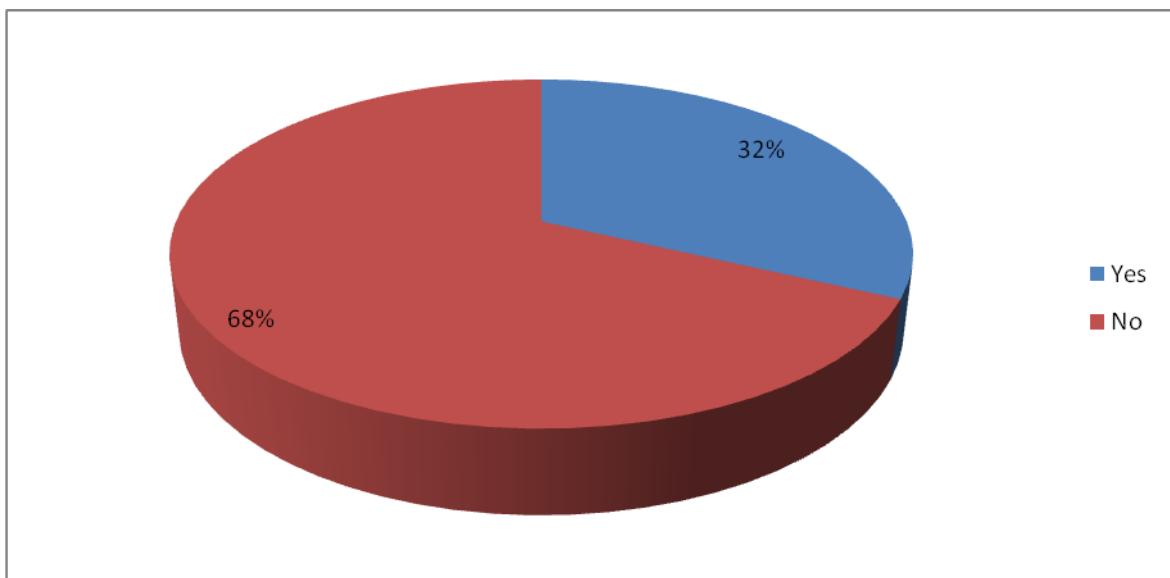


Fig 4.23: Lighting System

From figure 4.23 we can see that 32% people thought lighting system in night is acceptable but 68% of people are not satisfied with night lighting system

Table 4.24: Is there separate Entry and Exit away for Bus operating?

Yes	No
100	00

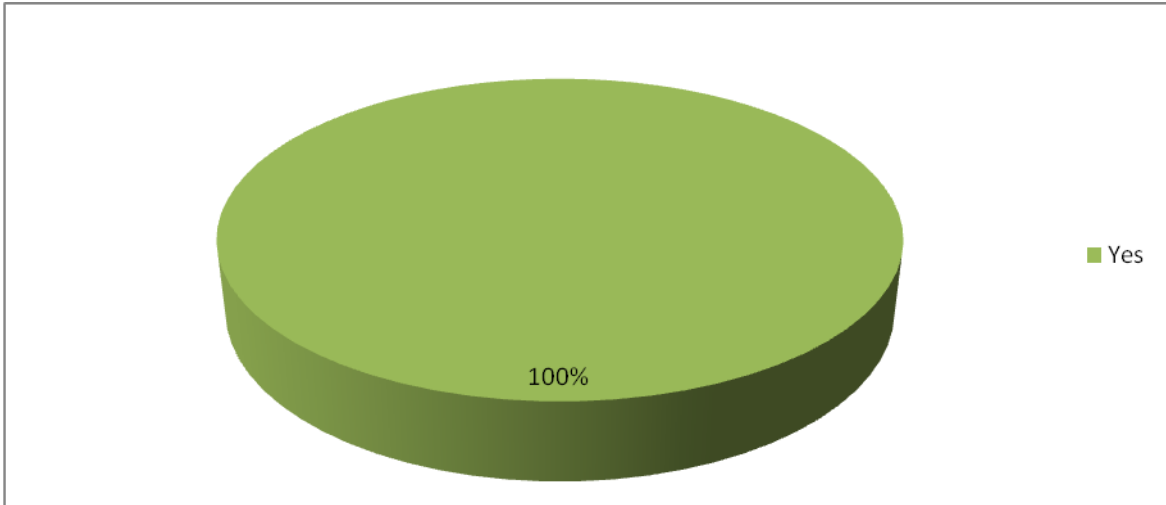


Fig 4.24: Separate Entry and Exit

From Figure 4.24: We can see that there is separate entry and exit for bus operating

Table 4.25: What is your opinion about cleanliness?

Good	Average	Poor
11	45	46

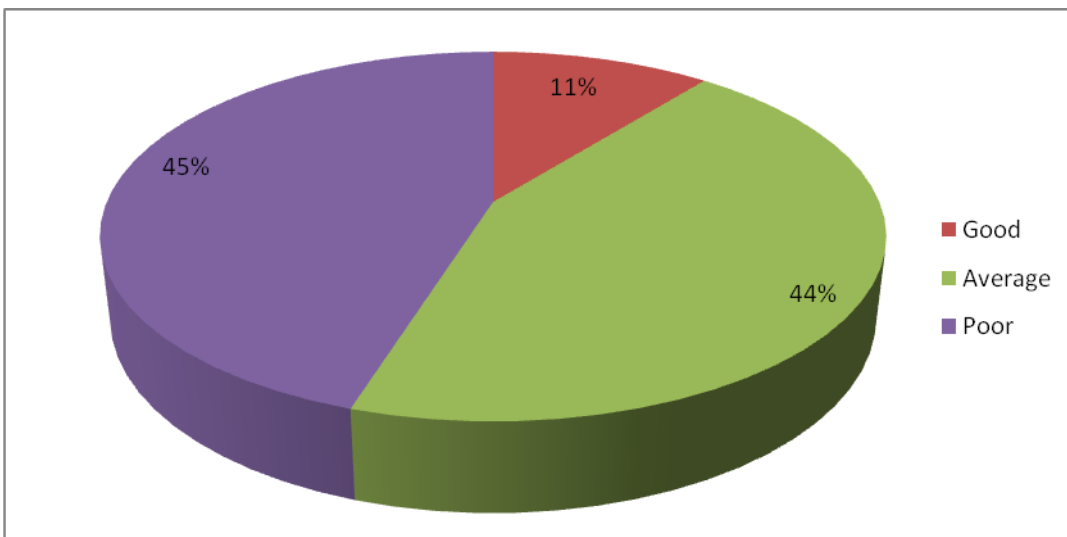


Fig 4.25: Clean & Cleanliness

In figure 4.25 we can see that 46% of people expressed that this terminal cleaning condition is poor.45% recommended average and 11% are happy with cleaning system.

Place: Mahakhali Bus Terminal:

Mohakhali Bus Terminal is one of three main inter-city bus stations in Dhaka opened in 1984. Area of Mahakhali bus terminal in 36,400 sq meters.

Famous Routes:

Sylhet region Tangail, Netrokona, Mymensingh, Jamalpur, Sherpur

Kishoreganj, and Bogra. This site can accommodate 300 buses. As of 2015, companies operate 800 daily trips from the terminal, on 60 different routes.

Table 4.26: Do the terminals are well facilitated?

Good	Average	Poor
62	23	15

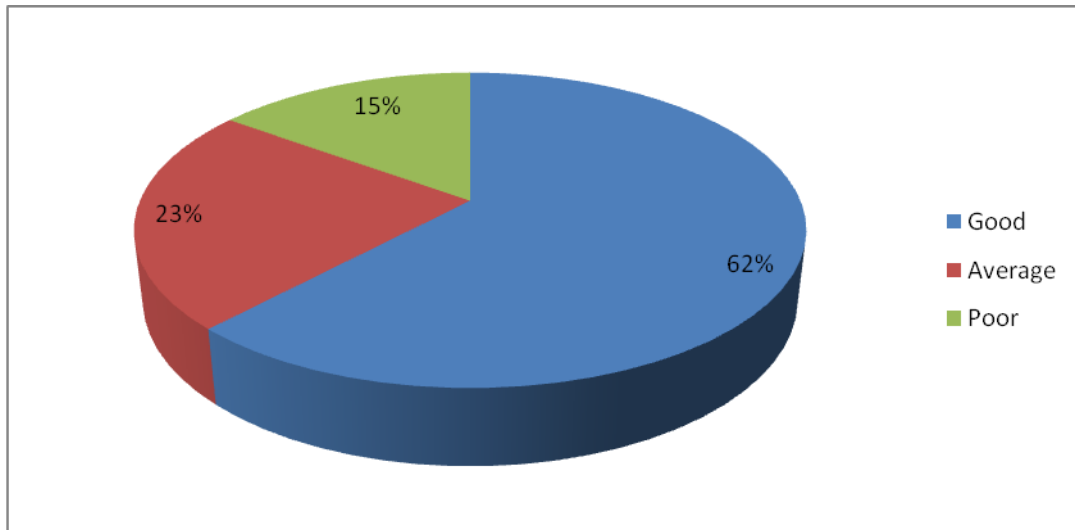


Fig 4.26: Terminal condition

In figure 4.26, we can see that 62% of people recommend that the overall condition of this terminal is good, 23% of people recommend that overall condition of this terminal is average and 15% of people recommend that overall condition of this terminal condition is poor.

Table 4.27: Are there sufficient waiting place for heavy passengers?

Yes	No
57	43

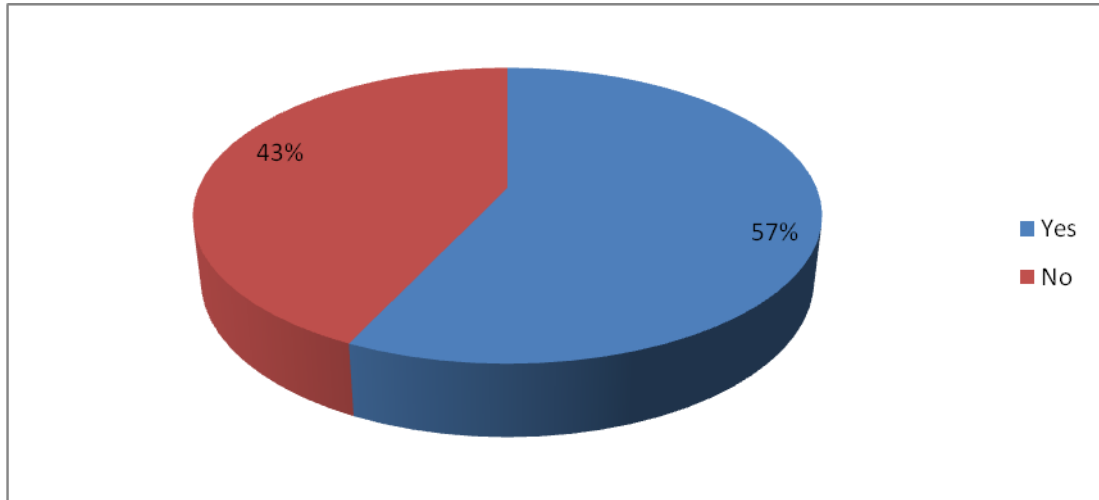


Fig 4.27: Passenger waiting place of this terminal

In figure 4.27, we can see that 57% of people recommend that this terminal waiting place for heavy passengers are sufficient but, 43% of people recommend that this terminal waiting place for heavy passengers are not sufficient for local and short distance passengers

Table 4.28: Are passengers waiting room well condition?

Good	Average	Poor
37	29	34

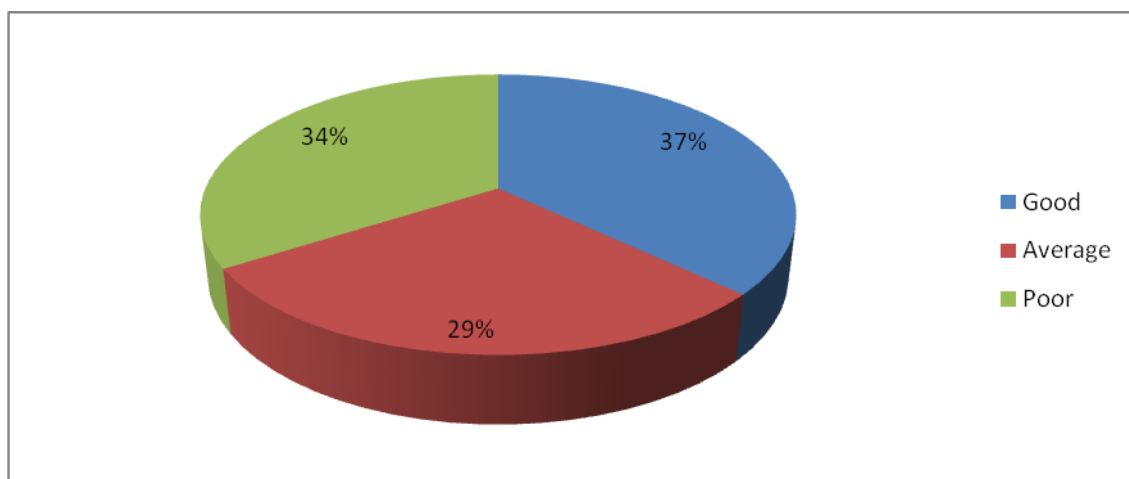
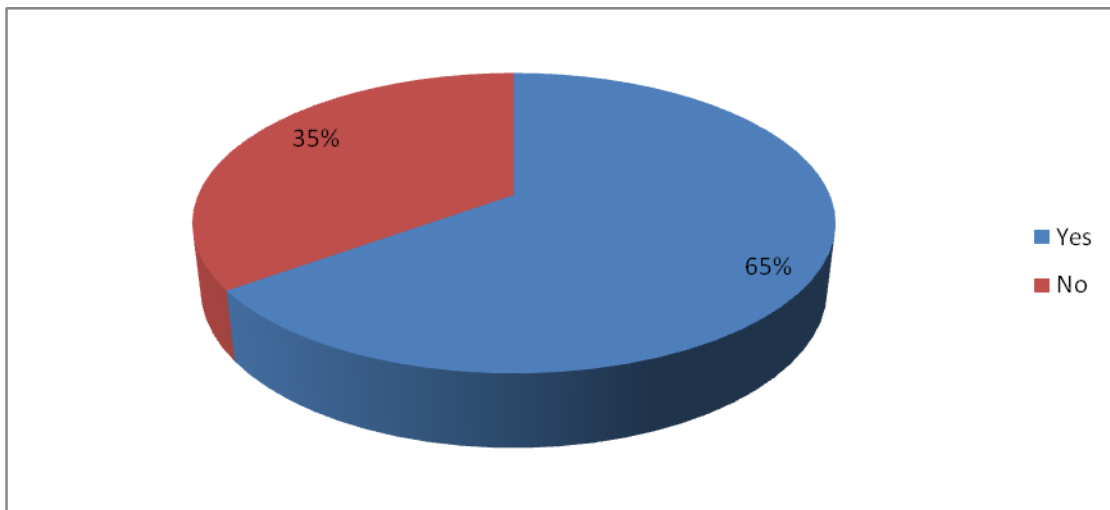


Fig 4.28: Waiting room condition of this terminal

In figure 4.28, we can see that 37% of people recommend that this terminal passengers waiting room condition is good, 29% of people recommend that this terminal passengers waiting room condition is average and 34% of people recommend that this terminal passenger waiting room condition is poor. Overall, terminal passenger waiting room condition is Good.

Table 4.29: Do you comfortable in this bus terminal?

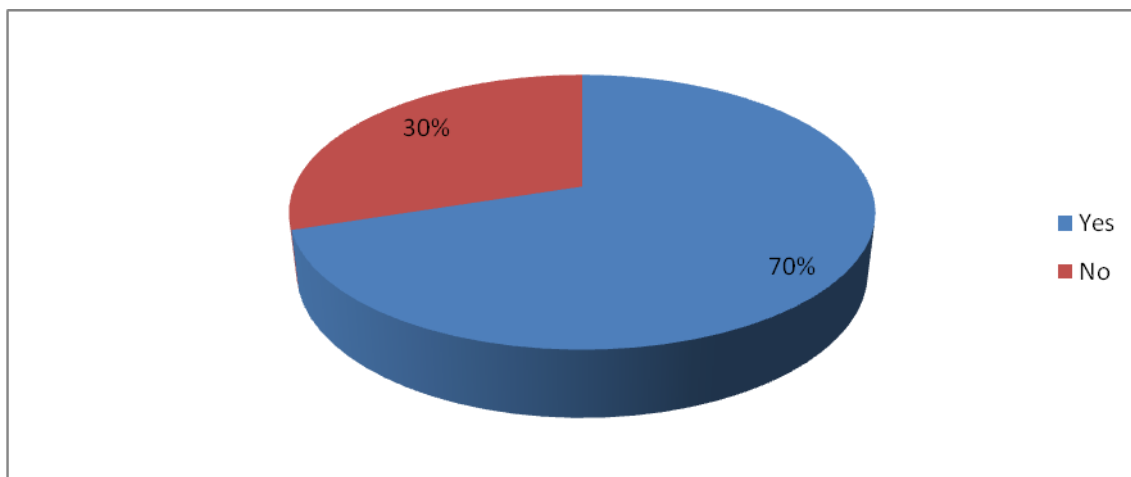
Yes	No
65	35

**Fig 4.29: Bus terminal comfortable condition**

In figure 4.29, we can see that 65% of people are comfortable in this bus terminal and on the other side 35% of people are not comfortable in this terminal. Overall passenger does not feel comfortable in this bus terminal due to weather, sound pollution, snatcher etc. Overall maximum people are comfortable.

Table 4.30: Are there available cafeterias, restaurants in this bus terminal?

Yes	No
70	30

**Fig 4.30: Bus terminal restaurants**

In figure 4.30 we can see that 70% people thought there are available restaurants but 30% thought there isn't enough

Table 4.31: Are the food qualities good?

Good	Average	Poor
23	50	27

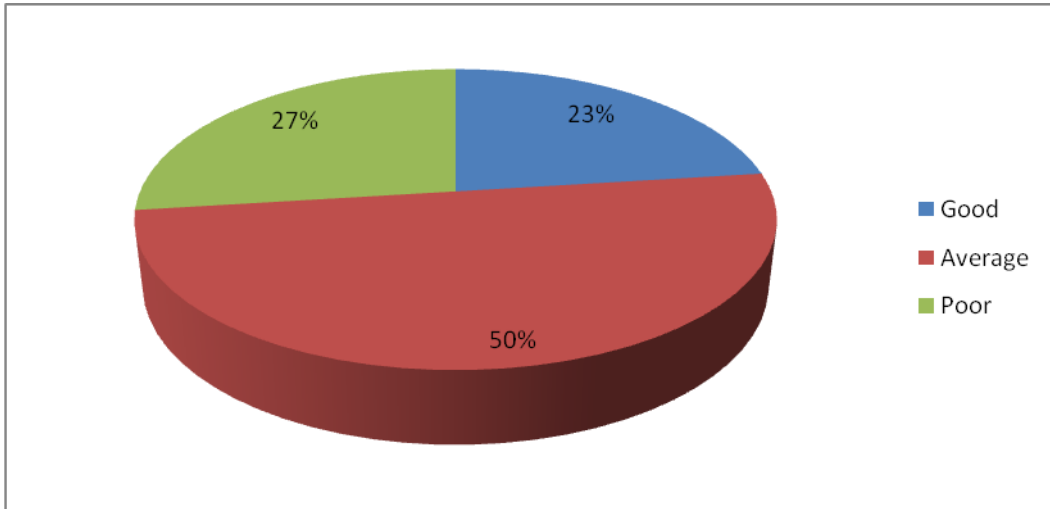


Fig 4.31: Terminal food qualities

In figure 4.31, Where we can see that 23% of people recommend that there is available cafeteria in this terminal and food quality is good, 50% of people recommend that that there is available cafeteria in this terminal and food quality is average in this terminal and 27% of people recommend that there is unavailable cafeteria in this terminal and food quality is poor in this terminal. So there is not available best quality cafeteria, restaurant and their food quality are not good.

Table 4.32: Are there available drinking water?

Yes	No
10	90

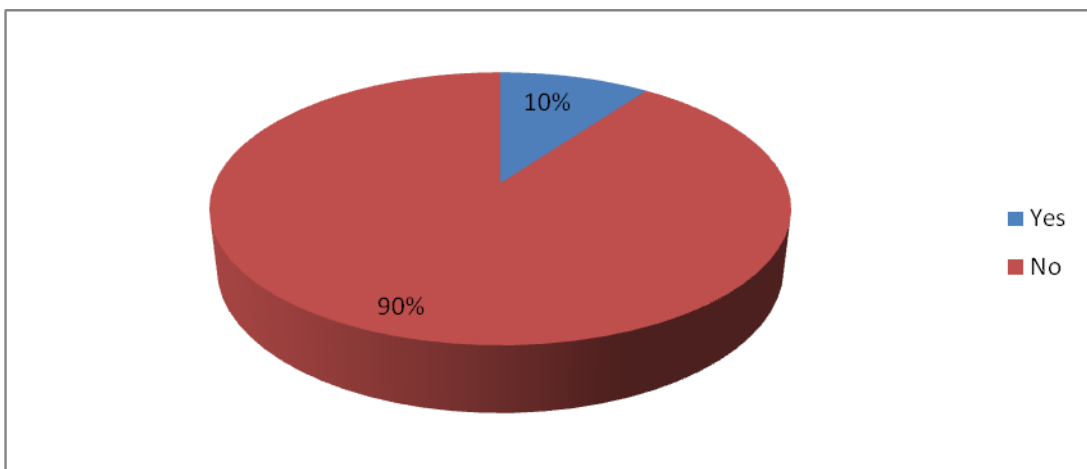


Fig 4.32: Drinking Water

From table 4.32 we can see that there is no available municipal drinking water. All of the people can buy mineral water from nearest shop.10% people get water facilities in air conditioned buses and its counter.

Table 4.33: What do you think about the water quality?

Good	Average	Poor
0	17	83

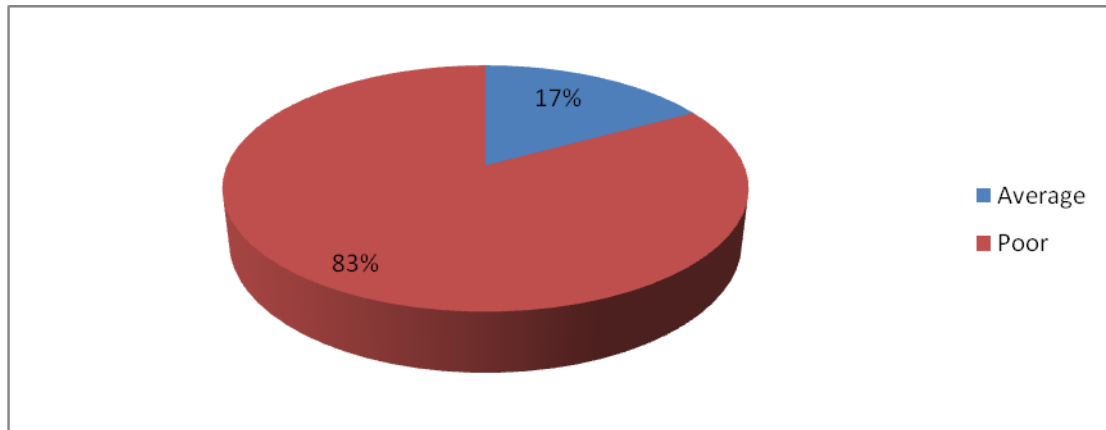


Fig 4.33: Water Quality

From table 4.33 we can see that there is no available municipal drinking water, people can buy mineral water from nearest shop. Though they are demanded free municipal water supply with good quality.

Table 4.34: Are there toilets available and well-conditioned?

Good	Average	Poor
09	33	58

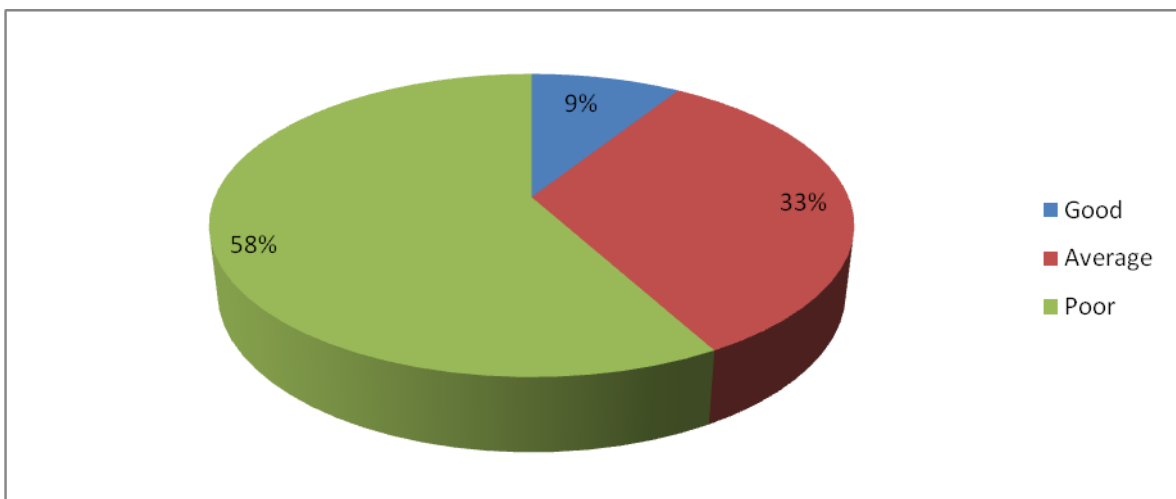
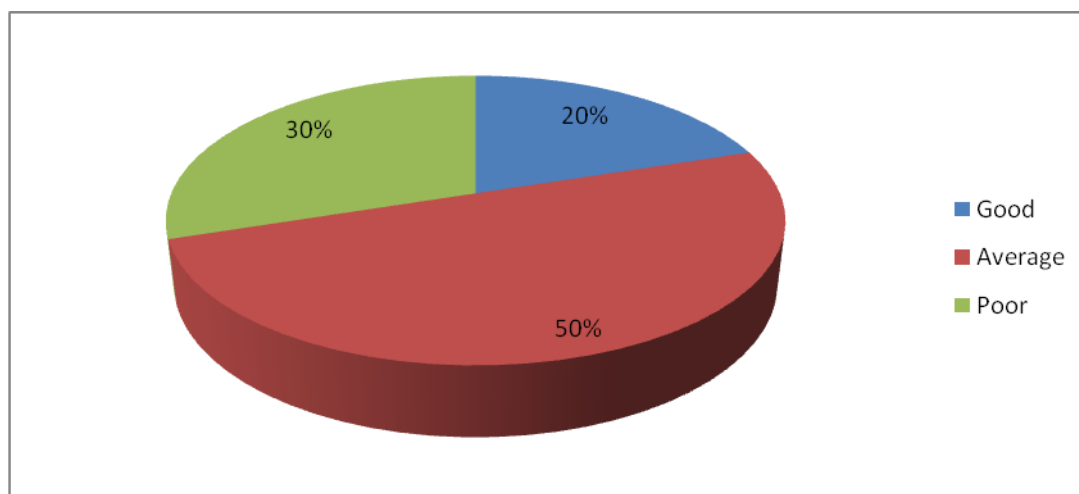


Fig 4.34: Toilets condition of the terminal

In figure 4.34, we can see that 9% of people recommend that these terminal toilets are available and well-conditioned, 33% of people recommend that these terminal toilets condition is average and 58% of people recommend that these terminal toilets condition is poor. Overall, terminal toilets are not available.

Table 4.35: Are there well condition available buses in this terminal?

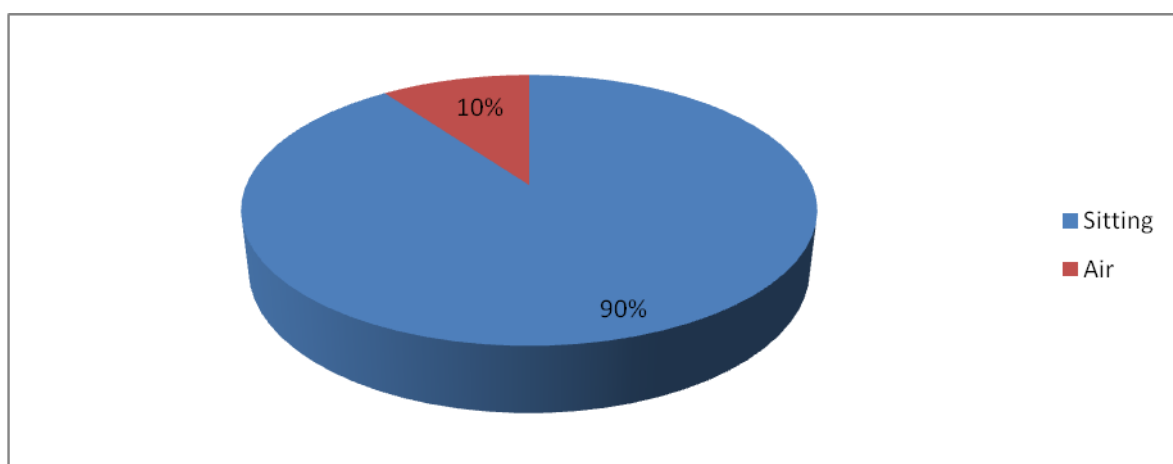
Good	Average	Poor
20	50	30

**Fig 4.35: Terminal available buses condition**

In figure 4.35, we can see that 20% of people recommend that there are available buses in this terminal and well condition in this terminal is good, 50% of people recommend that there are available buses in this terminal and well condition in this terminal is average and 30% of people recommend that there are available buses in this terminal and well condition in this terminal is poor.

Table 4.36: Waiting Rooms-:

AC	Non AC
10	90

**Fig 4.36: Waiting lounge of the terminal**

In figure 4.36, we can see that 90% people recommend that this Waiting Rooms- is sitting accommodation.10% people from a private bus company said that they got A/C sitting lounge.

Table 4.37: What do you think about the ticketing system condition?

Good	Average	Poor
30	47	23

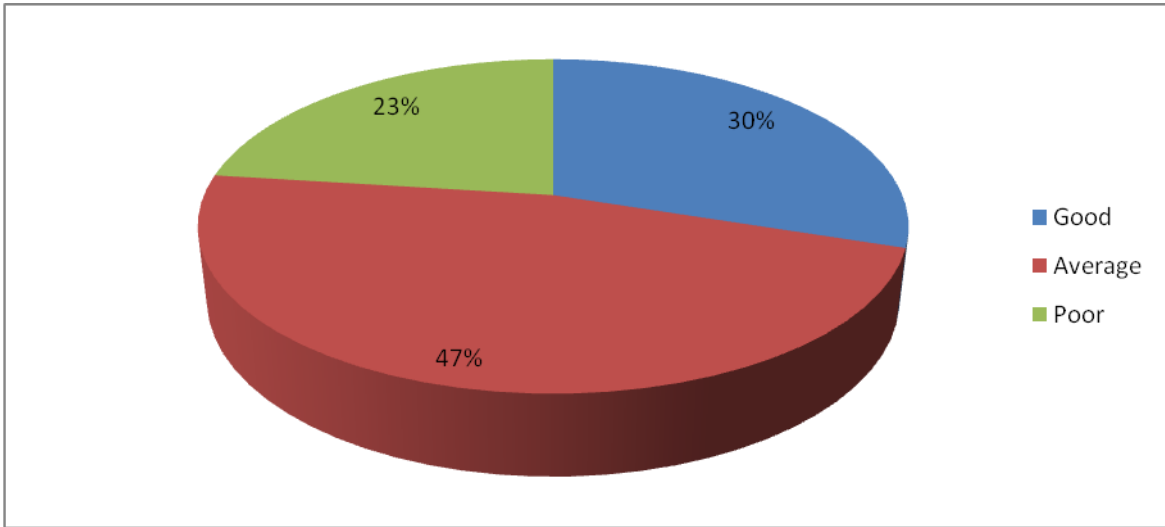


Fig 4.37: Ticketing system of the terminal

In figure 4.37, we can see that 30% of people recommend that there ticketing system is well condition in this terminal, 47% of people recommend that there ticketing system is average condition this terminal and 23% of people recommend that there ticketing system is poor condition in this terminal.

Table 4.38: Are there available scheduled buses?

Yes	No
70	30

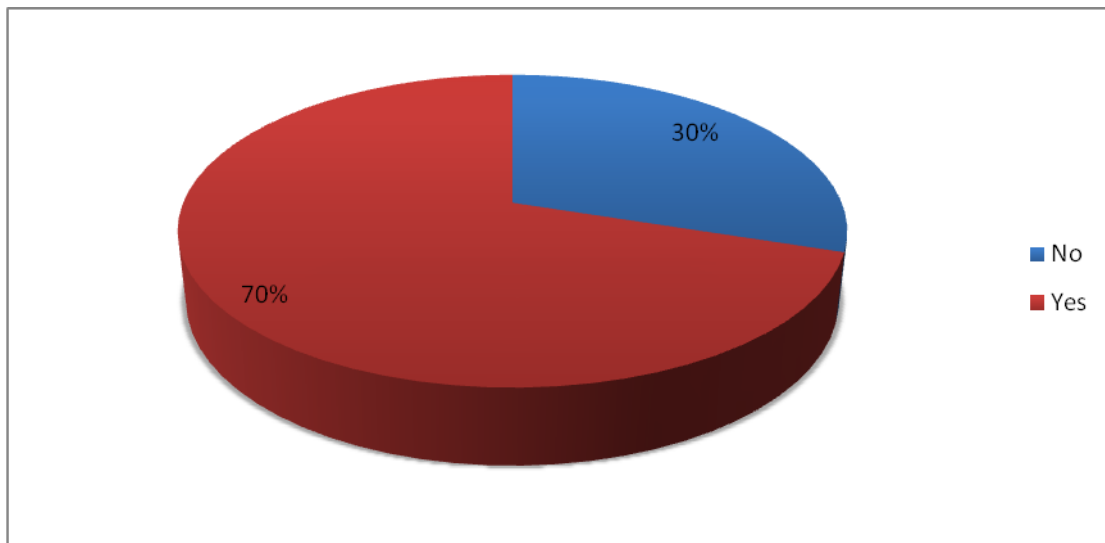
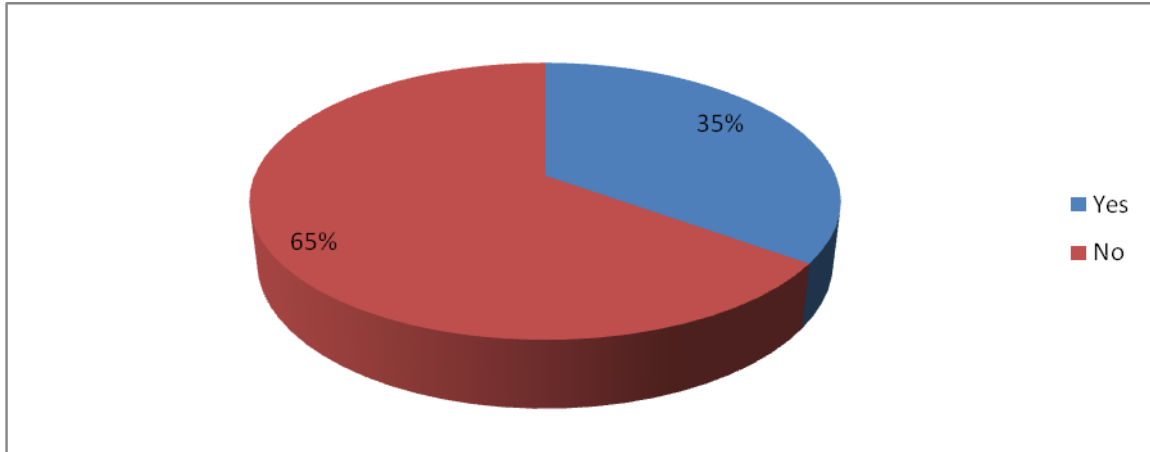


Fig 4.38: Scheduled buses of the terminal

In figure 4.38, we can see that 70% of people recommend that there is available scheduled bus 30% of people recommend that there is unavailable scheduled bus in this in this terminal.

Table 4.39: Do you feel the terminal is safe?

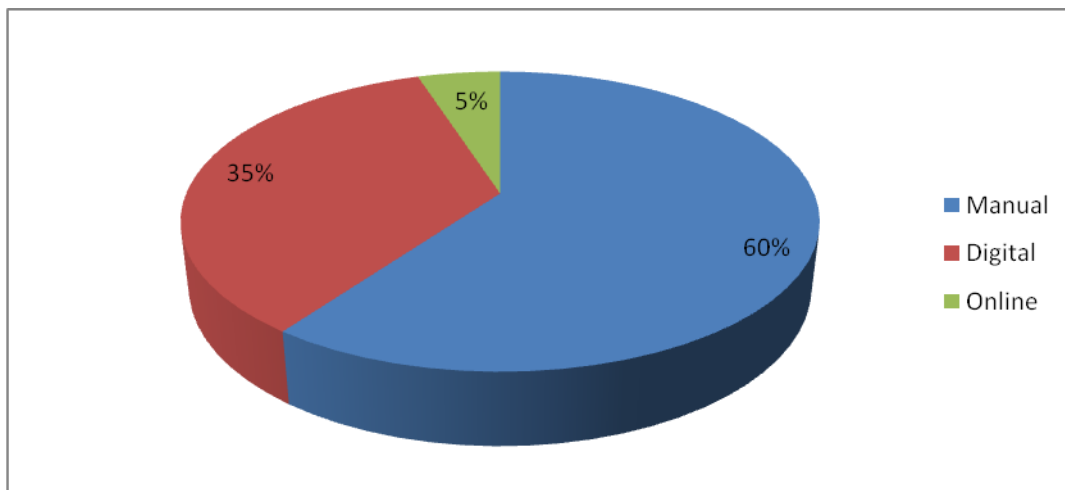
Yes	No
35	65

**Fig 4.39: Terminal safety condition**

In figure 4.39, we can see that 35% of people recommend that this terminal is safe for all people, 65% of people recommend that this terminal is unsafe for all people.

Table 4.40: Ticket selling system-

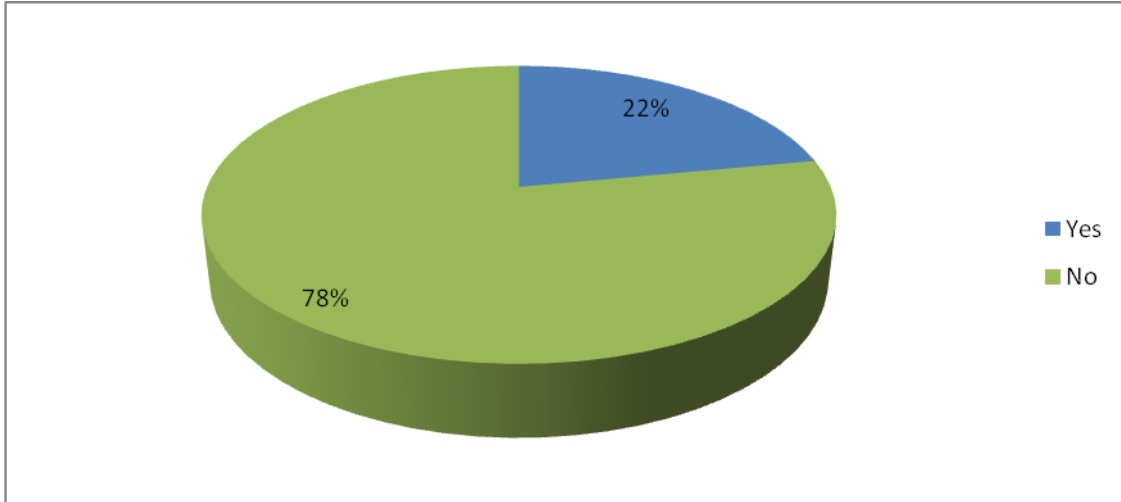
Digital	Manual	Online
35	60	5

**Fig 4.40: Ticket selling system of the terminal**

In figure 4.40, we can see that 60% of people recommend that their ticket selling system are manual in this terminal, 35% of people recommend that their ticket selling system are digital in this terminal, 5% of people recommended that they collect ticket from online.

Table 4.41: Is ticket price fair?

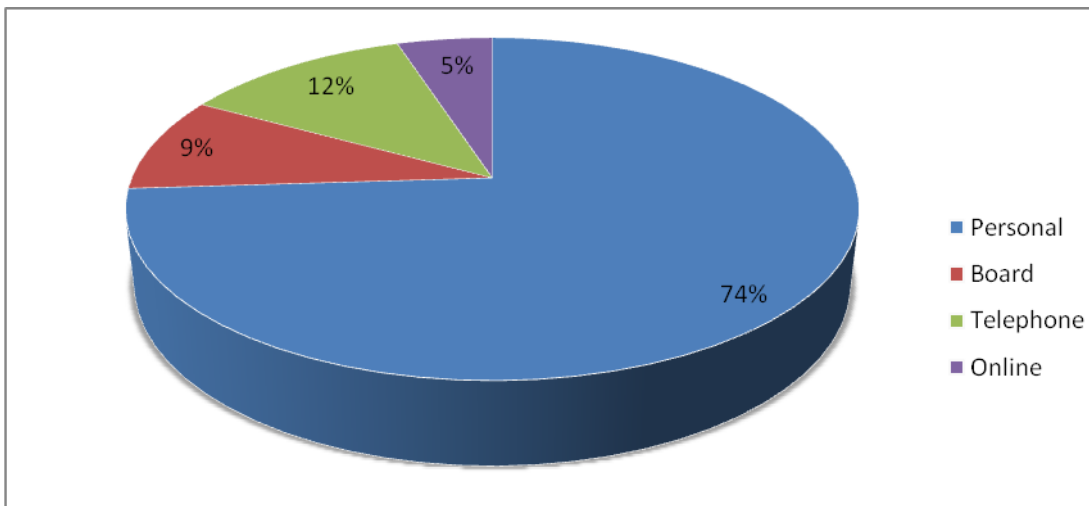
Yes	No
22	78

**Fig 4.41: Ticket price of the terminal**

In figure 4.41, we can see that 22% of people recommend that this terminal ticket price is fair, 78% of people recommend that this terminal ticket price is unfair. Overall, ticket price is not fair.

Table 4.42: Information system:

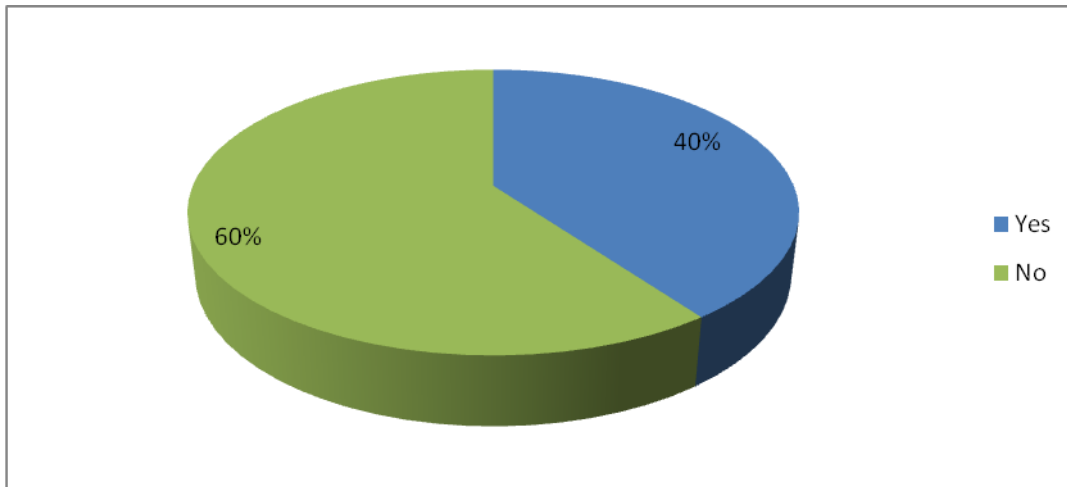
Boards	Telephone	Online	Personal Communication
9	12	5	74

**Fig 4.42: Information system of the terminal**

In figure 4.42, we can see that 9% of people recommend that they got information in this terminal over boards, 5% of people recommend that they got information in this terminal over online, 12% of people recommend that they got information in this terminal over telephone and 74% of people recommend that they got information in this terminal over personal communication.

Table 4.43: Is there sufficient space for passenger's personal vehicles parking?

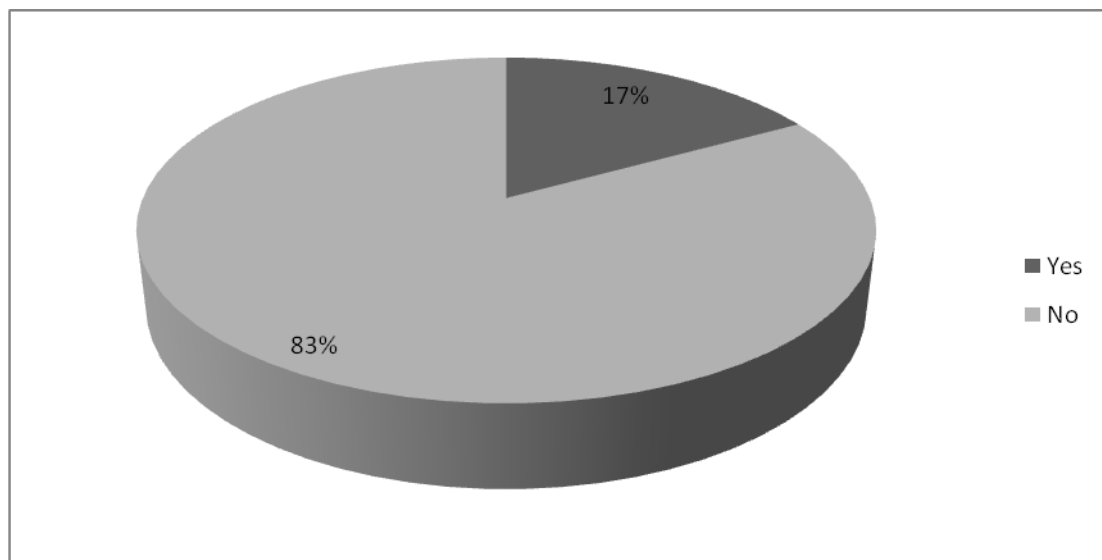
Yes	No
40	60

**Fig 4.43: Parking system of the terminal**

In figure 4.43, we can see that 40% of people recommend that they got enough parking facilities in this terminal. And rest of 60% thinks there aren't enough parking facilities.

Table 4.44: Is there sufficient Fire Extinguisher?

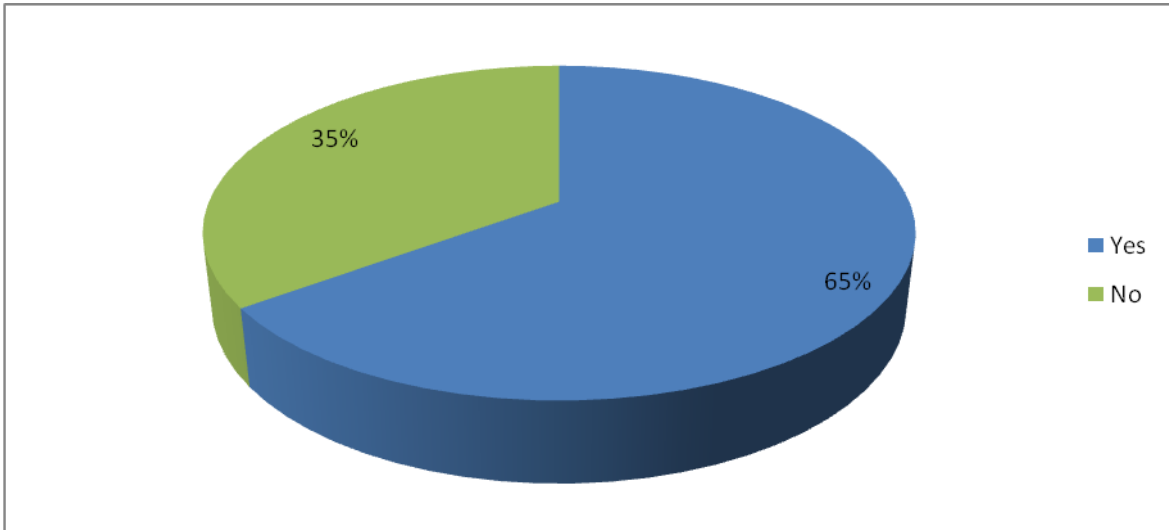
Yes	No
17	83

**Fig 4.44: Fire Extinguisher system of the terminal**

In figure 4.44, we ask this question to passengers, terminal stuffs and management. It shows that only 17% of them think there are sufficient Fire Fighting facilities and 83% recommended that there needs more fire fighting facilities.

Table 4.45: Is there sufficient space for bus parking facilities?

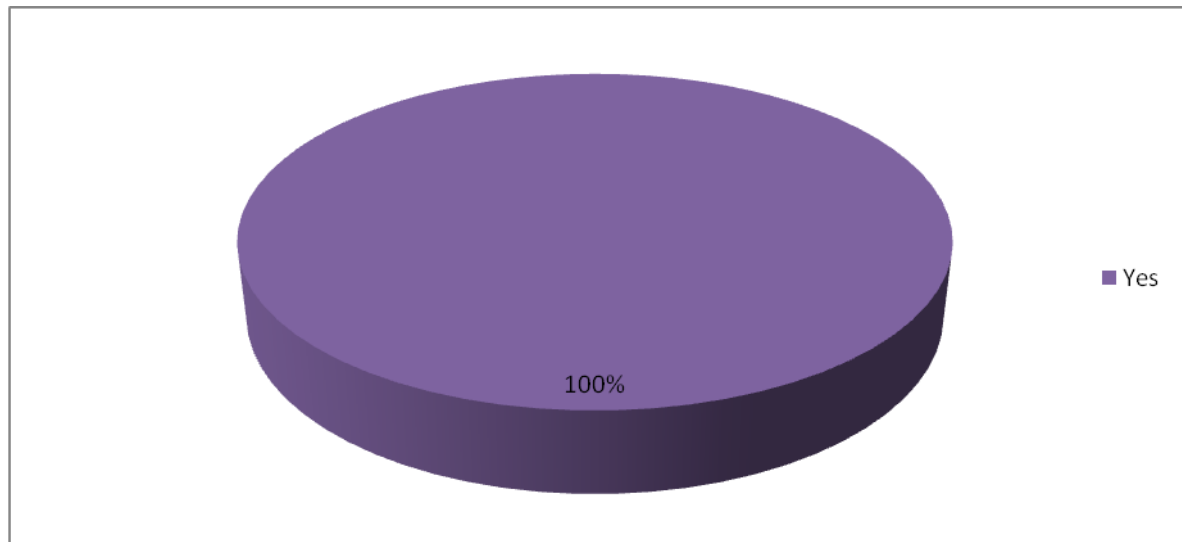
Yes	No
65	35

**Fig 4.45: Bus parking system of the terminal**

In figure 4.45, we ask this question to terminal bus stuffs 65% of them agree with there is sufficient parking place for buses.35% didn't agree with that. They thought only some big and renowned bus company and owner manipulated the parking system.

Table 4.46: Is there isolated space for workshops?

Yes	No
100	00

**Fig 4.46: Isolated working space of the terminal**

In figure 4.46, here again we ask this question to terminal stuffs and management and fortunately there's isolated workshops for normal and regular maintenance. 100% are agree with that

Table 4.47: Is there enough fueling facilities?

Yes	No
100	00

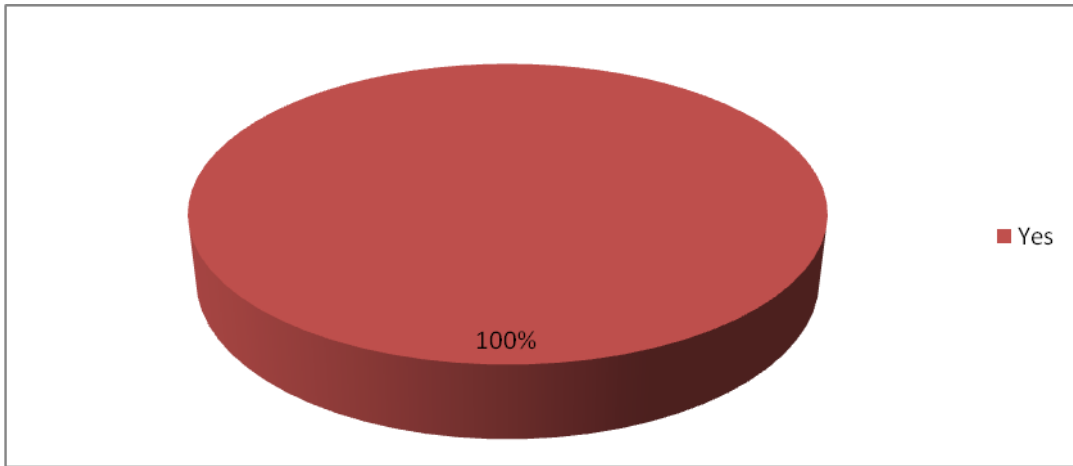


Fig 4.47: Fueling Facilities

In figure 4.47, management is happy with fuelling facilities. There're more than 10 fuelling station 5km around the Mahakhali Bus Terminal.

Table 4.48: Is there enough lighting System in this terminal?

Yes	No
24	76

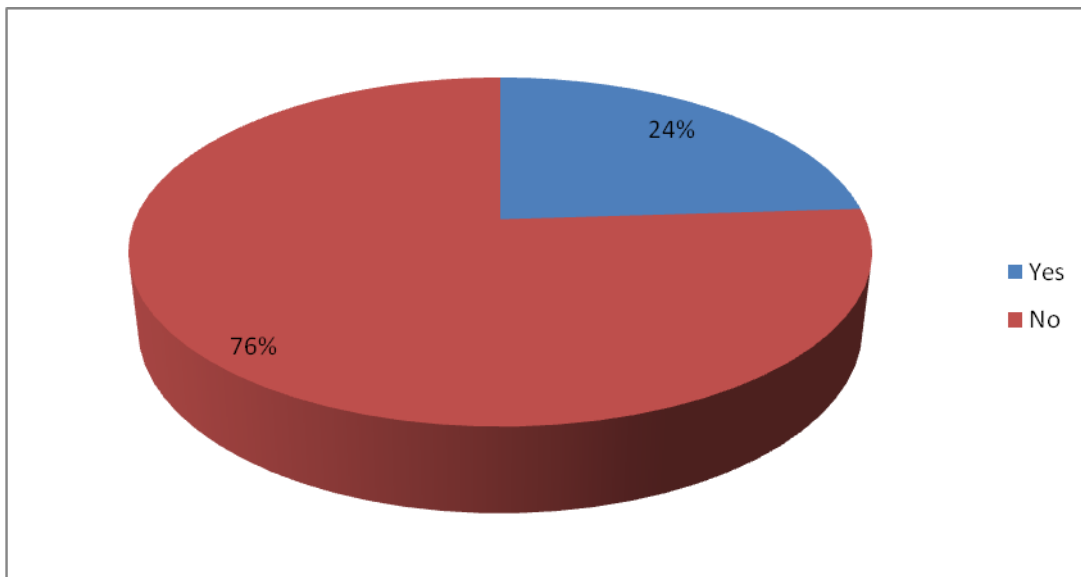


Fig 4.48: Lighting System

From figure 4.48 we can see that 24% people thought lighting system in night is acceptable but 76% of people are not satisfied with night lighting system

Table 4.49: Is there separate Entry and Exit away for Bus operating?

Yes	No
100	00

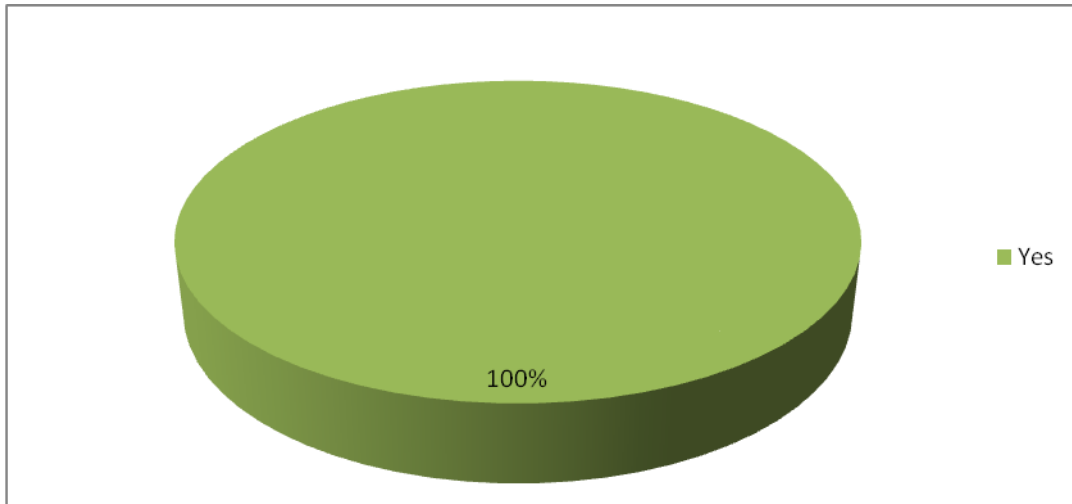


Fig 4.49: Separate Entry and Exit

From Figure 4.49: We can see that there is separate entry and exit for bus operating in this terminal

Table 4.50: What is your opinion about cleanliness?

Good	Average	Poor
23	37	40

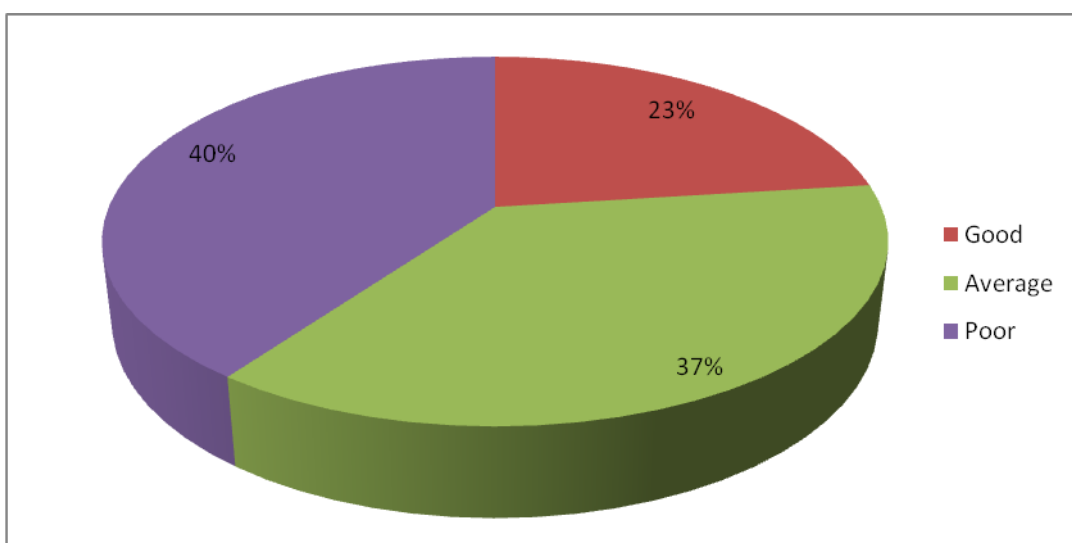


Fig 4.50: Clean & Cleanliness

In figure 4.50 we can see that 40% of people expressed that this terminal cleaning condition is poor. 37% recommended average and 23% are happy with cleaning system

Statistical Analysis: Site by site observation of these tow bus terminals:

#Q1 Do the terminals are well facilitated?

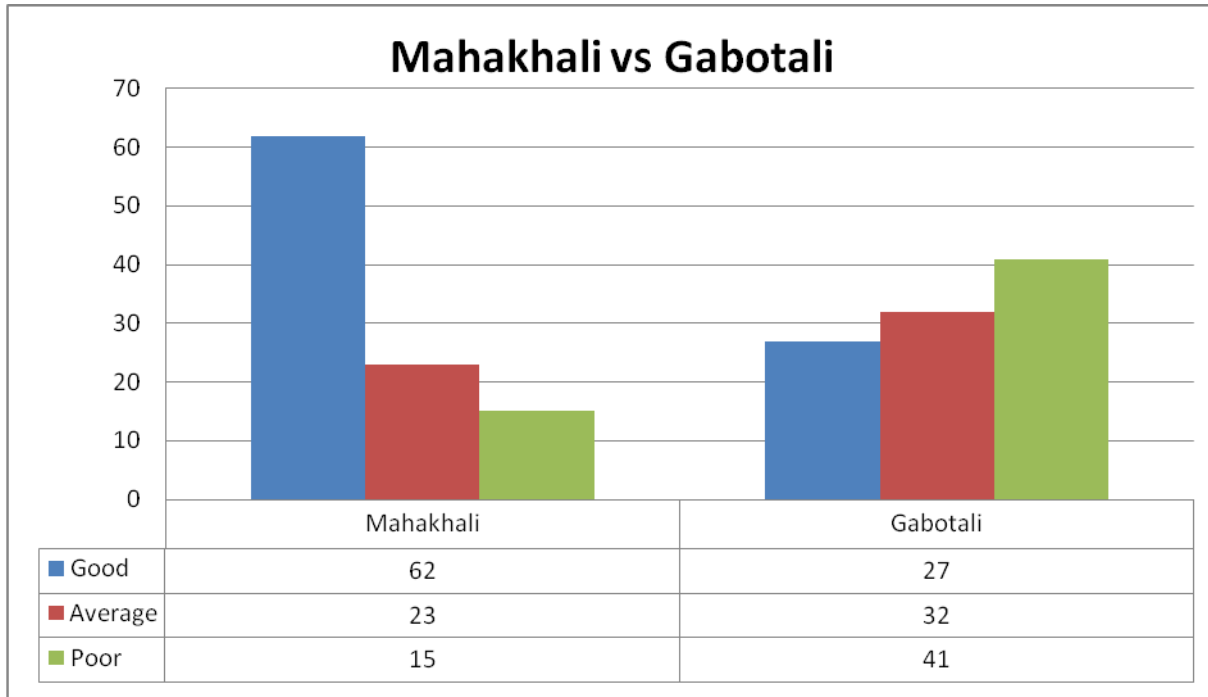


Fig 4.51: Terminal condition

From fig 4.51, we can see that maximum people say that Mahakhali bus terminal are well conditioned with respect to Gabotali bus terminal.

#Q2 Are there sufficient waiting place for heavy passengers?

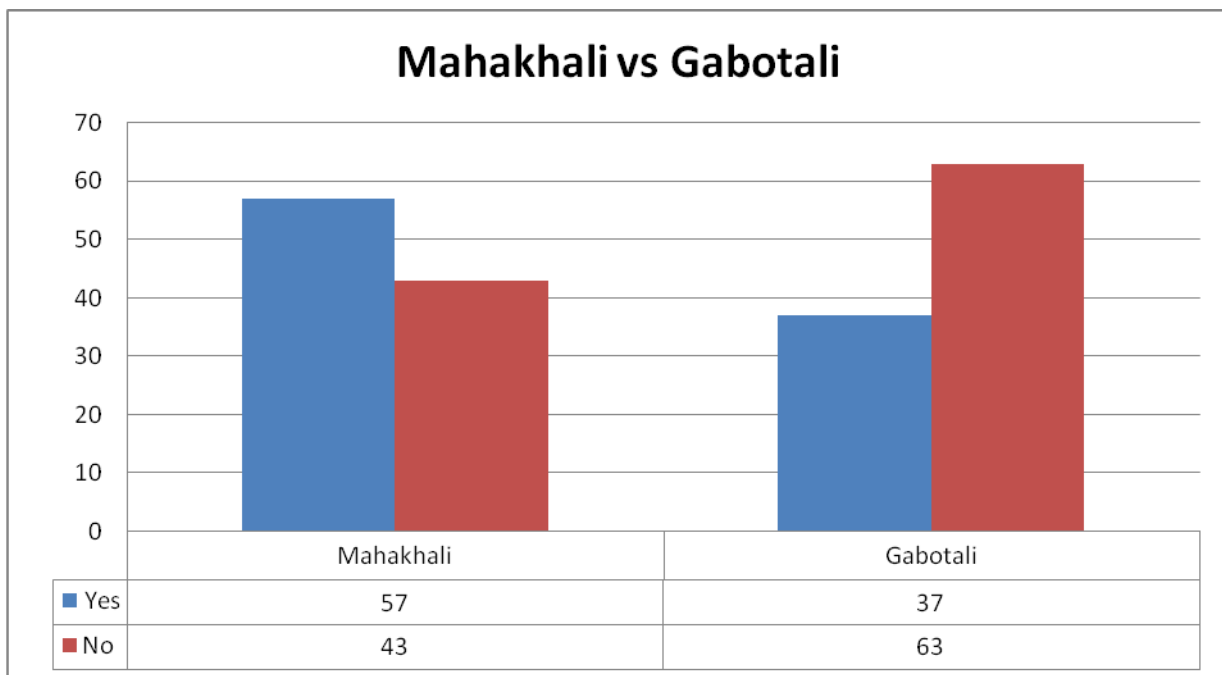


Fig 4.52: Waiting Place

From fig 4.52 we can see that passenger’s waiting room facilities are good conditioned in Mahakhali Bus Terminal over Gabotali.

#Q3 Are passenger’s waiting room well condition?

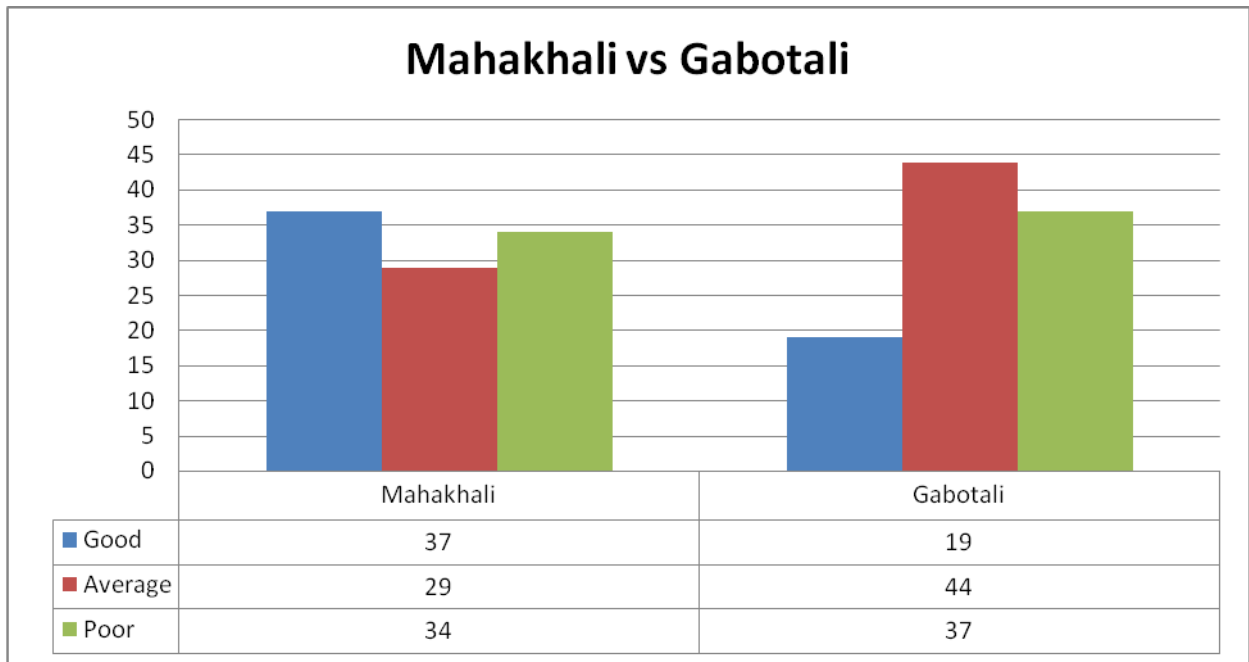


Fig 4.53: Waiting room condition

From fig 4.53 we can see that among these bus terminals Mahakhali bus terminal waiting room is better than Gabotali.

#Q4 Do you comfortable in this bus terminal?

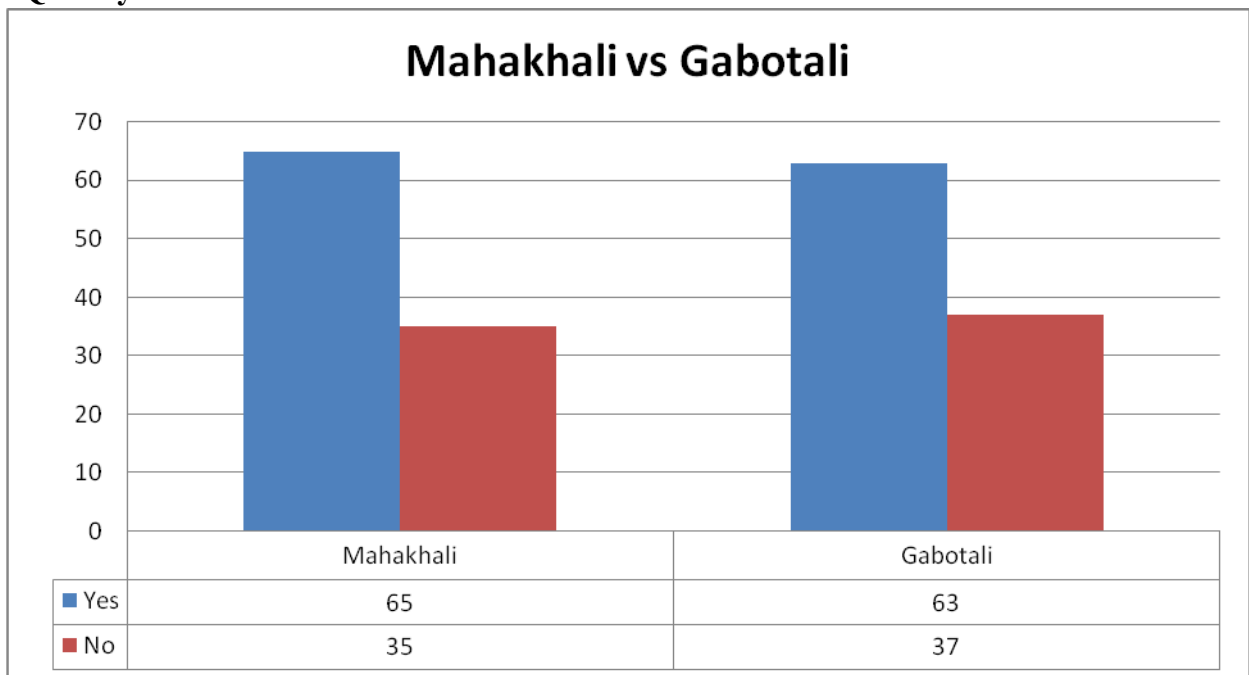


Fig 4.54: Terminal Comfortable

From fig 4.54 we can see people are comfortable in all of these terminals. But there are some problems with local transportation system. Passengers often didn’t get any local transportation.

#Q5 Are there available cafeterias, restaurants in this bus terminal?

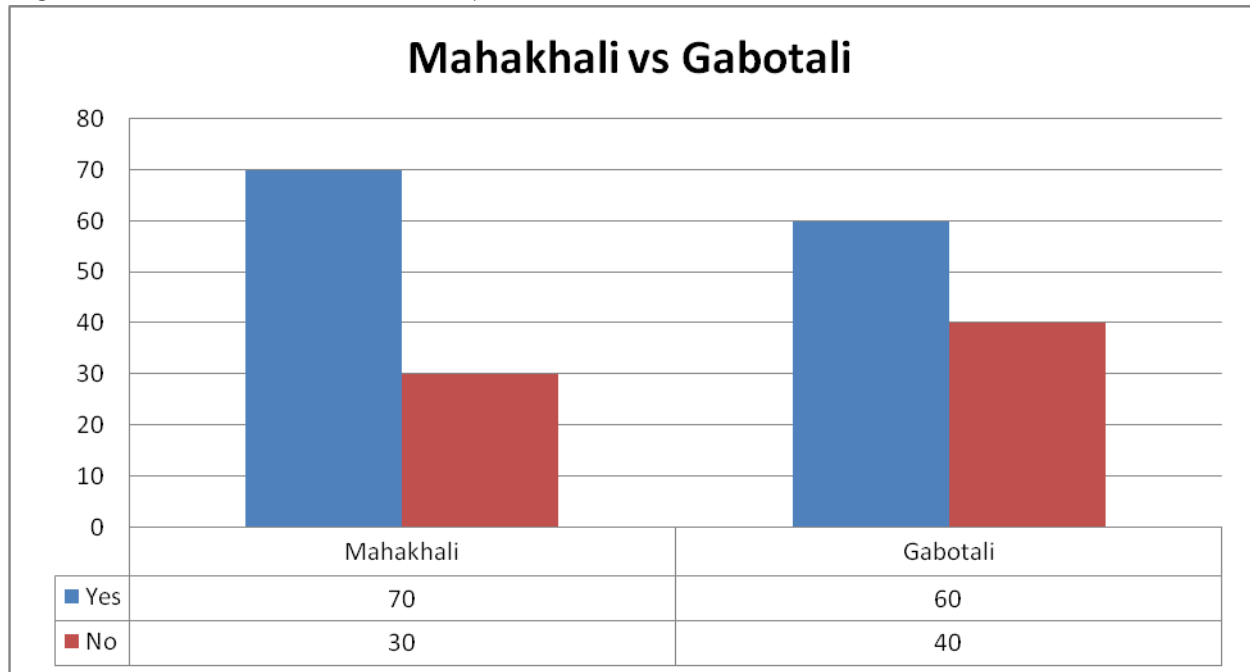


Fig 4.55: Terminal Cafeteria

From fig 4.55: we can see that Mahakhali has lots of cafeteria but most of them are opposite side of the terminal. Though all of those terminals have small food stalls.

#Q6 Are the food qualities good?

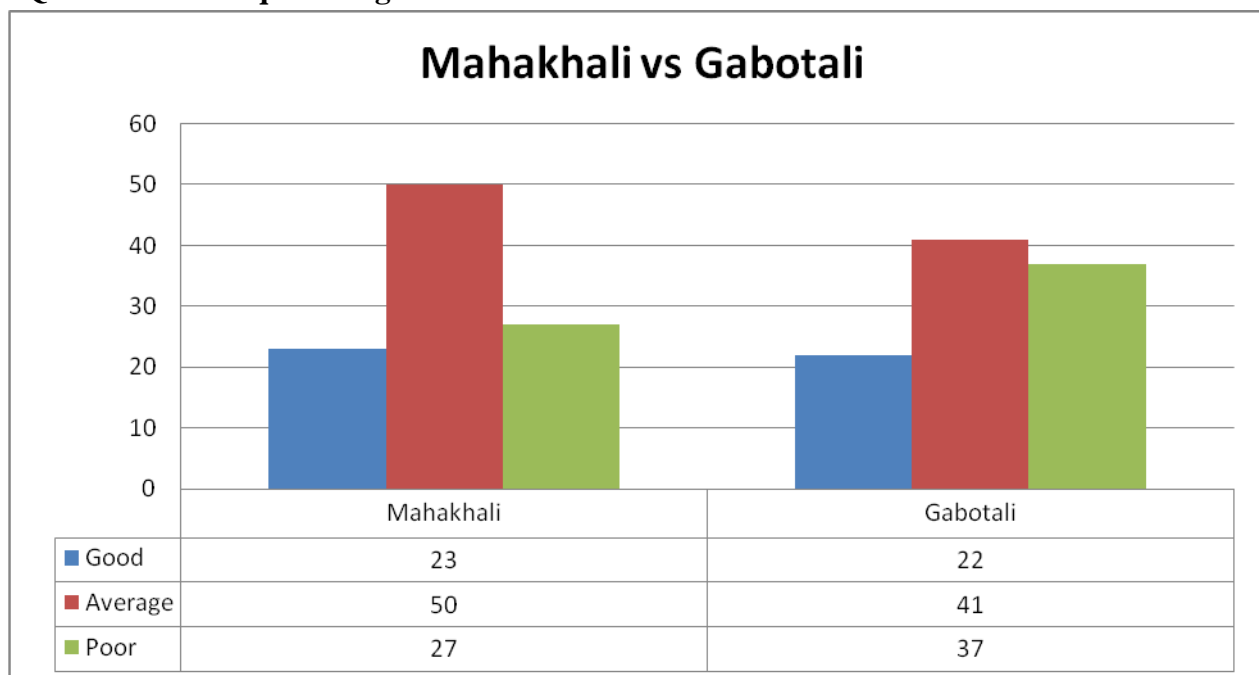


Fig 4.56: Food Qualities

From fig 4.56: we can see the food qualities in Mahakhali are better than Gabotali.

#Q7 Are there available drinking water?

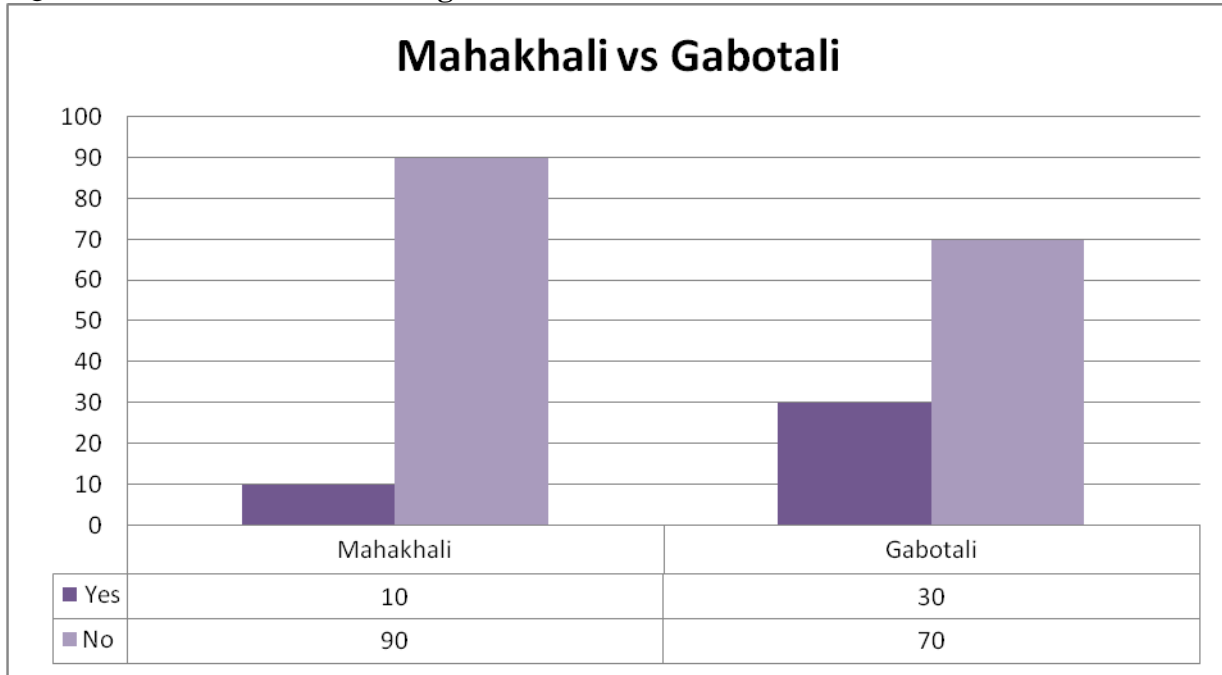


Fig 4.57: Available Water

From fig: 4.57 we can see that those entire terminals have no sufficient available water except some private terminal.

#Q8 What do you think about the Water Quality?

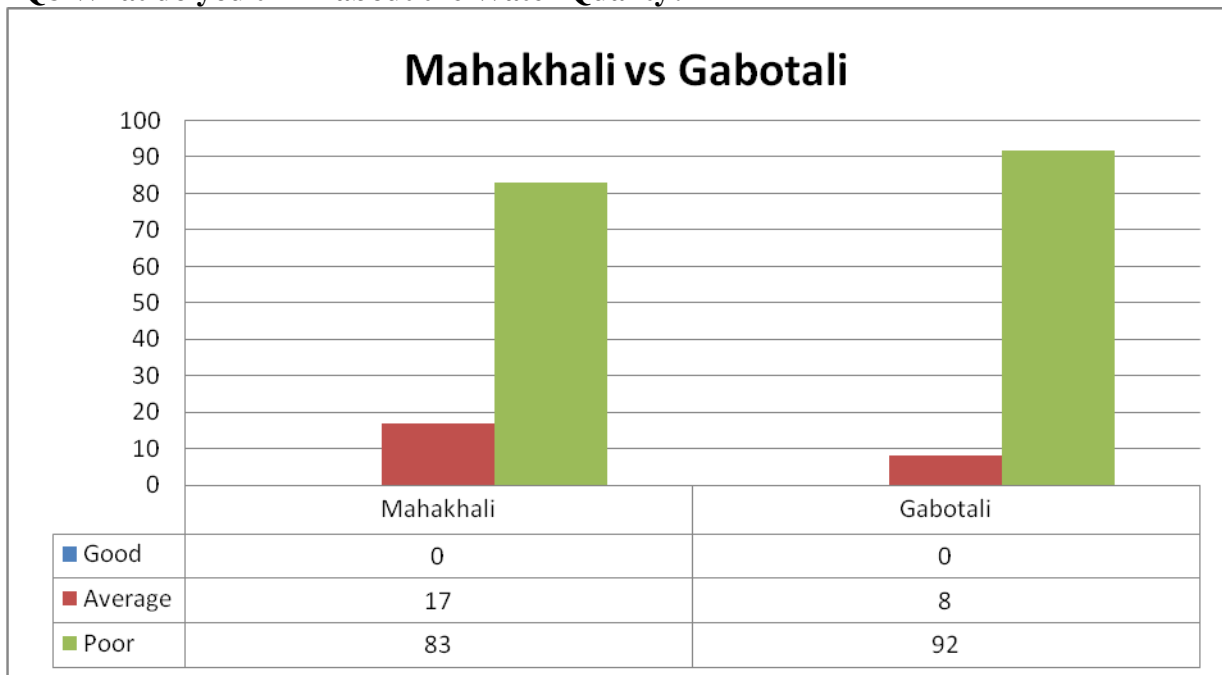


Fig 4.58: Water Quality

From fig 4.58: we can see all bus terminals water quality isn't even good; there is no municipal water distribution.

#Q9 Are there toilets available and well conditioned?

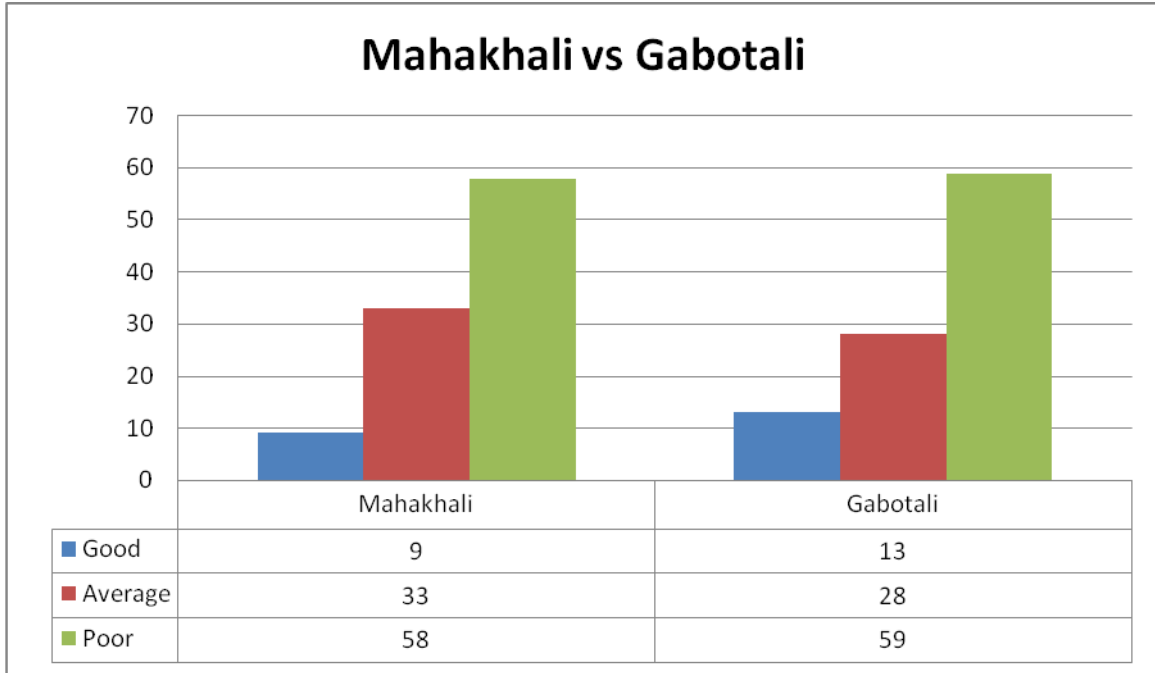


Fig 4.59: Toilet Conditioned

From fig 4.59: Comparing those two terminals Gabotali toilet condition is better than Mahakhali.

#Q10 Are there available buses in this terminal and well conditioned?

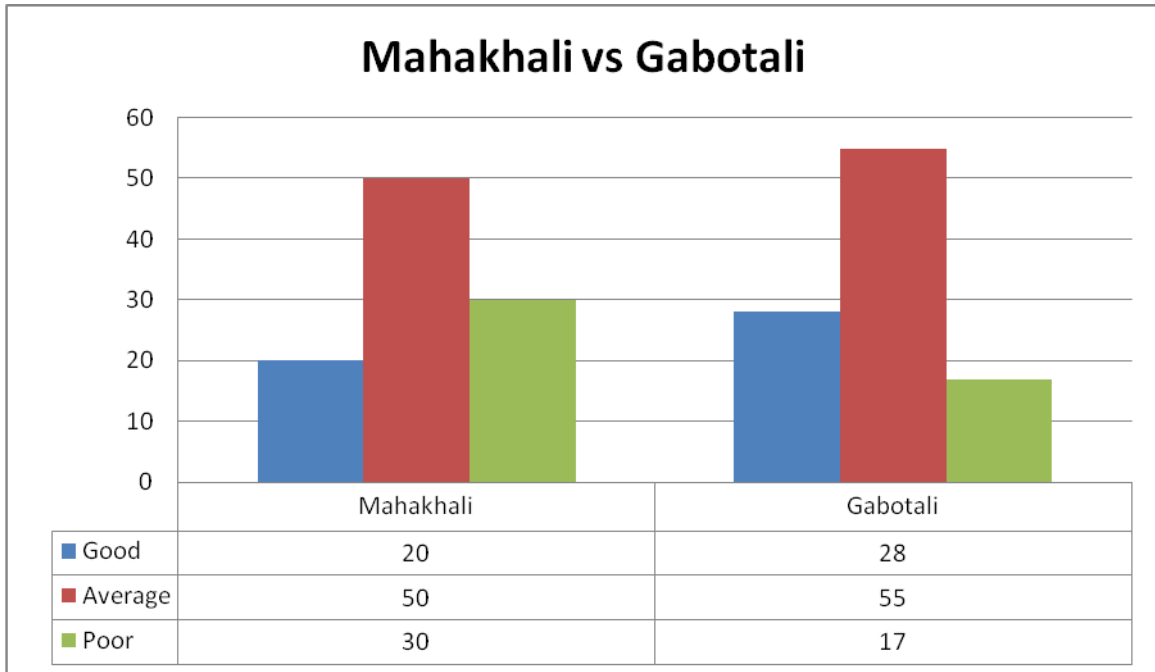


Fig 4.60: Buses Condition

From fig 4.60: We can see that both terminals have well conditioned buses and Mahakhali has more poor buses than Gabotali. Over all Buses of Gabotali has well conditioned buses than Mahakhali.

#Q11 Waiting Lounge

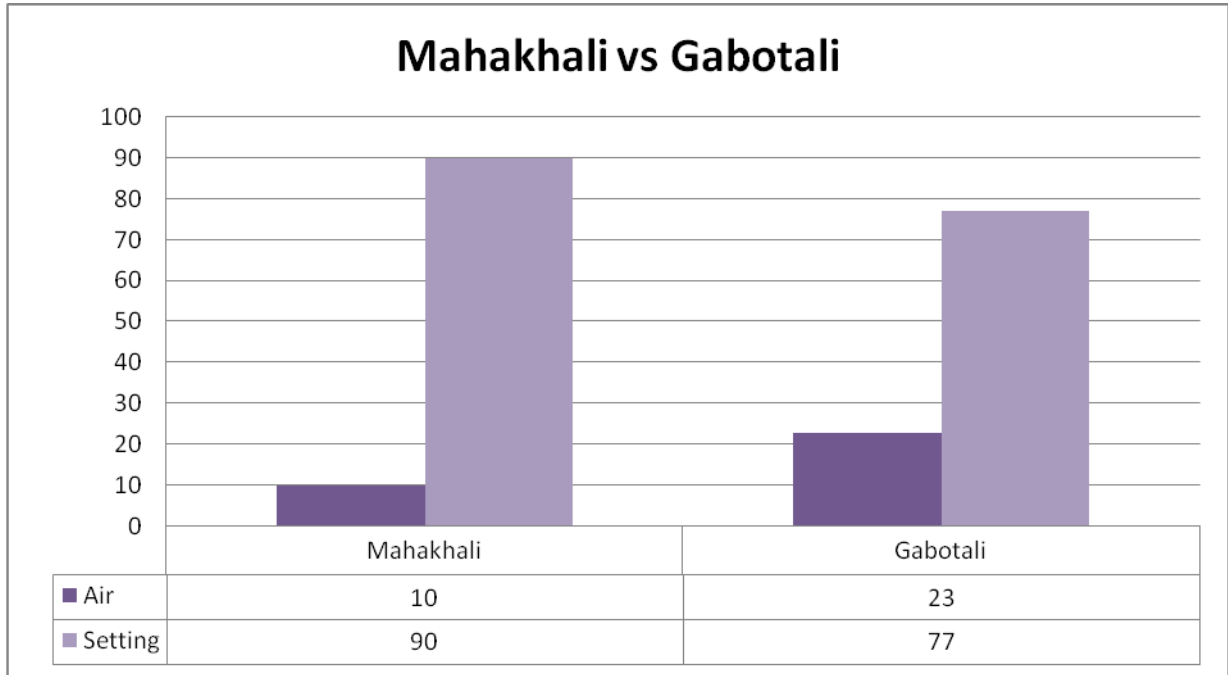


Fig 4.61: Waiting Lounge

From fig 4.61: We can see many buses counters in Gabotali have A/C facilities.

#Q12 What do you think about ticketing system conditioned?

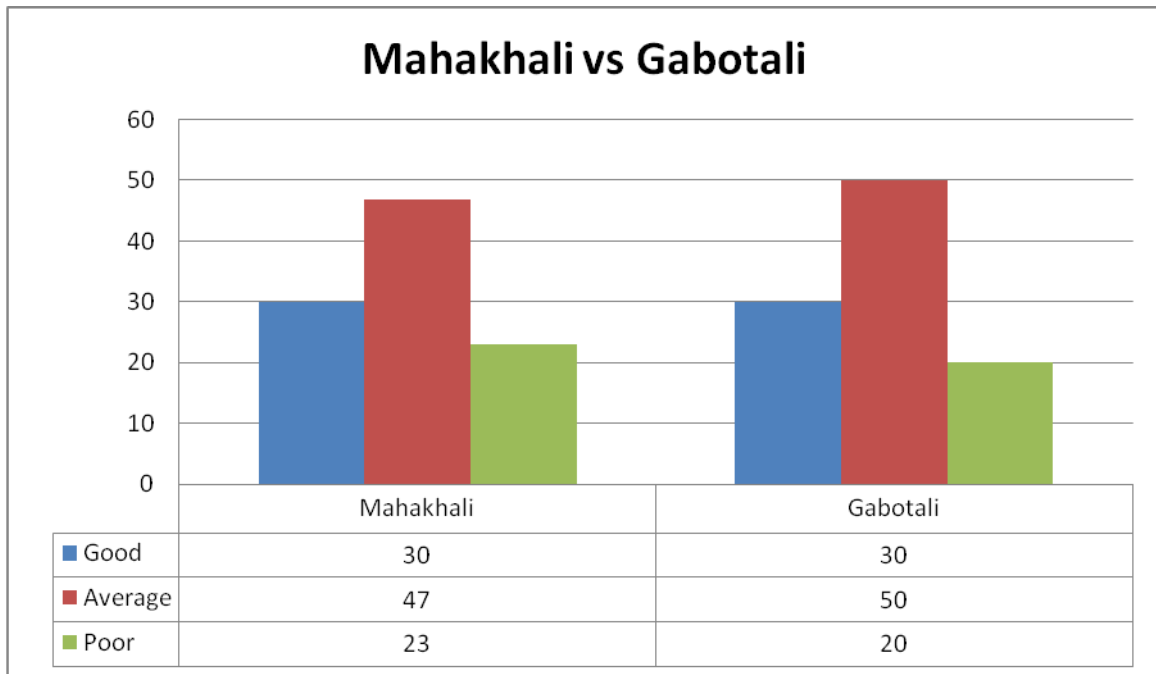


Fig 4.62: Ticketing System

From fig 4.62: Ticketing system is average in both terminals.

#Q13 Are there available scheduled buses?

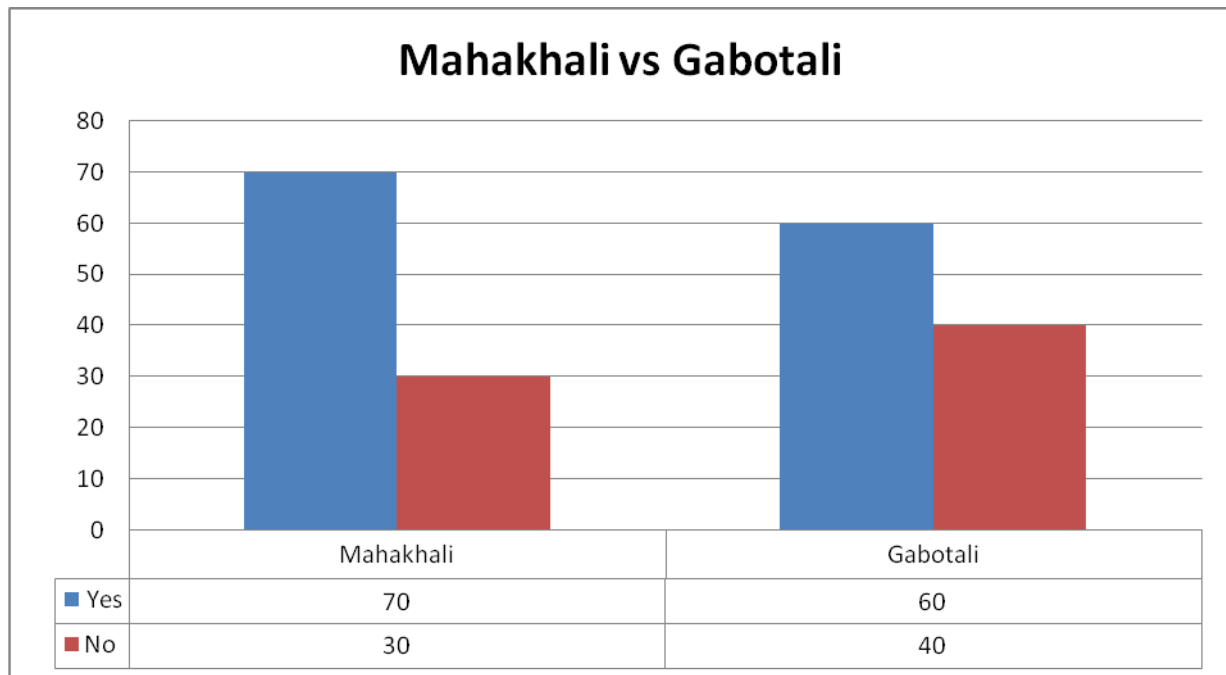


Fig4.63: Scheduled Buses

From fig 4.63: Both terminals have scheduled buses available. Some local buses don't follow time table and sometimes for traffic congestion buses don't late intentionally.

#Q14 Do you feel terminal is safe?

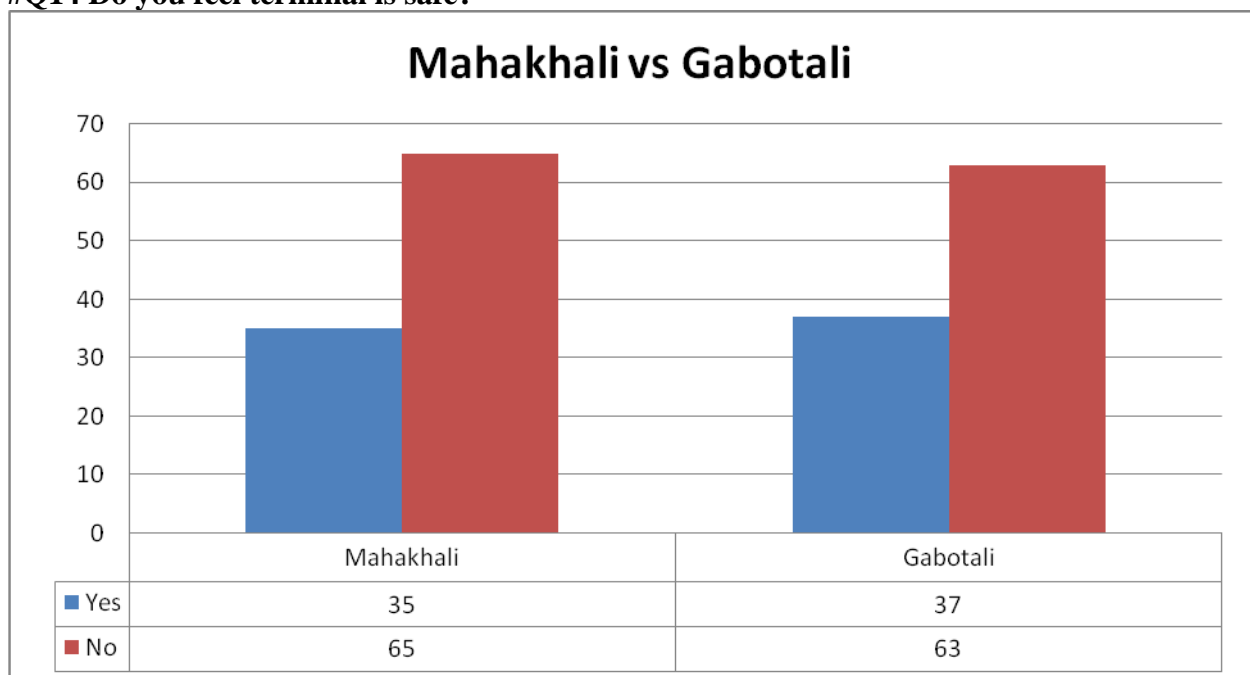


Fig 4.64: Terminal Safety

From fig 4.64: we can see that people felt safe in Gabotali bus terminal than Mahakhali bus terminal. Meanwhile safety problems are same in both terminals.

#Q15 Ticket Selling System-

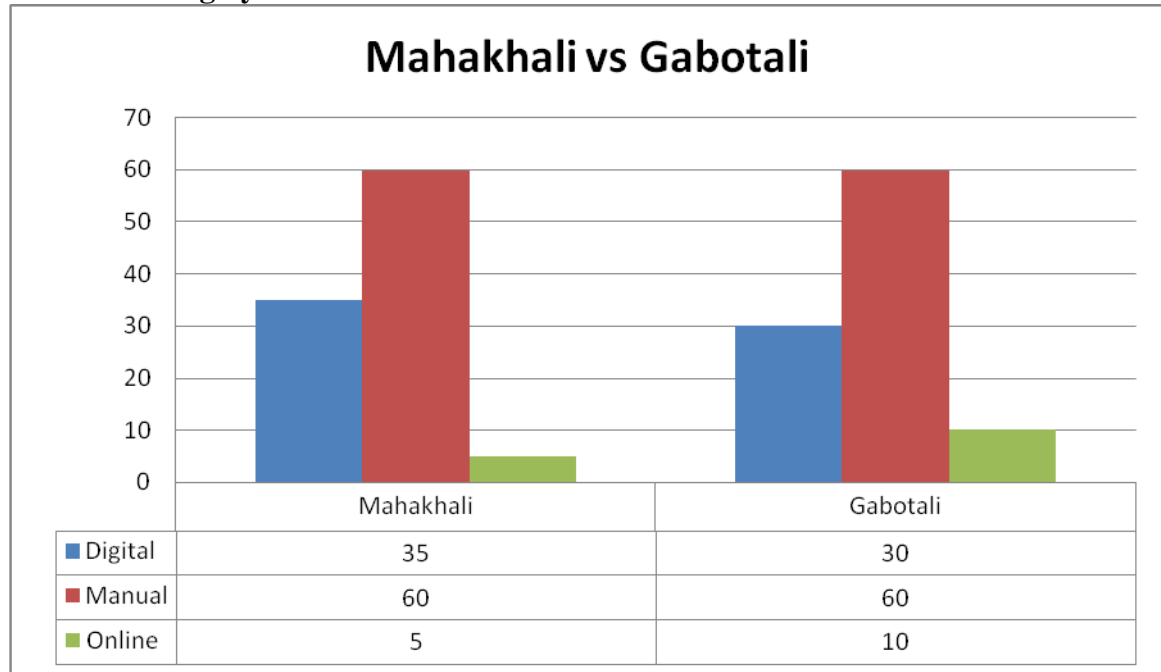


Fig: 4.65: Ticket Selling System

From fig 4.65 we can see that both terminal ticket selling system still manual. Though many well knower bus company sells ticket in digital and also in online.

#Q16 Is ticket price fair?

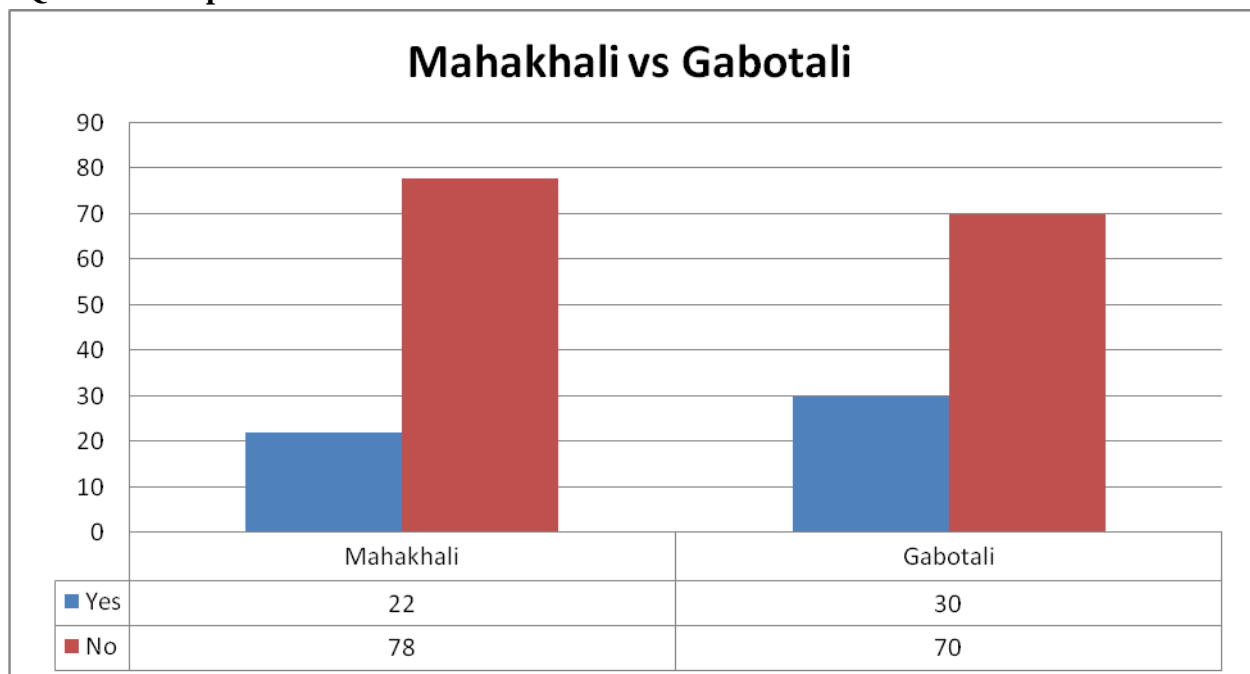


Fig 4.66: Ticket Price

From fig 4.66 we can see that ticket price in Gabotali is fair than Mahakhali. Mahakhali has bad experience with respect to ticket price and services. But overall both terminal ticket prices aren't fair enough.

#Q17 Information System

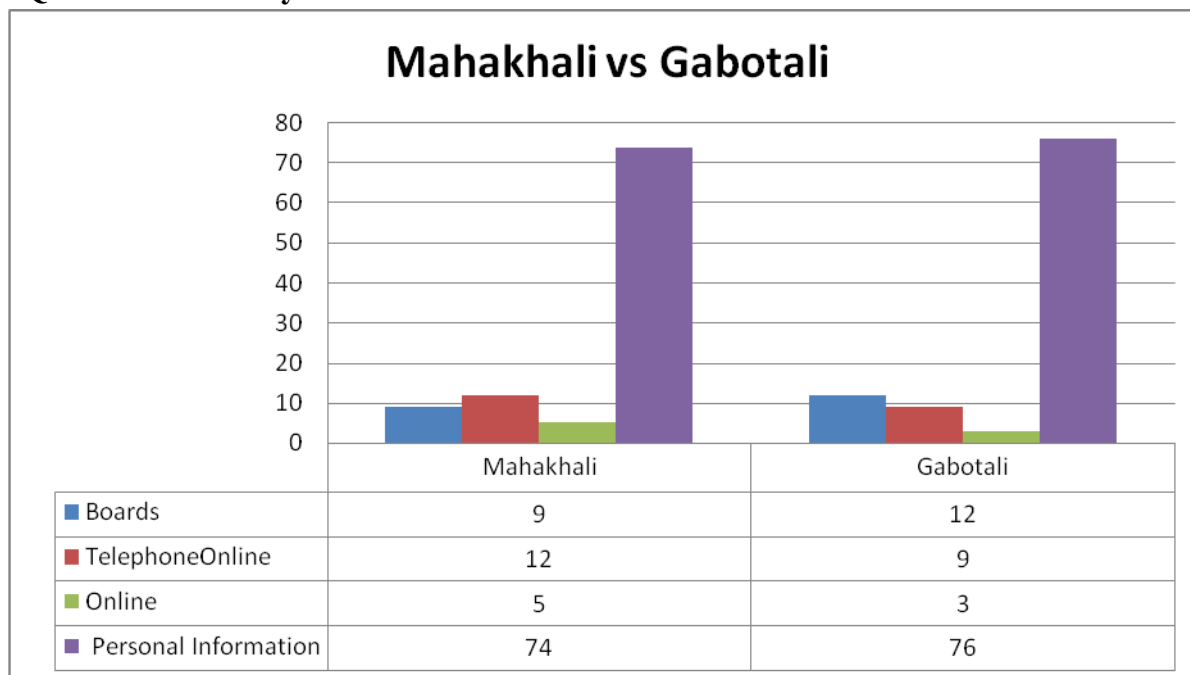


Fig 4.67: Information System

From fig 4.67: we can see that personal information is best position in both of the terminals. Gabotali has more digital information system like online and telephone than Mahakhali

#Q18 Is there sufficient space for passenger's personal vehicles parking?

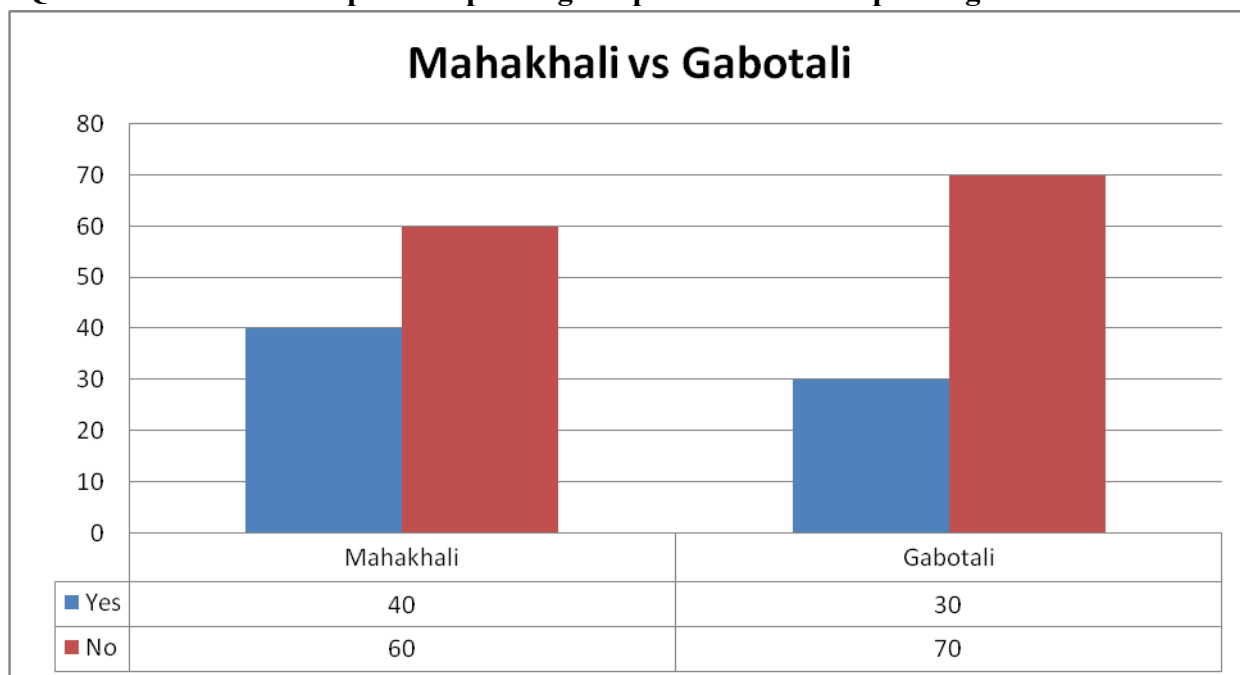


Fig 4.68: Parking Facilities

From fig 4.68: We can see that Mahakhali has higher parking facilities than Gabotali. Actually Gabotali has on street parking where Mahakhali can park personal vehicles on its premise.

#Q19 Is there sufficient fire extinguisher?

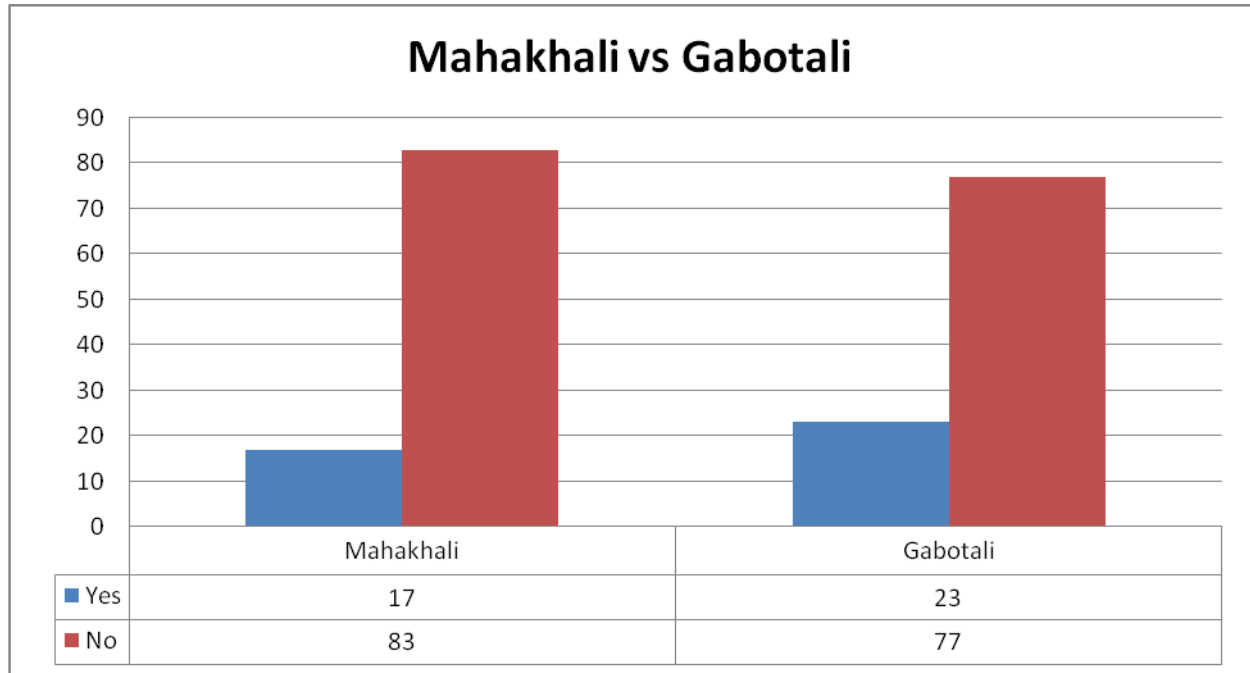


Fig 4.69: Fire Fighting Facilities

From fig 4.69: we can see both terminals don't have sufficient fire fighting facilities. Only some private bus counters have good fire fighting facilities.

#Q20 Is there sufficient space for bus parking facilities?

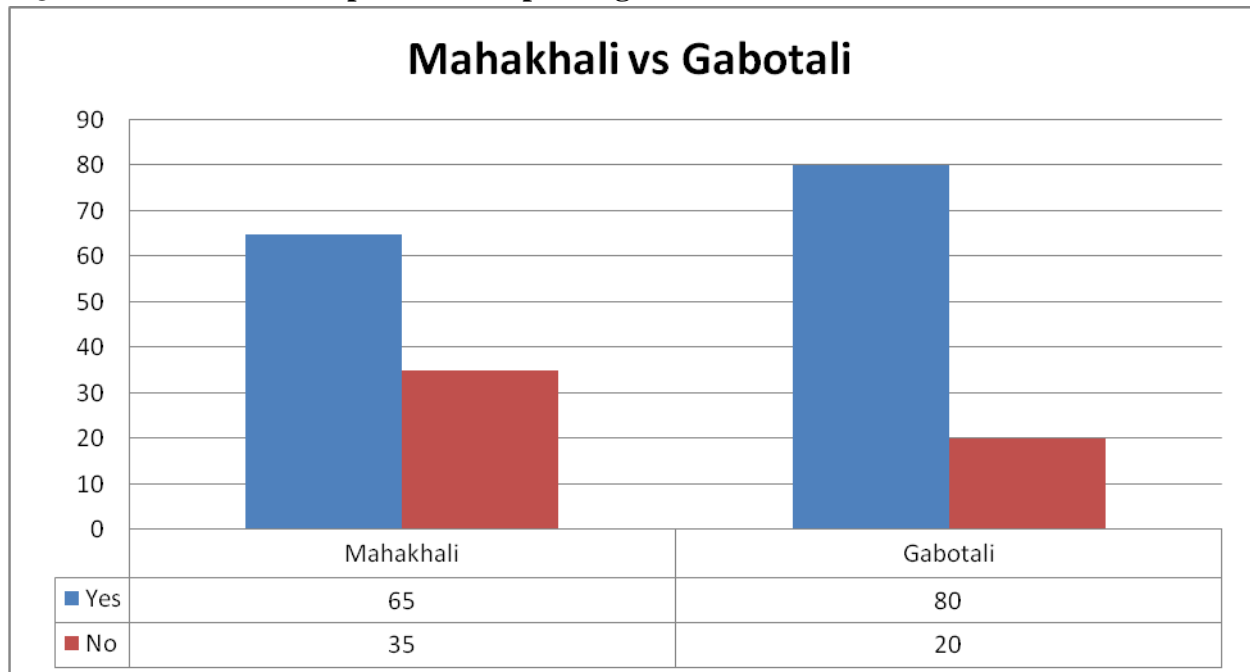


Fig 4.70: Bus Parking Space

From fig 4.70 we can see in Gabotali there're a lots of parking space where's Mahakhali don't have that much enough space for bus parking. Small and short distanced bus parked on road side

#Q21 Is there isolated work-space?

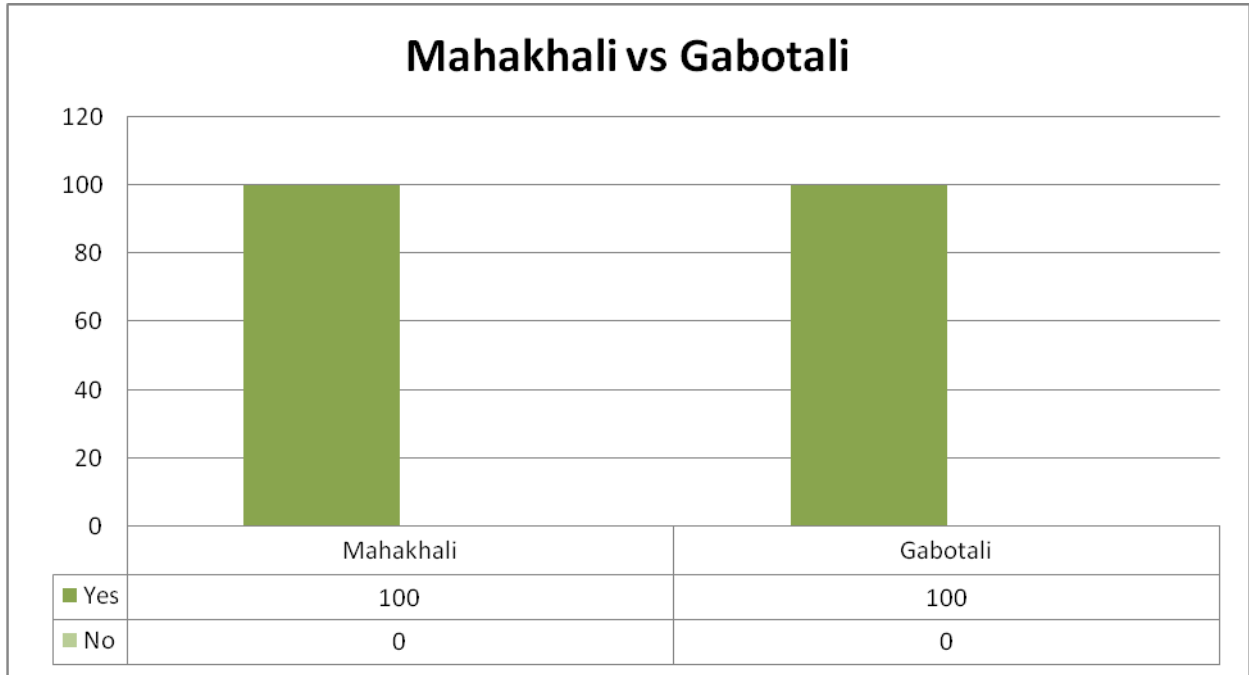


Fig 4.71: Isolated workspace

From fig 4.71: fortunately both terminals have isolated workspace

#Q22 Is there enough fuelling facilities?

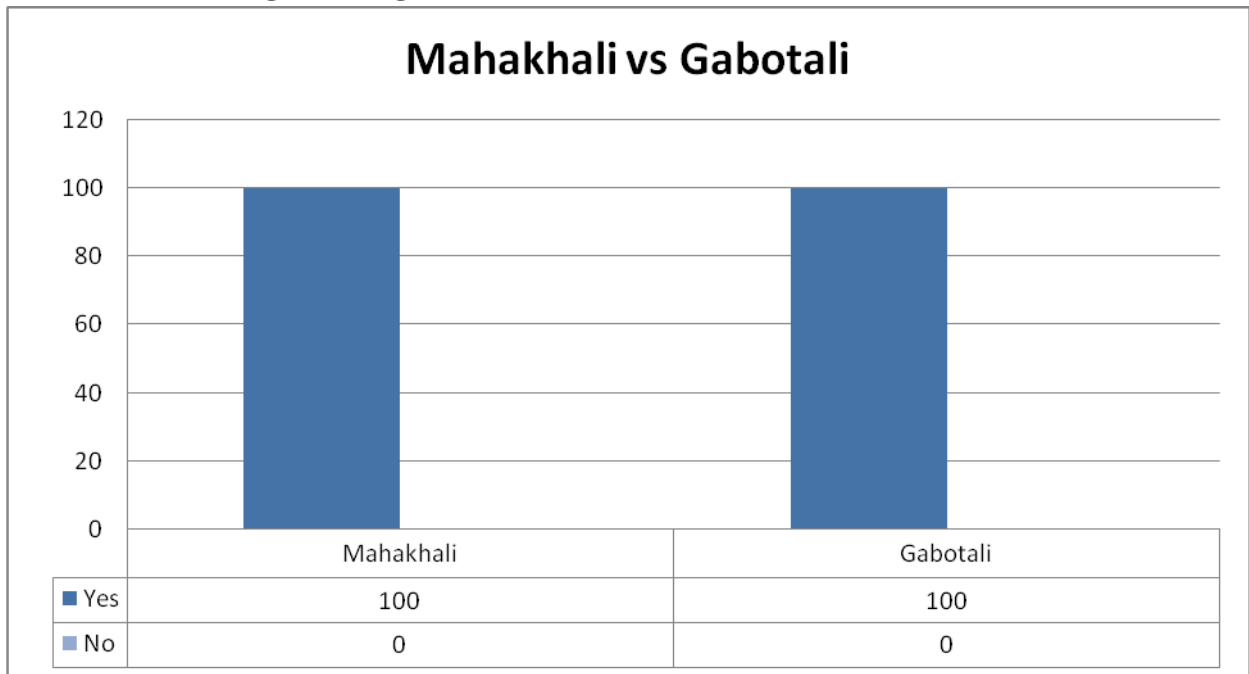


Fig 4.72: Fuelling Facilities

From figure 4.72 both terminals have sufficient fuelling facilities. Mahakhali Terminal have more than 10 fuelling station around 2 km.

#Q23 Is there enough lighting system in this terminal?

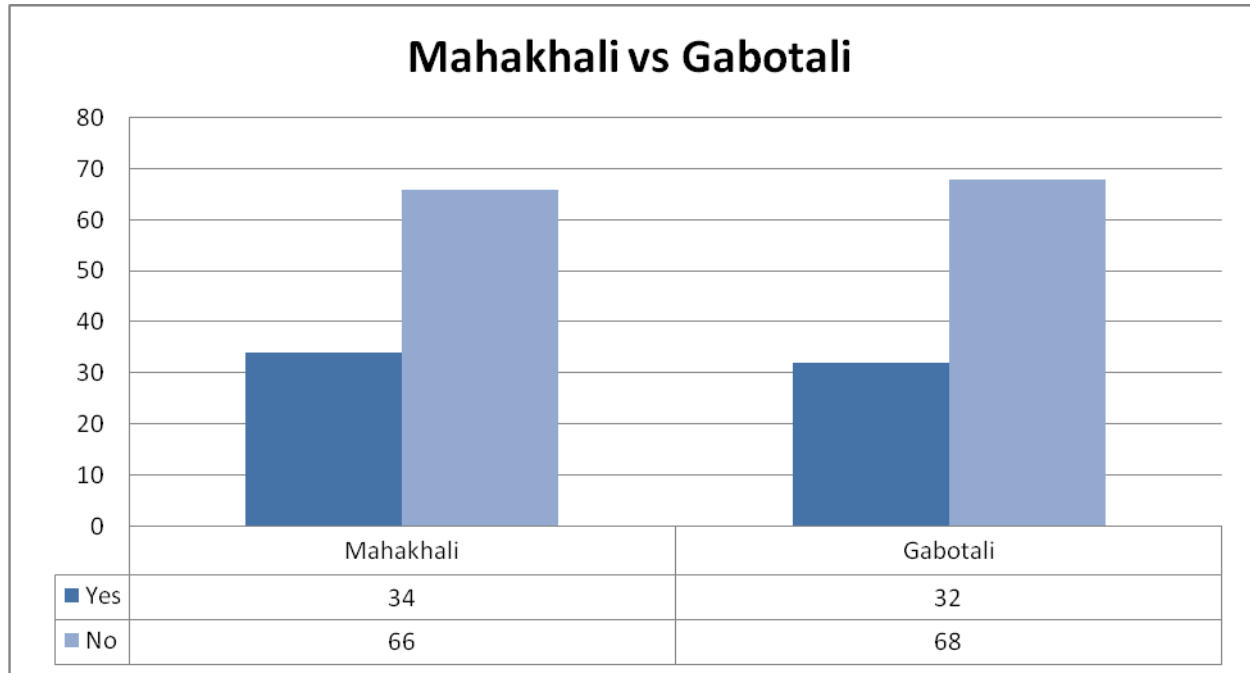


Fig 4.73: Terminal Lighting

From fig 4.73: we can see that there is a shortage of night lighting system in both of this terminal. People waiting space have enough lighting system but parking space, bus loading unloading area has a bad lighting system.

#Q24 Is there separate Entry and Exit away for bus operating?

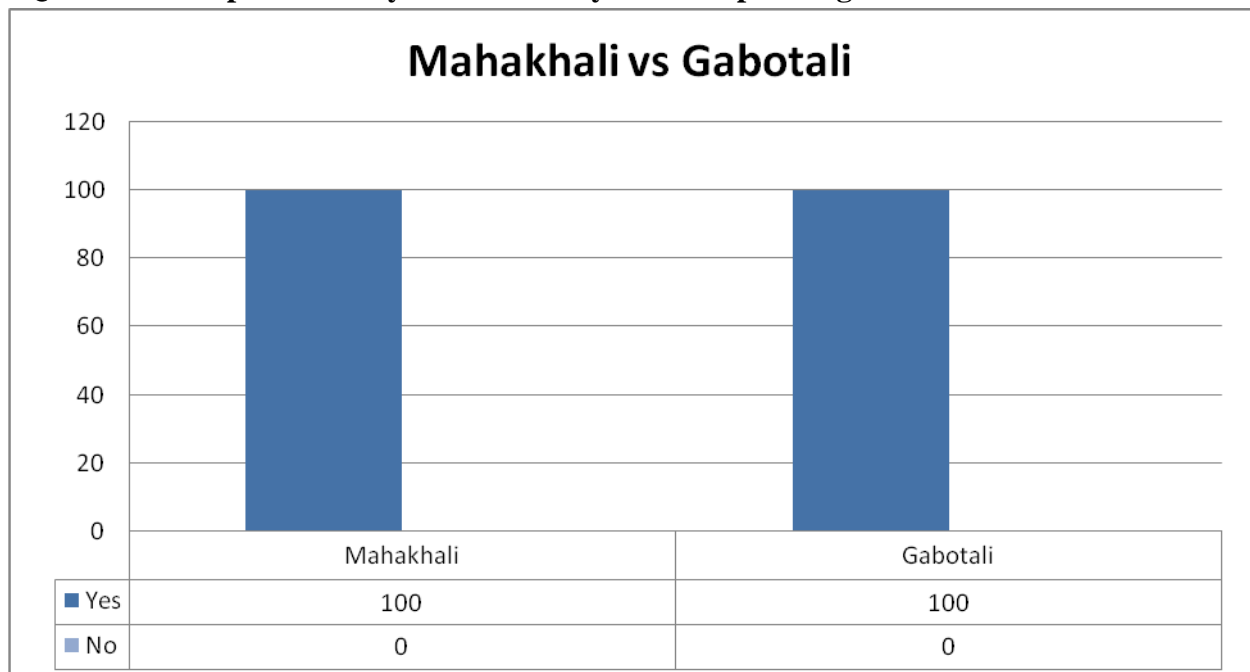


Fig 4.74: Entry and Exit Away

From fig 4.74 we can see that both terminals have separated entry and exit away.

#Q25 what is your opinion about cleanliness?

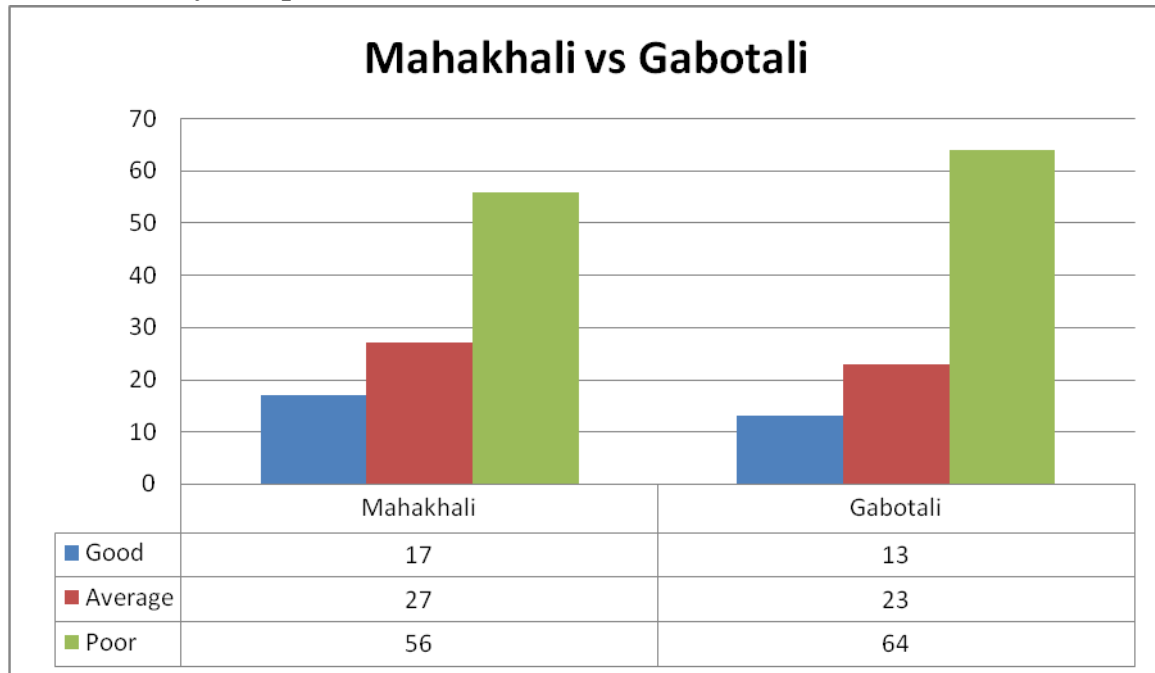


Fig 4.75: Cleanliness

From fig 4.75 we can see that all terminals don't have proper cleanliness. There is no separated place for keep wastage.

#Q26 Give any suggestion to improve bus terminal?

Mahakhali: People demanded more waiting place with proper air and light circulation for heavy passengers. As a thousand of people travelling from here to different places, there must be separated bus waiting place with proper marking .There must be digital announcing system instead of personal announcing. Beggar and Hawker should be controlled.

Gabotali: Terminal security should be developed. There're many bus counters so there must be proper marking for different routes and according to them there should be separated waiting place and announcing system while buses arrive.

Question for Staff:

#Q27 What do think about passengers safety?

We asked this question to the management of both Mahakhali and Gabotali bus terminal they ensure that they took proper step if any unwanted situation occurred .There're CCTV camera surveillance whole terminal

#Q28 Is there enough bus parking facilities?

From Mahakhali the management says there're some shortages of bus parking facilities for local and short distance buses. Since Mahakhali has only one intercity bus operating services short they have enough space for parking. But when we asked this question in Gabotali we came to know bus parking facilities in Gabotali is very poor. Many bus companies have their own parking place. Others uses on street parking method

#Q29 Is there passengers information desk?

In Mahakhali there's no information desk, but in Gabotali there's one information desk.

#Q30 Do you have licensed drivers?

We asked this question to bus counters they inform us they all appointed licensed and experienced bus drivers

#Q31 What is your ticket selling system?

Mahakhali has only one intercity bus service operating 3 routes. They sell ticket in digitally. Others sell ticket manually while many bus counters in Gabotali sells ticket in online also digitally via computer.

#Q32 Do you have enough fueling facilities around the terminal?

Mahakhali and Gabotali terminals have many refueling station around the terminals. Both terminals are happy with that

#Q33 Do you have separate entry and exit?

Mahakhali have Separate entry and exit for bus loading/unloading.

Gabotali mainly have on street loading unloading system.

4.3 Results:

The results are found from the statistical analyze of the study where we compare those two bus terminals site by site. Those two bus terminals are Mahakhali and Gabotali. The results are:

- From the statistical analysis of Question no:01, we can see for Gabotali bus terminal 27% people said that it is in a good condition on the other hand for Mahakhali bus terminal 62% people said that it is an average condition. Therefore, we can say that Mahakhali bus terminal are well conditioned with respect to Gabotali bus terminal.
- From the statistical analysis of Question no:02, we can see for Gabotali bus terminal 63% people said that this terminal waiting place for heavy passenger are not sufficient on the other hand for Mahakhali bus terminal 43% people said that this terminal waiting place for heavy passenger are not sufficient. Local bus services and short distance bus services don't have proper waiting place, announcing system. Therefore, we can say that Mahakhali bus terminal have sufficient waiting place with respect to Gabotali bus terminal.
- From the statistical analysis of Question no 03: we can see for Gabotali bus terminal 19% people said that it is in a good condition on the other hand for Mahakhali bus terminal 37% people said that it is in a good condition. Therefore, we can say that Mahakhali bus terminal are well conditioned waiting room with respect to Gabotali bus terminal.
- From the statistical analysis of Question no 04: we can see for Gabotali bus terminal 63% people said that the bus terminal is comfortable on the other hand for Mahakhali bus terminal 65% people said that the bus terminal is comfortable. Therefore, we can say that Mahakhali bus terminal are comfortable with respect to Gabotali bus terminal.
- From the statistical analysis of question no 05: we can see for Gabotali bus terminal 60% people said this terminal have sufficient available cafeteria restaurant on the other hand for Mahakhali bus terminal 70% people said this have sufficient available cafeteria restaurant terminal. Therefore, we can say that Mahakhali bus terminal is well toilet conditioned with respect to Gabotali bus terminal.

- From the statistical analysis Question no 06: we can see for Gabotali bus terminal 57% people said that this terminal food quality condition is poor on the other hand for Mahakhali bus terminal 40% people said that this terminal food quality condition is average. Therefore, we can say that Mahakhali bus terminal is well food facilities with respect to Gabotali bus terminal.
- From the statistical analysis Question no 07: we can see for Gabotali bus terminal 87% people said that this terminal water condition is unavailable on the other hand for Mahakhali bus terminal 93% people said that this terminal water availability condition is poor. Therefore, we can say that Gabotali bus terminal is well water facilities with respect to Mahakhali bus terminal.
- From the statistical analysis Question no 08: we can see for Gabotali bus terminal 92% people said that this terminal water quality condition is poor on the other hand for Mahakhali bus terminal 93% people said that this terminal water quality condition is poor. Therefore, we can say that both Mahakhali and Gabotali bus terminals have poor water quality.
- From the statistical analysis Question no 09: we can see for Gabotali bus terminal 59% people said this terminal toilets condition is poor on the other hand for Mahakhali bus terminal 58% people said this terminal toilets condition is poor. Therefore, we can say both terminals don't have good toilet condition.
- From the statistical analysis Question no 10: we can see for Gabotali bus terminal 55% people said that there are available well conditioned buses on the other hand for Mahakhali bus terminal 50% people said that there are available well conditioned buses. Therefore, we can say that Gabotali bus terminal have more available well conditioned buses with respect to Mahakhali bus terminal.
- From the statistical analysis Question no 11: we can see for Gabotali bus terminal 23% people said that this terminal Waiting Rooms- is sitting accommodation on the other hand for Mahakhali bus terminal 10% people said that this terminal waiting lounge is sitting accommodation. Because Mahakhali has only one A/C bus terminal. Therefore, we can say that the Mahakhali bus terminal and the Gabotali bus terminal Waiting Rooms- have sitting accommodation facilities for passenger.

- From the statistical analysis Question no 12: we can see for Gabotali bus terminal 50% people said that their ticket selling condition are average, on the other hand for Mahakhali bus terminal 47% people said that their ticket selling system are average. Therefore, we can say that Mahakhali bus terminal and Gabotali bus terminal are same condition of ticket selling system.
- From the statistical analysis Question no 13: we can see for Gabotali bus terminal 60% people said that there are available scheduled buses on the other hand for Mahakhali bus terminal 70% people said that there are available scheduled buses. Therefore, we can say that Mahakhali bus terminal are available scheduled buses with respect to Gabotali bus terminal.
- From the statistical analysis of Question no 14: we can see for Gabotali bus terminal 37% people said that the bus terminal is safe on the other hand for Mahakhali bus terminal 35% people said that the bus terminal is safe. Therefore, we can say that both Mahakhali bus terminal and Gabotali bus terminal are same in safety matters.
- From the statistical analysis Question no 15: we can see for Gabotali bus terminal 60% people said that their ticket selling system are manual on the other hand for Mahakhali bus terminal 60% people said that their ticket selling system are manual. Therefore, we can say that Mahakhali bus terminal and Gabotali bus terminals have same manual ticket selling system.
- From the statistical analysis Question no:16: we can see for Gabotali bus terminal 75% people said that this terminal ticket price is unfair on the other hand for Mahakhali bus terminal 78% people said this terminal ticket price is unfair. Therefore, we can say that Mahakhali and Gabotali ticket price aren't fair.
- From the statistical analysis Question no 17: we can see for Gabotali bus terminal 76% people said that they got information in this terminal over personal communication, on the other hand for Mahakhali bus terminal 74% people said that they got information in this terminal over personal communication. Therefore, we can say that Mahakhali bus terminal and Gabotali bus terminal information system is same.

- From the statistical analysis Question no 18: we can see for Gabotali bus terminal 30% said that they got personal vehicles parking on this terminal on the other hand for Mahakhali bus terminal 40% said that they got personal vehicles parking. Therefore, we can say that both terminal conditions are same for personal vehicles parking.
- From the statistical analysis Question no 19: we can see that for Gabotali bus terminal 77% said there is no sufficient fire extinguisher, on the other hand Mahakhali bus terminal 83% said there's no sufficient fire extinguisher. So we can say both terminals don't have enough fire fighting facilities.
- From the statistical analysis Question no 20: we can see for Gabotali bus terminal 80% people said that there is sufficient space for bus parking facilities on the other hand for Mahakhali bus terminal 65% people said that there is sufficient space for bus parking facilities. Therefore, we can say that Gabotali bus terminal are well parking facilities with respect to Mahakhali bus terminal.
- From the statistical analysis Question no 21: We can see that both Gabotali and Mahakhali bus terminal have separated isolated work-space.
- From the statistical analysis Question no 22: We can see that both Gabotali and Mahakhali bus terminal have enough fueling facilities.
- From the statistical analysis Question no 23: we can see for Gabotali bus terminal 68% said that there's no enough night lighting system on the other hand Mahakhali bus terminal 76% said that there's no enough night lighting facilities. So we can say that both Gabotali and Mahakhali bus terminal don't have enough night lighting facilities.
- From the statistical analysis Question no 24: We can see that both Gabotali and Mahakhali bus terminal have separated entry and exit away for bus operating.
- From the statistical analysis Question no 25: we can see for Gabotali bus terminal 64% said that the cleanliness is poor on the other hand Mahakhali bus terminal 56% said that the cleanliness is poor. So we can say that both Gabotali and Mahakhali bus terminal have poor cleanliness.



CHAPTER FIVE

CONCLUSSION & RECOMMENDATION

CHAPTER FIVE

CONCLUSION & RECOMMENDATION

5.1 Conclusion:

The Conclusion is analyzing of both Mahakhali and Gabotali bus terminals. Above the study of data analysis we can find much information. Based on our study the two bus terminals are in unsatisfied conditioned. People expressed that both bus terminal conditions are poor quality. Where there is not sufficient waiting place for heavy-passenger. In talking with waiting room condition of two terminals is not even the good condition. Some separated bus counters in those terminals are giving some facilities for passengers. But rest of the two bus terminal did not fulfill the requirement. The water facility condition of both bus terminals is poor. They did not provide water facility for passenger. As a result, people can't have drinking water while sometimes they have to stay a long time in those bus terminals. Both bus terminals toilet condition are poor quality. Those toilets do not clean regularly. The two terminals restaurants are not good and hygienic. There are not the available restaurants. The food quality is unhygienic and costly too. In those two terminals people did not feel comfortable and safe. The people feel uncomfortable because of the terminal waiting lounge is hitting in summer and people did not feel safe because of snatcher, robbery, beggar and hawker. Both terminals have parking facilities but did not use properly. The two bus terminals are available busses but talking with scheduled buses is poor service. In this bus services, some buses condition is poor. The two bus terminals people got information over phone. The ticketing systems of two bus terminals are manually. Now a day's people would like to collect the ticket from online. The ticket price is not fair of all time. In festival time the price is very high and ticket not available. The two bus terminals have workshops, fueling facility. Both the terminals have separated entry and exit away. Unfortunately both the terminals don't have enough fire fighting facilities.

5.2 Recommendation:

1. Government must take necessary steps to develop all of the terminals.
2. The sufficient waiting place should be provided for the heavy passengers.
3. The waiting room cleaning condition should be maintained regularly.
4. There must be available restaurant; cafeteria.
5. The food quality must be hygienic.
6. There should be establishing free water facilities.
7. The water quality should be pure.
8. The toilets condition should maintain.
9. Toilets should be separated for men and women.
10. Passenger should get enough personal vehicles parking space.
11. The bus parking facility of those terminals should use properly and regulated.
12. The bus terminal authority should maintain their bus scheduling.
13. The bus terminal busses should be well condition.
14. The waiting room should be giving air conditioning facility.
15. The waiting room should be beggar and hawker free.
16. The ticketing system must be computerized.
17. The ticket must be available in online.
18. The government should take necessary steps about controlling the ticket price.
19. Information booth should be established.
20. Information system must be improved and should use digital board system or proper announcing.
21. The terminal must be safe for all people.
22. The government giving police security to look after the bus terminal.
23. The government should give enough fire fighting facilities.
24. The terminal should be kept clean regularly.
25. Licensed driver must be appointed
26. Buses should have BRTA authorized clearance.



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