

# **A SURVEY ON FOOT OVER BRIDGES USERS IN DHAKA CITY**

Project report submitted to the Department of Civil Engineering of Sonargaon University (SU)  
In partial fulfillment of the requirement for the degree  
Of  
Bachelor of Science in Civil Engineering

**Supervised by**  
**Md. Abu Saleh Sagor**  
Lecturer  
Department of Civil Engineering  
Sonargaon University (SU)



## **Sonargaon University (SU)**

**Submitted By**

**Md. Azizul Hoque (BCE 1602008103)**

**Md. Jahirul Islam (BCE 1602008155)**

**Mohammad Mehedi Hasan Munna (BCE 1602008156)**

**Fall 2019**

Department of Civil Engineering  
Sonargaon University (SU)

# Department of Civil Engineering Sonargaon University (SU)



## CERTIFICATION

This is to certify that the project paper on “A survey on Foot over bridges users in Dhaka city” is a very important topic of the project work done by Md. Azizul Hoque (ID: BCE 1602008103) as a group leader and others for the partial fulfillment of the requirements of the degree of Bachelor of science (B.Sc.) in Civil Engineering.

This project work has been carried out under my guidance and it is accepted as successful project work.

### Supervisor

Md. Abu Saleh Sagor  
Lecturer,  
Sonargaon University  
147/ I, Green Road, Tejgaon, Dhaka-1215

**Letter of Grant**  
**January 2020**

To,  
Md. Abu Saleh Sagor  
Lecturer,  
Sonargaon University (SU)  
147/ I, Green Road, Tejgaon, Dhaka-1215

Sub: Submission of Project Report.

Sir,  
This is our great pleasure that we are submitting here with the project report on “A survey on Foot over bridges users in Dhaka city”. It is an important topic. The project report has been done according to the requirement and guidelines of the Sonargaon University (SU).

We hope that this report will certainly help you in evaluating our project report on “A survey on Foot over bridges users in Dhaka city”. We would be very glad to provide any assistance in interpreting any part of the paper, whenever necessary.

Thanking You  
Sincerely yours

Md. Azizul Hoque  
ID: BCE 1602008103  
Group Leader  
Section: 8B  
Department of Civil Engineering  
Sonargaon University (SU)

## **ABSTRACT**

Dhaka is the capital city of Bangladesh which is one of the most populated towns in the world. Safe roads for pedestrian are a popular catchword now-a-days. From now and onwards pedestrian in Dhaka city will be a serious headache to the city planners. Among several road user groups; Pedestrians are most vulnerable, on the contrary, they are less prioritized. Pedestrians are the victim of most fatality and casualty occurred in Dhaka city. Like other mega cities, pedestrian volume here is very high and it is very densely-especially in peak hours. More than 70 foot over bridges has already been constructed at different locations in the city to solve pedestrian-vehicle conflict at busy roads. However, number of foot over bridges in Dhaka is negligible comparing to huge pedestrian demand. In this study, questioner surveys will be conducted to investigate performance of existing foot over bridge facilities and possible causes of people's reluctance to the use of foot over bridges will be tried to identify. Several issues or key factors will be incorporated in the survey form and people will be allowed to fill up those voluntarily. Results of the survey will be compared to some common attributes of people's reluctance using foot over bridges like inconvenience, unawareness of the risk in crossing the street, poor accessibility, congested foot over bridges, and lack of security, time consuming and bad surroundings. Usually these are the common reasons that foot over bridges remains under-served and become ineffective to meet public demand. Zebra crossing is mostly preferable by the pedestrian. But it's not effective in our country due to untrained driver and unconscious pedestrians. By increasing the facilities of foot over bridge (FOB) and make drivers bound to obey the traffic rules then situation can be improved.

The specific objectives of the study were collect information about foot over bridge in some selected locations in Dhaka city. We used interviews and collect manual data for finding the issues why pedestrians using and avoiding foot over bridge in the city. The result we calculate facilities and obstacles of foot over bridge users. Indicate key methods for the future foot over bridge construction for the pedestrians.

### **Kew words**

Foot over bridge, Pedestrians, Law, Accident, Authority, Avoiding, Road, Safety, Dhaka citizen, User, Non-user

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Md. Azizul Hoque  
BCE 1602008103

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Md. Jahirul Islam  
BCE 1602008155

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Mohammad Mehedi Hasan Munna  
BCE 1602008156

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# CHAPTER 1

## INTRODUCTION

### 1.1 Introductions

Road accident is a common phenomenon in the third world countries like Bangladesh. Every year about 150 people are being died in various kind of road accident (1). A large number of people die every year while they try to cross the road ignoring the traffic rules. Last five years 950 people died in Bangladesh during crossing the roads (1). To avoid this kind of road accident the city corporation has placed more than 70 foot over bridges in Dhaka city and 15 over bridges are proposed for the pedestrians as they can pass the roads safely (1). But some of this foot over bridges is not in appropriate place and some of these are not usable. Moreover the people are accustomed to defy the laws, there are no strict rules and the people have little time to use foot over bridges. For all these reasons ignoring the traffic laws and passing through the roads increase not only the number of death of people by road accident but also the tears of nearest peoples. The research team tried to find out the reasons behind the ignorance of traffic laws practically through field survey, observation and by taking interview of pedestrians. After studying on foot over bridges for a month the team found a lot of data and exclusive information. The information has been examined by the related theories. Finally the team proposed some suggestions for the betterment of the foot over bridges facilities for its proper use. (1)



## **1.2 Objectives of the Study**

The general objectives of the study are to know the causes why many people don't use foot over bridges while they are moving one side to another side of a road. The specific objectives are –

1. To identify the causes why pedestrians do not use foot over bridges for crossing a road.
2. To identify new measures within it that may encourage pedestrians to use it.
3. To identify the government actions to ensure the best use of foot over bridges.

## **1.3 Illustration of the Problem**

In Dhaka city the pedestrians are reluctant to use foot over bridge while crossing the roads rather than they love to dart across the roads though they have the access to use safer and proper system their nearby (1). As a result many unwanted incident are occurring every day. In a report of (1), it was stated that every year about 150 people die in Dhaka while crossing road. Last five years 950 people have been died in road accident in Dhaka city. According to a report published in (1) shows that about 134 pedestrians have died in accident last year. After an accident some initiatives are being taken but those are not enough and after some days everyone forget the matter and the initiatives are nipped in the bud always (1). If any important person died in road accident, it draws the attention of the government and journalists for some days but effective steps are not being taken for this (1). But problems remain the same. (1)

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1 Review of Literature**

This paper reviews previous researches concerning the factors behind using or avoiding foot over bridges with an emphasis on the interaction between the human and non-human components of the road environment. This interaction is influenced by the knowledge of the road user has about appropriate behavior while interacting with over bridge. Here, researches addressing the knowledge of road user and their actual behavior on the foot over bridge will be reviewed to obtain a better understanding of the relationship between the two issues. The Centre for Urban Studies has conducted a research on the utilization of the Foot Over Bridges in Dhaka city in 2005. Due to the high proportion of pedestrian related traffic deaths. This research focuses specifically on pedestrian behavior. While footbridges offer a safe option, there are various reasons not to use them. The study interviewed 800 pedestrians nearby the footbridges and asked them why people don't use the foot over bridges. Md. Asadullah Khan has described the scenario of pedestrian behavior in Dhaka city in the Daily Star with the title "Is time more valuable than life? ", published on October 20, 2007 (3). He said "I really don't understand why people don't use the foot over bridges. Is time more valuable than life? Well it may be annoying to use the foot over bridges when we are running of time. But we should think about our safety first. Life is more precious than time. Every time I cross a road, I use the nearby foot bridges. Tragic road accidents are taking place regularly due to jaywalking. In recent years, many people including school children were crushed to death for not using the over bridges. As a conscious citizen, I am very worried .People urge the government to build over bridges, but surprisingly, they don't use it! The government should take immediate steps to stop jaywalking .There should be more traffic police on the busy roads so that they can keep track of the jaywalkers. People should be forced to use over bridges .There are also other reasons why people don't use over bridges: dirty atmosphere, hawkers and beggars occupy maximum space of the over bridges. I think over bridges should be clean and free from all hawkers beggars. At last, I would urge the Daily Star-the leading English daily to hold a campaign across the country to educate people about the benefits of using over-bridges "There was another report titled, "Reasons behind the Road-traffic Accident in Dhaka City: An Empirical Study "by Ananya Rubayat , Program Officer at Wild Team, Bangladesh & Nayeem Sultana, Associate Professor, Department of Development Studies, University of Dhaka, Bangladesh. Here they observed Mouchak Intersection, Postogola-Majar Road Intersection, Green Road-Mirpur Road Intersection, Minto Road-Kazi Nazrul Islam Avenue Intersection. Here they found that more or less 50% people don't use foot over bridge in Dhaka city.

In an interview they found that, 37% respondents said, they thought crossing when the traffic was completely stopped was the right time, which is the safest way of crossing. 27% mentioned crossing through the over-bridges when available, and otherwise using the Zebra crossing at grade is safe. 8% thought that crossing was safe enough when traffic flow was light. Alarmingly, 30% of the respondents thought crossing even through heavy moving traffic was alright, as long they were cautious. In a study titled "Feasibility Study on Foot Over Bridges in Dhaka City" by center for urban studies, Dhaka found the following data. (3)

In 2010, a study was conducted (3) at high risk pedestrian injury intersections in Vancouver, Canada violations of road regulations by both pedestrians and motorists were recorded by a team of observers at different periods of the day. In total for all observed intersections, over 2000 (21%) pedestrians committed one of the observed pedestrian road-crossing violations, while approximately 1000 (5.9%) drivers committed one of the observed motorist violations. (3)

## **2.2 Theoretical Framework**

In order to enrich the research the group will follow some prominent theories relating the topic that will be the torchbearer of this research. Here, the following theories have been selected for the convenience of this study.

### **Theory 'X' and Theory 'Y'**

Douglas McGregor in his book, „The Human Side of Enterprise“ (1960), has examined theories on behavior of individuals at work, and he has formulated two models which he called “Theory X and “Theory Y”

### **Theory X Assumption**

The average person dislikes work and will avoid it. Therefore most people must be forced with the threat of punishment to work towards organizational objectives. The average person prefers to be directed; to avoid responsibility; is relatively not ambitious, and wants security above all else.

### **Relation to the Study:**

The people are not willing to waste their time by using foot over bridges. Moreover they don't want to use a high foot over bridge by wasting energy. So they pass through the road very quickly saving their time and energy. In this case stick steps are necessary to be taken against these sorts of people to get a safe city. For this “theory X” can be applied here.

### **Theory Y Assumptions**

Effort in work is as natural as work and play. People will apply self-control and self-direction in the pursuit of organizational objectives, without external control or the threat of punishment. Commitment to objectives is a function of rewards associated with their achievement. People usually accept and often seek responsibility.

## **2.3 Relation to the study:**

Maximum people are conscious and they want a safe life but as the foot over bridges is not suitable enough to use so they don't use these. If government takes some initiatives to make the foot over bridges usable then people will use it. In this case “Theory Y” is applicable.

## **2.4 Hofstede's Cultural Dimensions Theory**

Greet Hofstede proposed six dimensions to evaluate a culture. Those are

1. Power distance
2. Individualism
3. Masculinity
4. Uncertainty avoidance
5. Pragmatism
6. Indulgence

Among these six dimensions the “individualism” and “uncertainty avoidance” are relevant to the study. These two dimensions will be explained here.

## **2.5 Individualism**

The fundamental issue addressed by this dimension is the degree of interdependence a society maintains among its members. It has to do with whether people's self-image is defined in terms of “I” or “We”. In Individualist societies people are supposed to look after themselves and their direct family only. In Collectivist society's people belong to „in groups“ that take care of them in exchange for loyalty.

Bangladesh, with a score of 20 is considered a collectivistic society (4). This is manifest in a close long-term commitment to the member 'group', be that a family, extended family, or extended relationships. Loyalty in a collectivist culture is paramount, and over-rides most other societal rules and regulations. The society fosters strong relationships where everyone takes responsibility for fellow members of their group. In collectivist societies offence leads to shame and loss of face, employer/employee relationships are perceived in moral terms (like a family link), hiring and promotion decisions take account of the employee's in-group, management is the management of groups. (4)

## **2.6 Uncertainty avoidance**

The dimension Uncertainty Avoidance has to do with the way that a society deals with the fact that the future can never be known: should we try to control the future or just let it happen? This ambiguity brings with it anxiety and different cultures have learnt to deal with this anxiety in different ways. The extent to which the members of a culture feel threatened by ambiguous or unknown situations and have created beliefs and institutions that try to avoid these is reflected in the UAI score. Bangladesh scores 60 on this dimension and thus has a high score (4). Countries exhibiting high uncertainty avoidance maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. In these cultures there is an emotional need for rules (even if the rules never seem to work) time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, innovation may be resisted, security is an important element in individual motivation.

### **Relation to the study:**

Pedestrians of Dhaka city are not so conscious and they depend on their luck. They think that an accident is fixed for him or her no one can save him or her from the accident so they don't care foot over bridge and run through the road. Sometime accident may occur and the victim takes it as

his lot. The law enforcement agencies are also not so careful about using of foot over bridges because they also think that all those are natural and nothing to do. So they just let it go.

### **Two Factor theories**

Herzberg's Two Factor Theory is a "content theory" of motivation". Herzberg analyzed the job attitudes of 200 accountants and engineers who were asked to recall when they had felt positive or negative at work and the reasons why. From this research, Herzberg suggested a two-step

### **Hygiene Factor**

The hygiene factors are those factors which prevents dissatisfaction of people. Example: Favorable environment, security etc.

### **Motivating Factor**

The motivating factors are those factors which motivate people. Example: Enforcement of law, attractive environment etc.

**Relevance to the study:** This theory is relevant to the study. If the users don't get proper and necessary environment, safety and elements then those can cause dissatisfaction among users and they become de motivated to use foot over bridges. If the government enforce law and can creating attractive condition in over bridges which will motivate people to use over bridge. This circumstance can be described with this two factor theory.

## **2.7 'Looking glasses self' theory**

The looking-glass self is a social psychological concept, created by Charles Horton Cooley in 1902 (1), stating that a person's self grows out of society's interpersonal interactions and the perceptions of others. The term refers to people shaping their self-concepts based on their understanding of how others perceive them. Because people conform to how they think others think them to be, it's difficult, or arguably impossible, to act differently from how a person thinks he or she is perpetually perceived. Cooley clarified that society is an interweaving and inter-working of mental selves. The looking-glass self has three major components and is-

(1). There are three main components of the looking-glass self (1).

1. We imagine how we must appear to others.
2. We imagine and react to what we feel their judgment of that appearance must be.
3. We develop our self through the judgments of others.

### **Relevance to the study:**

In Bangladesh specifically in Dhaka city the people are very much careless about law and rules. If anyone breaks the law no one looks at him/her in a different mode. So for the person who break the law does not feel any hesitation or any demand from the environment to change himself. As people (the mirror) in Dhaka city is inactive where no one can see his own fault the people has little chance to be changed and to obey the law. The "looking glasses self" theory is not functioning here. No one care about the looking glass. As the appearance of people to other is not an important fact so people always follow his or her choice here.

## 2.8 Human behavior

Human behavior is learned, thus all behavior can be unlearned and new behaviors learned in its place. Behaviorists are not interested in the mind, or its more rarified equivalents such as psyche and soul, inferences about the conditions that maintain and reinforce human behavior can be made from the study of animal behavior (1). Animal research has provided a very important foundation for the behavioral approach. The behavioral researcher is interested in understanding the mechanisms underlying the behavior of both normal individuals and those with problems that might be referred as "mental illness" (1). When the behavioral model is applied to mental illness, it tends to be used for a wide variety of presenting problems. It is perhaps most effective in treating behavioral disorders and disorders of impulse control, such as excessive drinking, obesity, or sexual problems (1). Behavioral approaches may be quite useful in treatment of anxiety and have occasionally been helpful in the management of more severe mental disorders such as schizophrenia, negative reinforcement, punishment, self-management, shaping, time out, and systematic desensitization.

### **Relevance to the study:**

According to the famous evaluation theory of Darwin human being comes from animal. In this present era there are some people who are belonging in the primitive nature. Ignoring law is one of the characteristics of animal and those people who ignore the laws are actually belonging in the primitive nature. They have a little sense of human being and citizens' responsibility. That is why there is a trend to break the law among these people. In Africa most of the people are involved in various types of crime because they are not fully evaluated. Proper socialization is so far away from them. They have still some characteristics of some animal. Those people who are not fully socialized they avoid traffic law and cross the road as they are belonging some characteristics of animal still now.

## 2.9 Cultural lag

The term cultural lag refers to the notion that culture takes time to catch up with technological innovations, and that social problems and conflicts are caused by this lag. According to "Ogburn" cultural lag is a common societal phenomenon due to the tendency of material culture to evolve and change rapidly and voluminously while non-material culture tends to resist change and remain fixed for a far longer period of time. Due to the opposing nature of these two aspects of culture, adaptation of new technology becomes rather difficult.

### **Relevance to the study:**

According to the theory of cultural lag there is a great difference between infrastructural-technological innovation and social or mental development. In Dhaka city the infrastructure or technological development is good but the inner site of the people has not been developed. The people still give more priority to the time than life, people has poor knowledge about the technology and its use. People are less conscious about the civic sense and at the same time the authority has also the same problem.

### **3.0 Operational Definitions**

Some core concepts related to this study need to be defined briefly. These concepts are defined here. Culture “Culture is the collective programming of the mind that distinguishes the members of one group or category of people from others” (1).

#### **3.1 Law**

Law is, generally, a system of rules which are enforced through social institution to govern behavior. Laws can be made by legislatures through legislation (resulting in statutes), the executive through decrees and regulations or judges through binding precedents (normally in common law jurisdictions).The Third New International Dictionary from Merriam-Webster defines law as: "Law is a binding custom or practice of a community; a rule or mode of conduct or action that is prescribed or formally recognized as binding by a supreme controlling authority or is made obligatory by a sanction (as an edict, decree, prescript, order, ordinance, statute, resolution, rule, judicial decision, or usage) made, recognized, or enforced by the controlling authority."

#### **3.2 Defy**

The term DEFY is a verb which generally means to resist (a powerful person, authority, etc.) Openly and boldly it refers to challenge or provoke someone or something judged to be impossible.

#### **3.3 Defying law**

Defying laws refers to such a situation or condition in which an individual or a group of individuals do not follow or violate the established rules and regulations which are enforced through social institution to govern behavior. (1)

## CHAPTER 3 METHODOLOGY

### 4.1 Foot over bridge

A footbridge or a pedestrian bridge is a bridge designed for pedestrians rather than vehicular traffic. Footbridges complement the landscape and can be used decoratively to visually link two distinct areas or to signal a transaction. Footbridges are often situated to allow pedestrians to cross water or railways in areas where there are no nearby roads to necessitate a road bridge. They are also located across roads to let pedestrians cross safely without slowing down the traffic. The latter is a type of pedestrian separation structure, examples of which are particularly found near educational institutions, hospitals etc. to help prevent people running in front of moving cars.

### 4.2 Pedestrian

A pedestrian is a person traveling on foot, whether walking or running. In some communities, those traveling using tiny wheels such as roller skates, skateboards, and scooters, as well as wheelchair users are also included as pedestrians. In modern times, the term usually refers to someone walking on a road or pavement, but this was not the case historically.

### 4.3 Variables

A variable is a measurable characteristic that varies. It may change from group to group, person to person, or even within one person over time. Moreover a variable can be described as either a result of some forces or is itself the force that causes a change in another variable. In experiments, these are called dependent and independent variables respectively. An independent variable is the presumed cause, whereas the dependent variable is the presumed effect. Dependent variables are the variable that is being measured in an experiment or research. For example, if the study is about the use of over bridges and its effectiveness then the dependent variable will be “use of the over the bridges”. (1), (2)

Independent variables is the values that can be changed in a given model or equation. They provide the "input" which is modified by the model to change the "output".

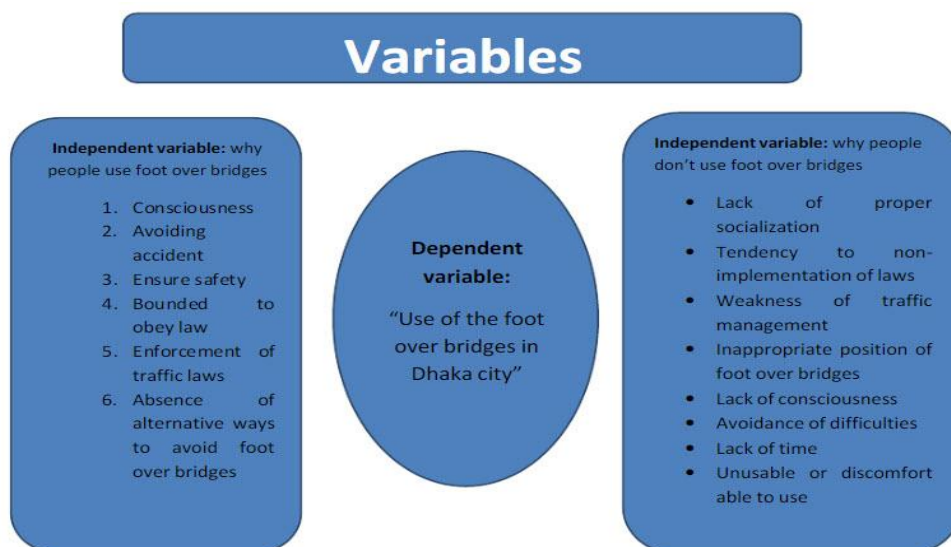


Figure 1: Variables



### **Research method of the study**

Research methods are technique which is used for collecting data. There are usually two methods of collecting data – Qualitative and quantitative. The topic of the study is, “culture of defying law in Bangladesh: A comparative study of use of foot over bridge in Dhaka city”. This is more attached to the society. So the research has become a qualitative one. For data analysis the group has used some quantitative approach.

### **4.4 Data collection**

The required data for this study has been collected from both primary and secondary sources.

#### **Primary source**

The primary sources of data collection are-

1. Interview of 207 (both user and nonuser) pedestrians from four different over bridges.
2. Interview of two specialist and two high responsible officials.
3. Observation on total 3092 (both user and nonuser) pedestrians from six different over bridges for 105 minutes.

#### **Secondary source**

The secondary sources of data collection are-

1. Various website through internet browsing (Address of web site and date of browsing are attached in reference section).
2. BBC report telecasted on 30<sup>th</sup> November, 2014.
3. Daily newspaper.
4. Publications of various government office

### **4.5 Methods of interview**

There were two kinds of interviewee

1. The pedestrians
2. Responsible officials

The interviews and observation were taken through “Sampling” method. There were two sampling methods.

### **4.6 Methods of Sampling**

1. **Random sampling:** The observation on 3092 pedestrians and interview of 133 pedestrian’s were taken by random sampling. The research team went four over bridge and collected the interview of both user and nonuser pedestrians. The question of interview was both open ended and close ended. The sample question is attached in the appendix section. In case of observation on pedestrians the members of the team took their position on foot over bridge and one group count the user and one group count the nonuser.
2. **Non random sampling:** The over bridges and the specialist are taken through a non-random sampling process. The seven (for both observation and interview) over bridges are selected on the basis of their position, user and criteria.

#### **4.7 Survey area:**

The whole Dhaka city is the research area for the research. But here only seven foot over bridges have been chosen by applying sampling method. The name of the over bridges are given bellow.

1. New Market foot over bridge
2. Farmgate foot over bridge
1. Banani foot over bridge

#### **4.8 New market foot over bridge:**

The new market over bridge was taken as there is no official gate way to pass through the road but people cut the barricade and made a small way to pass. Here the team did observation and interview both. This over bridges represents all kind of over bridges in Dhaka city. The explanation of the activities is given in the following articles.

#### **4.9 Limitations of the study**

The study has some limitations. The limitations are given bellow. Most of the pedestrians were not willing to interview. Especially the non-user avoided the interview. In Dhaka city there are more than 70 foot over bridges but only Three were chosen for observation. Because of time and fund limitations the short listed foot over bridges was observed.

The research demands to take interviews of more pedestrians but because of time constraints and business of the experts it was not possible.

**New market foot over bridge:** The team did research on New Market, Dhaka foot over bridge and got the following data. In this research the team took interview of 100 pedestrians and observed on 1710 people for 30 minutes. In that 20 minute the team found that 880 people crossed the road and 820 people used foot over bridge. Though there is a barricade at the middle of the road to stop pedestrians to cross the road but it is a matter of great sorrow that people has broken the barricade and now people pass through this broken part of the barricade. The numbers of this kind of people who break rules are more than those who maintain rules. 28 persons pass through the broken part while 57 use foot over bridge in every minute.

## 5.0 Location

The foot over bridge is located on the Mirpur road. The location is shown in the following diagram.

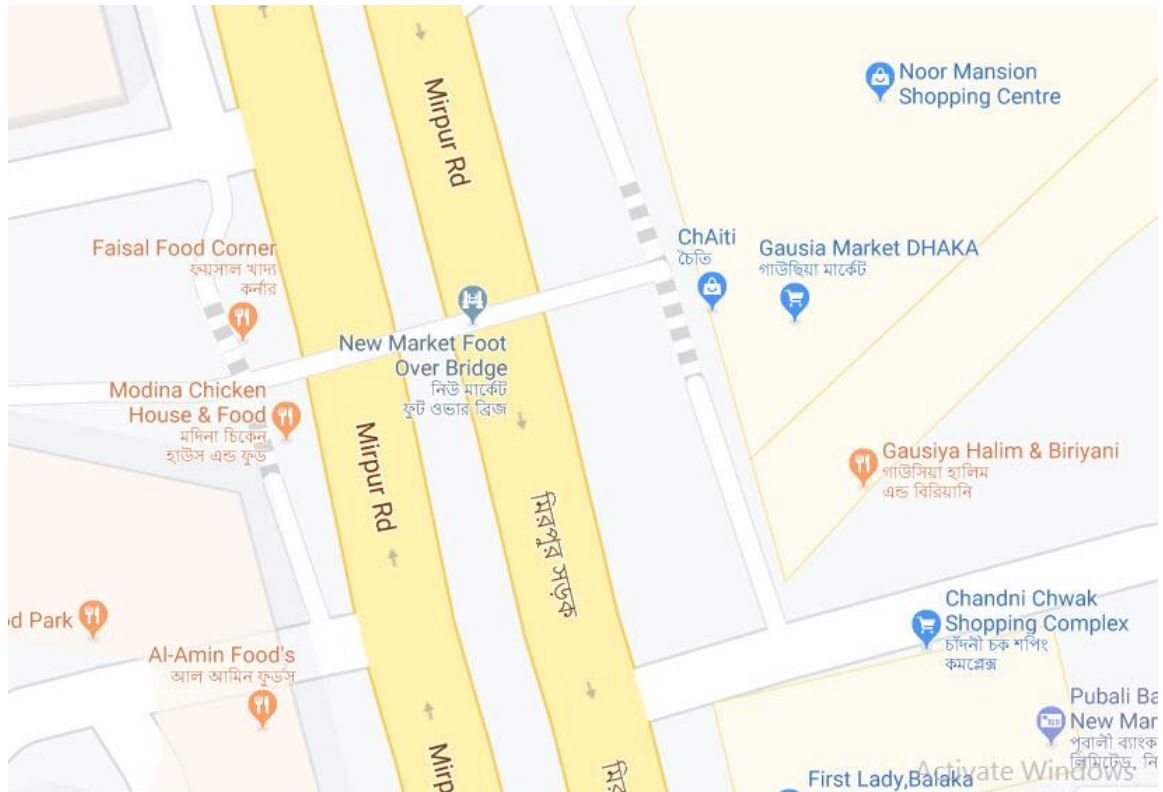


Figure 2: New market foot over bridge Map

## 5.1 Pedestrian reviews:

Total respondents 107 pedestrians

Pedestrian group	User/ Non Users of foot over bridges	Male	Female
Users of foot over bridges	100	68	32
Non Users of foot over bridges	7	5	2

## 5.2 Profession of the pedestrians

During research the profession of the pedestrians was in concern. It is because the team wanted to know which kind of people are conscious and who are not conscious.

No	Professions	Pedestrian Numbers	Status
1	Students	45	User
		5	Non User
2	Business Man	7	User
		0	Non User
3	Job Holder	24	User
		0	Non User
4	Worker	8	User
		0	Non User
5	House wife	15	User
		2	Non User
6	Others	1	User
		0	Non User

## 5.3 Reasons of using foot over bridge

In this foot over bridge the team found several causes of using the bridge. Maximum pedestrians said that they use this because of their consciousness. Here pedestrians think that as a citizen of the country everybody should follow the rules of the country. They are conscious about their civic sense and that is why they follow the rules and they use foot over bridge. Some people also said that they use this to avoid accident and some noticed a very important point that they are willing to break the rule and pass through the road but they cannot because there is no alternative way to use. For this they are bounded to use this foot over bridge.

No	Reasons of using foot over bridge
1	Avoiding accident
2	Consciousness
3	Enforcement of law
4	Absence of alternative ways

## 5.4 Reasons of avoiding foot over bridge

The team found that most of the people avoid foot over bridge because of lack of time. Here some new points has come that some people has physical problem like pregnant women, elderly and disable people who avoided foot over bridge for their physical problem. Another important point is that the bridges are not in the appropriate position. Some foot over bridges is in such a position where generally people don't go. Three pedestrians noticed that in the over bridge there are a lot of garbage, hawker, hijackers and that is why people don't willing to use this. Eight pedestrians noticed that the stairs are not so comfortable to use. The stair is almost 55 degree slop which is very difficult for the physically weak people.

No	Reasons of not using foot over bridge
1	Lack of time
2	Lack of proper socialization
3	Weakness of traffic system
4	Inappropriate foot over bridge position
5	Lack of consciousness
6	Avoidance of difficulties
7	Discomfort able
8	Physical problem
9	Lack of security
10	Laziness
11	Dirty environment
12	At night improper lighting facilities

## 5.5 Analysis

The over bridge has a lot of problems but there is no legal way to avoid it. Under the bridge there is a steel frame barricade. But unfortunately people has broken two of its rod and through the small way 7 people pass in every minute in an unsafe manner. No doubt that the bridge is not like that of Banani but as there are no alternative way people should use it without any hesitation. But people are ignoring it and that is why government should consider the recommendations and take proper steps to make it usable and punishment also needed to make people bounded. Not only punishment but also high motivation is necessary here. Generally girl's doesn't take serious risk but the girl is taking risk to cross the road very dangerously. This is the Prof of the nature of the people. How much unconscious they are!

### Some images new market foot over bridge environments



**Figure 3: Risky passing under new market foot over bridge 1**

The pictures show us that people have no concern about their life and the rules also. They do not pay any heed to the demand of rules. The right corner picture shows that a group of people are crossing the road without any fear and there is a brave manner in their body language.



**Figure 4: Hawkers in front of foot over bridge 1**



**Figure 5: Hawkers in front of foot over bridge 2**



**Figure 6: Hawkers in front of foot over bridge 3**



**Figure 7: Hawkers in front of foot over bridge 4**



**Figure 8: Hawkers in front of foot over bridge 5**





**Figure 9: Hawkers doing their daily activities on foot over bridge 6**



**Figure 10: Hawkers make a small shop on the foot over bridge stairs 1**



**Figure 11: Hawkers make a small shop on the foot over bridge stairs 2**

## 5.6 Observations

Overall foot over bridge situation is too poor. On the gate of the bridge there are so many shoe shops which actually hide the bridge. The new comer here cannot find the stair of the bridge normally. Not only that there are the following problems. Foot over bridge authority should be maintain foot over bridge and its surrounding environment clean and clear, sufficient lighting facilities should be provided, ensuring security system 24/7, remove baggers and damaged places need to reconstruct for the pedestrians.

## 5.7 Recommendations

The team got some recommendations from the pedestrians to make foot over bridge more useable. Most of them suggested ensuring strict law enforcement to bound people to follow the traffic rules. One the other hand other people suggested raising consciousness among people. Eight people suggested that the foot over bridge will be more attractive if the hawkers and other floating people can be transferred from the over bridges.

No	Recommendation
1	Law enforcement
2	Proper placement
3	Ensure good environment
4	Stop alternative way
5	Consciousness raising
6	Ensure security
7	Remove hawkers
8	Increase the number of over bridge in gathered places

## 5.8 Framgate foot over bridge

Farmgate over bridge was taken as it used highly and there is no chance to use road to pass; it is situated in a busy area and only observation was done there.

1. There are five gates of the bridge. The bridge has three parts. The main part of the bridge is not able to take the load of pedestrians.
2. The main part of the bridge is always vibrating because a lot of people use the bridge in every minute and the strength of the bridge is not enough. It is frightening to the pedestrians.
3. Though there is no chance to cross the road under the bridge as there is strong barricade and the pressure of traffic is so high but a very little people cross the road in a serious unsafe manner.
4. The bridge is dirty enough. Papers and polythene are spread here and there. On that time there were 5 baggers on the bridge.
5. The bridge is one of the busiest bridges in Dhaka city. In every minute almost 94 people use the bridge but there were 11 hawkers on the bridge and they occupied more than two third of the bridge. There is only 2 feet space for the pedestrians in some cases as hawkers occupied both two sides

## 5.9 Location

The bridge is located at framgate on Kazi Nazrul Islam Avenue.

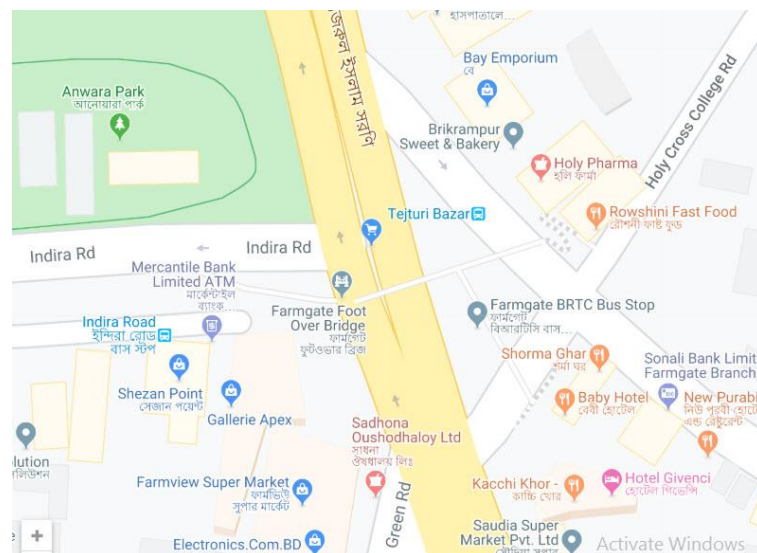


Figure 12: Farmgate foot over bridge Map



Figure 13: Farmgate foot over bridge top view (Ref.3)

## 6.0 Data observations

In this observation the following data was found.

Status	Non Users of foot over bridges	Male	Female
User	100	68	32
Non User	8	5	3

## 6.1 Pedestrian reviews:

Total respondents 100 pedestrians

1. Foot over bridge not clean everyday properly
2. Lots much beggar on the foot over bridge

## 6.2 Profession of the pedestrians

During research the profession of the pedestrians was in concern. It is because the team wanted to know which kind of people are conscious and who are not conscious.

No	Professions	Pedestrian Numbers	Status
1	Students	40	User
		0	Non User
2	Business Man	15	User
		0	Non User
3	Job Holder	23	User
		0	Non User
4	Worker	10	User
		0	Non User
5	House wife	12	User
		0	Non User

## 6.3 Reasons of using foot over bridge

In this foot over bridge the team found several causes of using the bridge. Maximum pedestrians said that they use this because of their consciousness. Here pedestrians think that as a citizen of the country everybody should follow the rules of the country. They are conscious about their civic sense and that is why they follow the rules and they use foot over bridge. Some people also said that they use this to avoid accident and some noticed a very important point that they are willing to break the rule and pass through the road but they cannot because there is no alternative way to use. For this they are bounded to use this foot over bridge.

No	Reasons of using foot over bridge
1	Avoiding accident
2	Consciousness
3	Enforcement of law
4	Absence of alternative ways

## 6.4 Analysis

It is a matter of pleasure that about all of the pedestrians are using foot over bridge but at the same time it is a matter of great sorrow that the over bridge is vibrating all the time which is really threatening. Some days ago the bridge was banned to use but now it is open without any strong protective measure. Any time the bridge can be fallen down. More over the condition of the bridge is so bad and it needs immediate reaction to make it usable. Those people who are passing the road under the bridge in an unsafe manner ignoring the strong barricade should bring under punishment.

## 6.5 Observations

Farmgate foot over bridge, one of the busy foot over bridge in the Dhaka city. Dhaka is the capital of Bangladesh and Farmgate is the vital key point of Dhaka. Thousands of people pass through the road by using this foot over bridge. Beggars and hawkers doing their activities on the foot over bridge every day and they make the foot over bridge environment clumsy. Dirty walking way and some places are damaged. Government trying to provide good facilities to the pedestrian but responsible authority may not take proper steps to do so.

## 6.5 Recommendations

The team got some recommendations from the pedestrians to make foot over bridge more useable. Most of them suggested ensuring strict law enforcement to bound people to follow the traffic rules. On the other hand other people suggested raising consciousness among people. Eight people suggested that the foot over bridge will be more attractive if the hawkers and other floating people can be transferred from the over bridges.

No	Recommendation
1	Ensure good environment
2	Consciousness raising
3	Consciousness raising
4	Consciousness raising

## 6.7 Banani foot over bridge

The team did research on Banani foot over bridge and got some very important information. In this research the team took interview of total 35 pedestrians and observed on 587 people for 20 minutes. In that 20 minute the team found that 283 people crossed the road and 304 people used foot over bridge. 14 people cross the road with high risk in every minute. When there is a signal to stop traffic for one side then most of the people do cross the road. Every signal is for maximum 5 minute and in this five minute more than 60 people cross the road. On the other hand 15 people use foot over bridge in every single minute. The data is given bellow in different tables.

## 6.8 Location

The bridge is located between Banani and Kakoli on the Dhaka-Mymensingh high way road. It has been shown through the diagram from Google Map.



Figure 14: Banani foot over bridge Map

## 6.9 Data observations

Status	Non Users of foot over bridges	Male	Female
User	100	55	45
Non User	8	0	0

## 7.0 Profession of the pedestrians

During research the profession of the pedestrians was in concern. It is because the team wanted to know which kind of people are conscious and who are not conscious.

No	Professions	Pedestrian Numbers	Status
1	Students	20	User
		0	Non User
2	Business Man	5	User
		0	Non User
3	Job Holder	42	User
		0	Non User
4	Worker	7	User
		0	Non User
5	House wife	26	User
		0	Non User

## 7.1 Causes behind using foot over bridge

The pedestrians use foot over bridge for different causes. Most of them use foot over bridge to avoid accident. The study on Banani foot over bridge shows that 12 pedestrians use it to avoid accident and no one do this in fear of law enforcement.

No	Reasons of use foot over bridge	Number of users
1	Consciousness	58
2	Avoiding accident	17
3	Ensure safety	23
4	Law enforcement	1
5	Absence of alternatives	1



## 7.2 Reasons behind avoiding foot over bridge

The team found some pedestrians who avoided foot over bridge. A lot of causes are there for avoiding foot over bridge and most of them think that they avoid foot over bridge for their lack of time. Not only general people but also police avoid foot over bridge to save time. It is very dangerous that people give more priority to time than life!

No	Reasons of not using foot over bridge
1	Lack of time
2	Lack of proper socialization
3	Weakness of traffic system
4	Inappropriate foot over bridge position
5	Lack of consciousness
6	Avoidance of difficulties
7	Discomfort able
8	Physical problem
9	Lack of security
10	Laziness
11	Dirty environment
12	At night improper lighting facilities

## 7.3 Picture

This is a very good foot over bridge with high modern facilities and there is no reason to avoid it.



**Figure 15: Banani Foot over bridge escalator one sided setup (5)**

## 7.4 Observations on the foot over bridge

Not only the pedestrians but also the foot over bridge was observed. It was found that the foot over bridge is very good in its structure. It is neat and clean and it is situated in an appropriate position. There is no hawker, no bagger, no banner or poster and no mentionable garbage. There are two escalators in the bridge and both are active. Physically weak people can also use this bridge with joy. There is a problem which was identified by many interviewees that one side is forgetting up and one side is to get down so whenever people use it they have to walk a long distance.

## 7.5 Analysis

The Banani foot over bridge is the best among all foot over bridges in Dhaka city. There is no chance to claim it for garbage or insecurity but the number of non-users are almost the same. The main reason here is the institutionalization of a bad culture among the city dwellers. One of the pedestrians said that he never uses foot over bridge in his whole life. It is a characteristic of masculinity. Some people consider crossing road is an expression of brave and heroism. Looking at self and Y theory is totally failed here. Only X theory can make people conscious in this case.

## 7.6 Recommendations

The pedestrians provided some recommendations to make foot over bridge more useable. Most of them suggested to strict the law enforcement to bounded people to follow the traffic laws. The recommendations were collected from both users and non-users.

No	Recommendations
1	Add escalator in both sides
2	Security in foot over bridges
3	Ensure sound environment
4	Introduce mobile court
5	Increase publicity
6	Obligation for use
7	Make it more easy
8	Increase over bridge

## **7.7 Dhaka City**

Dhaka is one of the old and pride city in the world. It is the capital of Bangladesh and that is why millions of people lives in the city or come to the city for their various activities. The people of the city are from different area having different culture and educational background (7). Some people are ideal citizen of the city and some are illiterate and they have little civic sense. Some people are very serious about traffic laws and some hardly care the so called laws. The law enforcement agencies of the city are not so different from the general people. Sometimes they enforce laws and sometimes they break laws by themselves (7). They are very careful about their duty in which they get extra money and really less careful about disturbing the people by enforcing the laws upon them. Four years ago the Dhaka was divided into two parts- Dhaka North City Corporation and Dhaka South City Corporation for a political purpose and it was said that the deviation will increase the quality of service for the city dwellers and the city corporations are now only increasing service quality for the respective politicians (7). The roads, footpath, foot over bridges are hardly usable. Most of the cases city corporations don't pay any heed to the demands of the city dwellers. In the city there are more than 70 foot over bridges among them 18 are 100% unusable, 29 are 50% to 70% usable and 23 are fully usable with proper citizen services. Everyday about 60-70 new cars are being added in the city road which are increasing the possibility of accident 2-3% every day (7). The 9% car of the city is occupying the 42% space (7). No one care this. Neither the pedestrians nor the city corporation are concern about this. Hardly the city dwellers find some little initiatives by the city corporations to make the foot over bridges usable. But the initiatives go in vain before people get the facilities.

## **7.8 Nature of the Pedestrians**

Breaking law is a nature of human being. It is a divine legacy (7). When Adam and Eve was in heaven they broke the law first and this is now continuing among mankind. By born everyone is a potential criminal and he/she always try to break the law (7). If anyone get any chance to do it he/she doesn't miss it. But the environment and socialization forbid people to break the laws. People achieve the socialization from society (7). First family teach a person about the social norms and values and then gradually he/she learn norms and values through various socialization process. But if anyone borrowed any culture from other society or has lacking in socialization process then he/she disobeys the norm and values of that particular society (7). In Bangladesh only 58.6% people are literate. Among them 68.3% can sign only (7). The huge number of people is out of the light of education and knowledge. They don't know what civic sense is, what a rule is and why they need to obey the rules. That is why people break the laws and cross the road in an unsafe manner.

Defying laws depends on the nature of the people. In Bangladesh breaking laws is a undefined law. Everyone break laws according to their will. Very few people are concern about the law and rules. The concept will be more clear through the following picture.



**Figure 16: Nature of the people of Dhaka City**

The picture was taken from the Gawsia, new market, Dhaka. The distance from the left to right of the area included in the picture is not more than 3 meters but alas! Within the 3 meters there are five unexpected scene. At the very left of the picture there is a man who is walking in the road beside him a rickshaw has been parked. Just beside it two people sat there and using the road as their toilet; the footpath has been occupied by the floating business man and a smoking object is being seen lying on the road. The whole picture is full of irregularities. This is actually the nature of the common people of Dhaka city. They are used to defying laws and it is very easy to them to ignore the rules. There is some pictures will provide a clear idea about the nature of the people to ignore rules and safety measures.

## 7.9 Some risky passing images bellow



**Figure 17: Crossing the road avoiding the rules**



**Figure 18: Crossing the road avoiding the rules although there is a foot over bridge**



**Figure 19: Crossing the road avoiding the rules with life risk**



**Figure 20: A woman trying to cross the road avoiding the rules with life risk**



**Figure 21: Woman child trying to cross the road avoiding the rules with life risk 1**



**Figure 22: Woman child trying to cross the road avoiding the rules with life risk 2**



**Figure 23: Pick our officials trying to cross the road breaking the safety rules (6)**

## 8.0 Uncertainty avoidance

Uncertainty avoidance refers a culture where people are not conscious about the uncertain future. Here people think that everything is predetermined and no one can change this. Bangladesh scores 60 on this dimension and thus has a high score. Countries exhibiting high uncertainty avoidance maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. Here a sentence is very common to the people that, “If God saves no one can die”. For this concept people are very much careless about the uncertain accident in the road and the easily cross the road avoiding foot over bridge. So people cross the road in a very unsafe manner.



**Figure 24: High uncertainty avoidance with life risk**

The picture shows that a man is jumping over the barricade to cross the road while just in front of him there is an over bridge. There is a car on the road and there is a great chance of a serious accident. But he is careless because he is belonging in a high uncertainty avoidance situation.

## 8.1 Irresponsible authority

No doubt that the nature of the people of the city is not matured enough but for this the people are not responsible only. The irresponsibility of the authority is the main reason for unsocial manner (7). The city corporation is responsible for the maintenance of the foot over bridges. They are also responsible for planning and setting up bridges in the city. But unfortunately the city corporations are not functioning properly. They are setting over bridges in inappropriate places. For example the Ramna and Azimpur over bridges are totally useless. Very hardly people use these. On the other hand in Sahabag and Nilkhet Transition there is a crying need of foot over bridge. But the authority is careless about these matters. The city corporation is also responsible for the proper



maintenance of the over bridges. But the condition of the over bridges notice that no one take care of these. Some pictures are given hereto realize the irresponsibility of the authority.



**Figure 25: Open manhole just at the gate of the over bridge**



**Figure 26: Gate of the over bridge has been blocked by shoe market**

This photo was taken from Utsob 1 (New market over bridge). It is the gate of the over bridge but gate is unseen. The people who come here for the first time cannot find the gate because of the shoe shops. The market is always crowded and as there are a lot of shoes in the market it is very difficult to find out the gate.

## **8.2 Laws for foot over bridge**

There are no specific laws for using foot over bridges and no specific punishment for avoiding these. But police is now using public nuisance offences of the Penal Code 1860, chapter XIV, article 268, article 290 and article 291. The articles and the laws are given bellow.

### **THE PENAL CODE, 1860 (ACT NO. XLV OF 1860) CHAPTER XIV OF OFFENCES AFFECTING THE PUBLIC HEALTH, SAFETY, CONVENIENCE, DECENCY AND MORALS**

## **8.3 Public nuisance**

A person is guilty of a public nuisance who does any act or is guilty of an illegal omission which causes any common injury, danger or annoyance to the public or to the people in general who dwell or occupy property in the vicinity, or which must necessarily cause injury, obstruction, dangers or annoyance to persons who may have occasion to use any public right. A common nuisance is not excused on the ground that it causes some convenience or advantage. Punishment for public nuisance in cases not otherwise provided for 290. Whoever commits a public nuisance in any case not otherwise punishable by this Code shall be punished with fine which may extend to two hundred taka. Continuance of nuisance after injunction to discontinue 291, whoever repeats or continues a public nuisance, having been enjoined by any public servant who has lawful authority to issue such injunction not to repeat or continue such nuisance, shall be punished with simple imprisonment for a term which may extend to six months, or with fine, or with both. The Dhaka Metropolitan Police has operated mobile courts for seven days on a pilot basis from November 25 on the road stretch from Ruposhi Bangla hotel to Farmgate police box. Police sources said there were four footbridges at Paribagh, Banglamotor, Daily Star and Farmgate police box points and one underpass at Karwanbazar. A pedestrian has been sentenced to a maximum six months in jail or fined Tk. 200 or both if they do not use underpasses or footbridges in the capital. The initiative has been taken to create road safety awareness among pedestrians and motivate them to use underpasses and footbridges, said the DMP commissioner at a press briefing at its information Centre Suggestions from DMP

The Dhaka metropolitan police has mentioned some tips to cross the road safely in there website. But those tips are not shown in the road where pedestrians pass the road in an unsafe manner. Providing tips only in website will benefited the researcher but not the pedestrians. Surprisingly the three page safety plan does not include the word “foot over bridge” (2). Here DMP only suggest remaining concern during crossing the road. They did not suggest pedestrians to use foot over bridge for a single time. One the other hand they are providing 200 taka fine and maximum 6 month jail on the basis of penal code 1860 (2). The safety tips are given bellow.

## **8.4 How to cross the road safety**

### **A. Think First– Plan**

- Find the safest place to cross the road.
- If available, cross the road at a zebra crossing, traffic light crossings or at traffic islands or where there is a police officer.
- Wait on the pavement until the traffic has completely stopped.
- If not available, choose a place where you can see clearly along the roads in all directions, and where drivers can see you.
- Never cross on turns.

### **B. Stop**

- Stand on the pavement little way back from the edge. You should be away from the traffic but still be able to see all around even if there is no pavement stand at a little distance from the edge.
- Don't hurry, give yourself time and have a good look all round.

### **C. Watch and Listen**

- Look for traffic in all directions and listen.
- When it's safe, walk directly across the road.
- Keep looking & listening while crossing.
- Never run.

### **D. Wait until it's Safe**

- Wait patiently and let the traffic pass.
- Cross when there is a safe gap and you are sure there is enough time.
- Don't cross if you are not sure.

### **Crossing the road where vehicles are parked**

- Avoid crossing between parked cars
- If there is nowhere else to cross: choose a place where there is enough space between two cars
- Make sure no car is about to move out of the parking- look for drivers in the cars, lights and

### **Listen for engines.**

- Ensure that you can easily get to the other side of the road.
- Walk to the outside edge of the cars and stop.
- Look on both sides for traffic.

### **Crossing road with a median**

- Some roads have an island or a median in the middle.
- Treat each half of the road as a separate crossing.
- Wait on the island or median, observe and then cross.

### **Crossing at a zebra crossing**

- If there is a zebra crossing, always use it.
- Wait on the pavement near the edge and wait for all the traffic to stop before you start to

cross.

- After traffic has completely stopped from both sides, walk across on the black and white stripes.
- Keep looking all round and listening because a driver might not have seen you.
- If it is wet, cars would take more time to stop.

### **Crossing where there is an island on the road**

- Mostly traffic flows in one direction where there is an island on the road.
- Treat each half of the crossing as separate crossing.
- Watch out for overtaking vehicles.
- Do not assume that vehicles will stop.
- Check that the vehicles have stopped before you cross the road.

### **School crossing managed by police or traffic marshals**

- When school crossing is managed by police officers or volunteers, wait until they signal to you to cross the road.
- Always cross in front of them and obey their instructions.

### **Crossing one-way road**

- Check the direction in which the traffic is going.
- Traffic will be flowing in more than one lane
- Do not cross until it is safe to cross the whole road.

### **Safety tips for children while crossing roads**

- Cross quickly – do not linger or play in the street.
- When walking on sidewalks, be aware of driveways and alleys from which cars may emerge.
- When walking down a street with no sidewalks, walk as near to the edge of the road as possible, facing traffic. Bright colored clothing increases visibility, but when walking/biking near dusk reflective tape should be used on jackets, backpacks, bikes, etc.
- First and foremost, set a good example by always following the traffic safety rules yourself. Children learn by example.
- Children should look to see that drivers are aware of them. Making eye contact with a driver is a good way to know whether a driver is aware that someone is about to cross the road.
- Teach children the meaning of traffic signs. Stop at all stop signs, red lights, and obey traffic signals. When the intersection has crossing signals, only cross when the walk signal is lit.
- There are many traffic safety tips to share with your children to keep them safe when you can't be with them. These tips may seem a bit trite, but they bear repeating (and repeating and repeating and repeating for kids).

## 8.5 Pedestrian Activities

This file photo shows a large number of pedestrians crossing the busy Airport Road in Dhaka ignoring the heavy traffic, while violating laws and risking their lives, instead of using the foot over bridge that is just several feet away Syed Zakir Hossain/Dhaka Tribune.

According to data of the two Dhaka city corporations, currently there are 43 foot over-bridges in the Dhaka North City Corporation, and 31 in the Dhaka South City Corporation

Despite the presence of numerous foot over-bridges on the busy roads of Dhaka, most of the pedestrians prefer to cross the street, risking probable accidents and deaths.

According to data of the two Dhaka city corporations, currently there are 43 foot over-bridges in the Dhaka North City Corporation, and 31 in the Dhaka South City Corporation.

In Dhaka, people make 60% of trips by foot and only 4% of trips by car, said a 2015 study by the Department of Civil and Environmental Engineering, Islamic University of Technology.

The study titled “Pedestrian’s Behavior on Road Crossing Facilities” said that 76% of all trips are less than 5 km, and 50% are less than 2 km, which is why people find walking to be convenient.

In a 2018 report titled “A study on the efficiency of foot overpasses and underpasses in Dhaka City” presented in the International Conference on Research and Innovation in Civil Engineering (8), researchers found that in Dhaka, 86% of the road deaths are that of pedestrians.

The study further found that almost half of pedestrian- related accidents occur while people are waiting for a bus, crossing roads or walking on the roads without using footpaths.

Shamima, a pedestrian who was caught while crossing road in the Shymoli intersection, said she was in a hurry and did not have time to climb two flights of stairs to cross the road.

Another female pedestrian complained that the over-bridges remain crowded with hawkers and people loitering around, smoking, and sometimes even harassing women.

“The over-bridges are too dirty to be used,” she added, urging the authorities concerned to maintain them well.

“I think police needs to take action against these people,” said Belal Ahmed, a pedestrian, who crossed the road by using the over-bridge. He admitted that he rarely uses the over-bridge in the area as he feels “unsafe” around them.

Road safety experts claim that people cannot just be expected to follow the rules unless they are enforced by the authority.

“The authorities need to ensure proper maintenance of the foot-over bridges,” said Assistant Professor Kazi Md Shifun Newaz at Accident Research Institute (ARI) of Bangladesh University of Engineering and Technology (BUET).

People in Bangladesh are not educated and ethical enough to follow laws on their own, he said, adding that the relevant authorities need to resort to penalizing people for jaywalking to ensure that they use the over-bridges.

“Installing fences on the side-walks underneath and around the over-bridges will also force people to use them,” he added.

A questionnaire survey, conducted with 500 people as part of the study on the efficiency of foot overpasses and underpasses, found that 87.8% of the respondents consider using the over-bridges time consuming while 68.3% consider the over-bridges lack security.

## **8.6 Accident**

Road accident is a common phenomenon in the Dhaka city. A large number of people die every year while they try to cross the road ignoring the traffic rules. They cross the road in front of moving vehicles and consequently fall victims of fatal accidents. The government and pedestrians both should think that lives are most valuable and nothing should be compared with it. To save lives we need to be social; we need to follow the traffic rules because life will not come for the second time.

The authorities should take the necessary steps to prevent these road accidents. Traffic police and the citizen should be more aware of the problem. Rules and regulations should be followed more strictly. When there is a VIP on the road, the traffic police are very conscious. However, they should be conscious all the time, and make sure no one can jaywalk through the busy roads. People who break the rules should be punished, possibly via fines. The foot over-bridges should be cleared of all vendors. The authorities need to improve the over-bridges to encourage people to use them. The first and most important step is to ensure people are using them. The media should highlight the importance of their use by pointing out the many accidents that are occurring due to jaywalking. The roads in our city should have signs for pedestrians not to jaywalk. Overall, this should be practiced by all classes of people. Otherwise, the foot over-bridges will remain unused and accidents will continue. It is now time to make your family, friends, colleagues and neighbors conscious about the negative effects of jaywalking. Textbooks can be a useful tool in educating people about their use. Print and electronic media can play a vigorous role to educate the masses about the necessity of using footbridge, and avoid jaywalking. (8)

## **Chapter 4**

### **Results and Discussion**

#### **9.1 Explanation**

This study reveals the perception of pedestrians on the use of pedestrian crossing facilities. Based on the study it is identified that insufficient security is the prime concern of pedestrians to use pedestrian foot over bridge or underpass. Security should be increased so that pedestrians do not fear for the hijacking and mugging problem. Field observation suggests that the maintenance of roadside barrier and median barrier should be improved to separate pedestrian movements from vehicular traffic and to encourage pedestrians to use road crossing facilities. Also there are other sectors which should be improved such as: pedestrian awareness, social awareness, design improvement etc. Type of road crossing facilities plays an important role to increase the efficiency of it. According to our study 71% pedestrians want underpass rather than FOBs. Thus, we propose, if possible, to build more underpass rather than overpass. Nonetheless, several steps have to be taken to improve the surrounding environment of the FOBs which ultimately increase their usage. The steps are as follows:

Foot over bridge should be accessible very easily. It means the entrance should be wide enough and convenient approach to facilities so that pedestrians can use it without discomfort and hindrance.

Foot over bridge should be free from all kinds of commercial and illegal activities. Such as: it should be free from hawkers, beggars, prostitutes etc. Billboard and advertisement should be banned in foot over bridge.

Foot over bridge should have appropriate roofing facilities so that pedestrians can use it during the rainy season as well as in the hot summer.

Lighting facilities should be increased so that pedestrians can use the facilities at night without hesitation and discomfort. Foot over bridge should be aesthetically beautiful.

Public awareness campaign should be organized by the government and different road authorities. Variable message sign can be used to warn the pedestrians about the bad impact of not using road crossing facilities.

Based on the situation observed and survey the most important sector should be improved is law enforcement

## 9.2 Results and Discussion

After doing this survey we found some reasons that pedestrian break the law because lack of law and enforcement authorities' laziness, Lacking of proper awareness, saving the time, Improper setup of the foot over bridge, damaged walking space, dirty environment etc. The authority must need to take sufficient initiatives to maximum use of the foot over bridge. On the other hand pedestrian will love to use foot over bridge for their safety and security to avoid accident.

There is some highlighted point need to be ensured using the foot over bridge for the pedestrians. Like as-

1. Much people awareness about foot over bridge safety and security.
2. Electronic and print media may take vital rule by providing attractive advertisements to awake laze civilian.
3. Those people break the safety law they should be punished by the law and enforcement department.
4. Authority must take care about foot over bridge environment and its surrounding areas and also maintain necessary electrical, electronic and mechanical equipment regularly.
5. Ensure safety and security measure for all specially for the woman 24/7.
6. Appropriate Design for the foot over bridge.
7. By the nature people like to leave life free. Foot over bridge authority must take initiatives to exercise the maximized pedestrians. Middle of the road must setup the barrier for the pedestrians to avoid accident. It may be costly to facilitate but outcome is good for the pedestrians. No pedestrian will be injured or died for the reason of risky road crossing.
8. Foot over bridge & Roads and high way authority should be collaborate while any foot over bridge designed and finished its construction to open for the pedestrians to ensure all kinds of easy access of them without any obstacle.
9. Foot over bridge it may be escalator or general stairs it should be designed with modern facility to easy of it use and maintenance.

## 9.3 Observations:

Pedestrians of Dhaka city not much more conscious about their life and personal safety, whatever they want to do they act faster. Some time they break the appropriate rules and for that they fall in bad situation but they accept it and think that is destiny. Government can take multiple projects to aware them properly to maintain the traffic rules and avoid accident to safe life & assets too. Electronics and print media can play a vital role by providing efficient messages to the pedestrians. Safety rules can be added to text book to educate people about their safety and security.



## 9.4 Recommendations

Though a huge number of recommendations have already been given by pedestrians and specialist some recommendations can be suggested by the researcher. The recommendations are given bellow.

1. All the risky points should be identified first through which pedestrians cross the road. Then those need to be stopped by strong and high barricade as no one can pass through these.
2. Those points where barricade is not possible for the free movement traffic police should play the role of barricade. They have to encourage people to use foot over bridges.
3. Foot over bridges need to be set up in appropriate position especially in the transactions and busy road. All the useless over bridges should be transferred to appropriate position. Field study is necessary before setting up a bridge. According to the public demand foot over bridge can be setup.
4. Foot over bridges should be neat and clean and usable. Hawkers, beggars, banners, garbage should be removed.
5. Over bridges should be friendly for the physically weak people. For example the stair should be more flat (20 to 25 degrees) instead of 45 degree angle.
6. Publicity should be increased through advertisement in TV, radio, newspapers, billboard and posters with emotional pictures and words like, "Save your life", "Your family depends on you", "avoiding over bridge = avoiding life", "Life is most valuable" and so on to conscious the pedestrians.
7. Traffic Education should be included in the text book of educational curriculum.
8. Instead of more foot over bridge underpass can be set up. The underpasses should have enough lighting and citizen facilities.

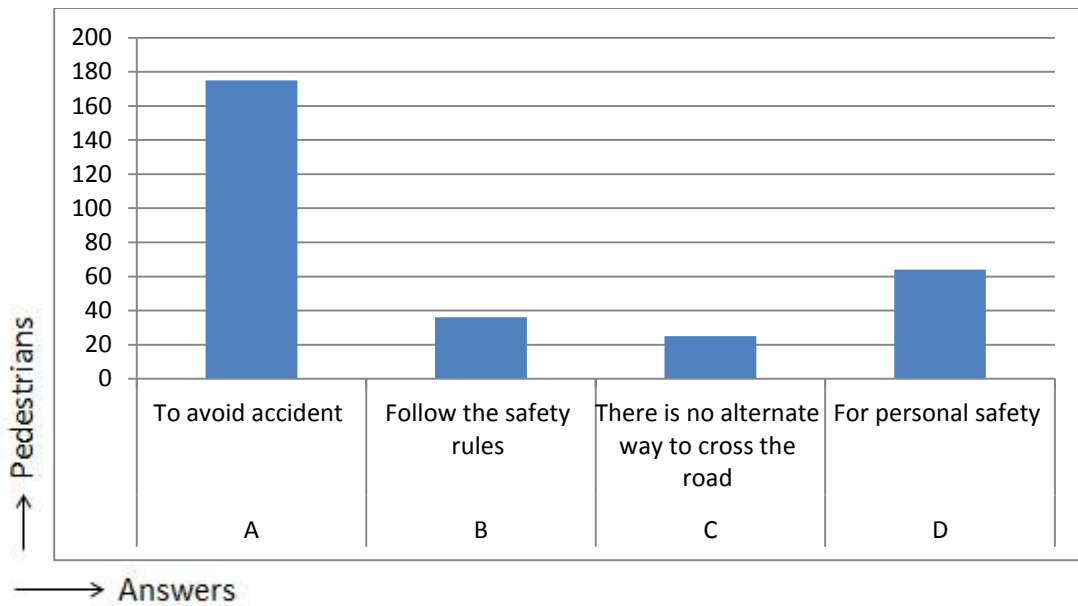
## 9.5 Questionnaires and Answers:

### 1. Why do you like to use foot over bridge?

- A. To avoid accident
- B. Follow the safety rules
- C. There is no alternate way to cross the road
- D. For personal safety

**Answer:**

A	To avoid accident	175
B	Follow the safety rules	36
C	There is no alternate way to cross the road	25
D	For personal safety	64



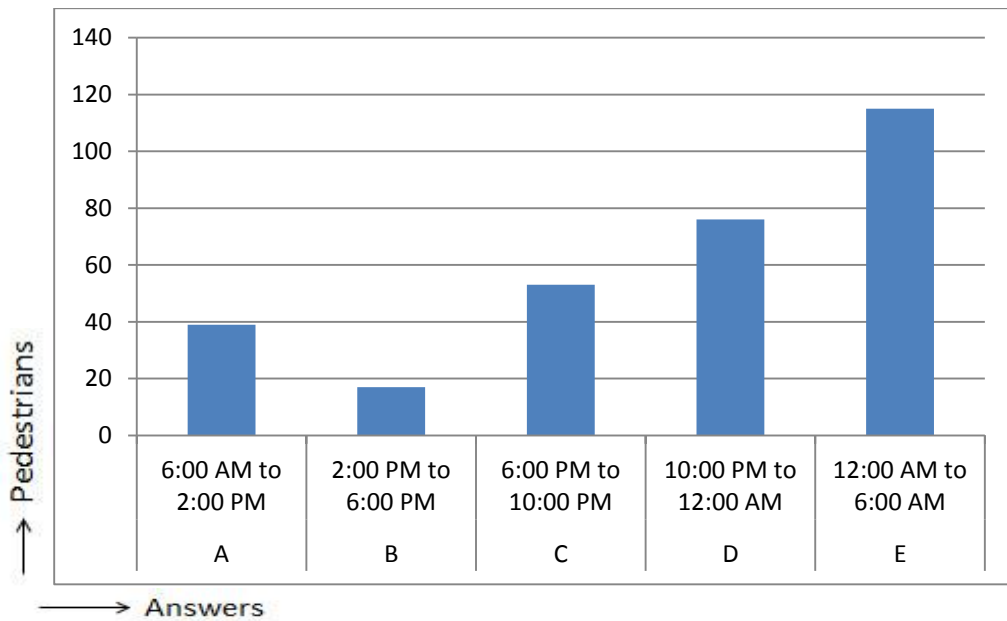
**Figure 27: Why pedestrians use of foot over bridge**

**2. Which time do you feel insecurity while using foot over bridge?**

- A. 6:00 AM to 2:00 PM
- B. 2:00 PM to 6:00 PM
- C. 6:00 PM to 10:00 PM
- D. 10:00 PM to 12:00 AM
- E. 12:00 AM to 6:00 AM

**Answer:**

A	6:00 AM to 2:00 PM	39
B	2:00 PM to 6:00 PM	17
C	6:00 PM to 10:00 PM	53
D	10:00 PM to 12:00 AM	76
E	12:00 AM to 6:00 AM	115



**Figure 28: Mentioning time pedestrians feel insecurity to use foot over bridge**

**3. Why you are taking the advantage of foot over bridge?**

A. Safety, B. Obey the traffic rules, C. Avoid accident, D. Consciousness

**Answer:**

A	Personal Safety	93
B	Obey the traffic rules	63
C	Avoid accident	110
D	Consciousness	34

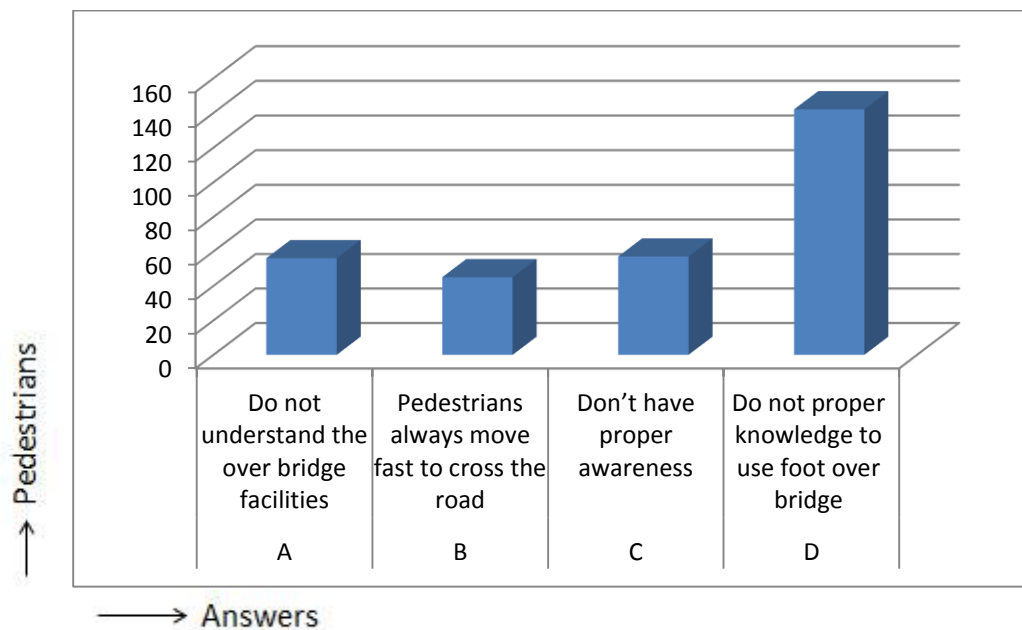


**Figure 29: Why pedestrians take advantages of foot over bridge**

4. Can you please shear your opinion why people not interested to use foot over bridge?
- A. Do not understand the over bridge facilities
  - B. Pedestrians always move fast to cross the road
  - C. Don't have proper awareness
  - D. Do not proper knowledge to use foot over bridge

**Answer:**

A	Do not understand the over bridge facilities	56
B	Pedestrians always move fast to cross the road	45
C	Don't have proper awareness	57
D	Do not proper knowledge to use foot over bridge	142



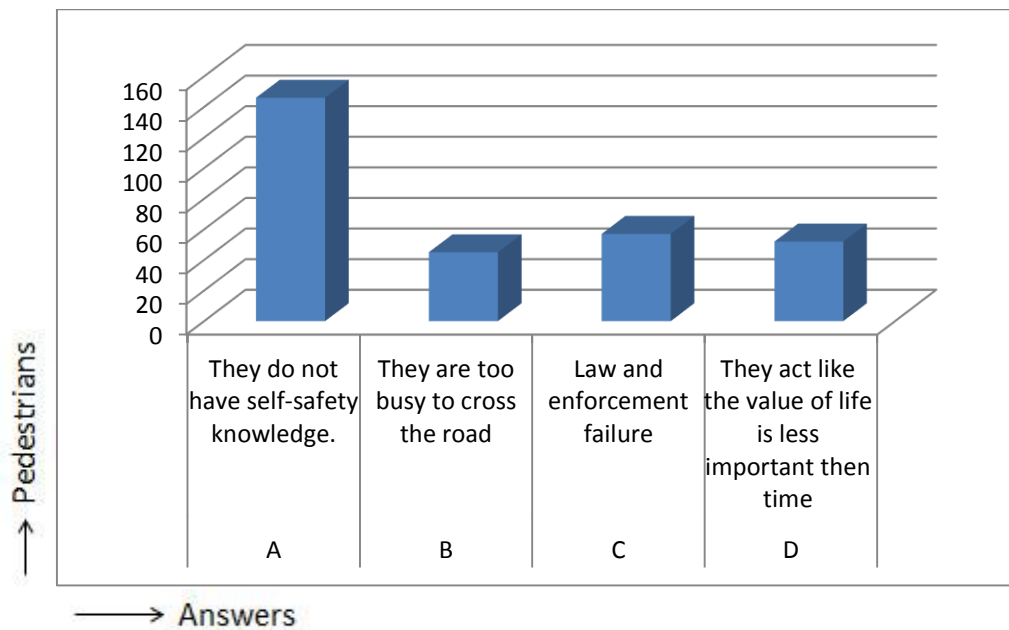
**Figure 30: Pedestrians opinion why not to use foot over bridge**

**5. What do you think that people do not like to use foot over bridge?**

- A. They do not have self-safety knowledge.
- B. They are too busy to cross the road
- C. Law and enforcement failure
- D. They thought life is less important than time etc.

**Answer:**

A	They do not have self-safety knowledge.	146
B	They are too busy to cross the road	45
C	Law and enforcement failure	57
D	They thought life is less important than time etc.	52



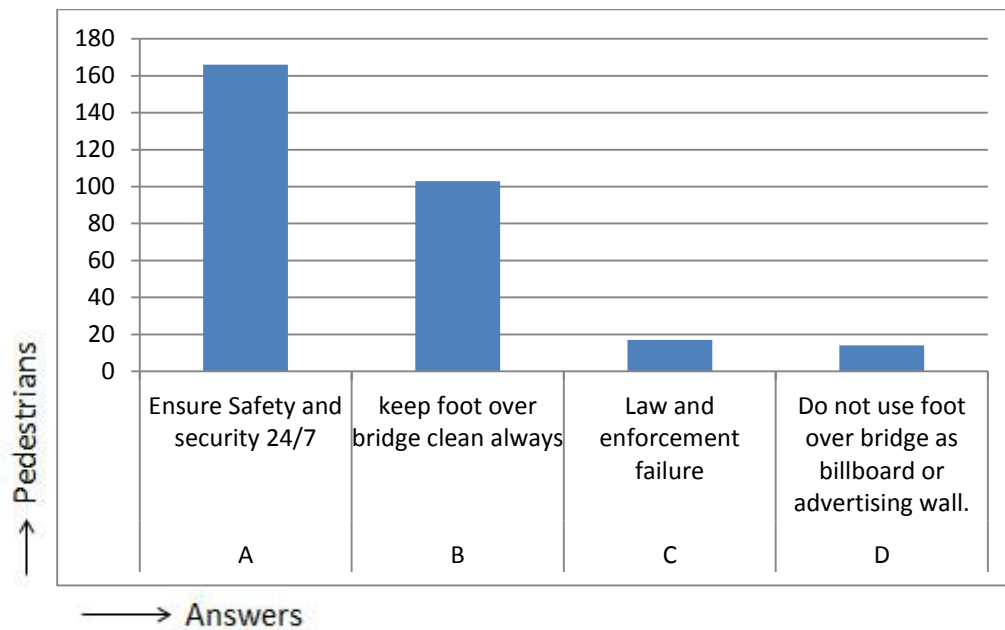
**Figure 31: Why pedestrians not use foot over bridges**

**6. How to improve foot over bridge facilities for the pedestrian?**

- A. Ensure Safety and security 24/7
- B. keep foot over bridge clean always
- C. Remove hawkers and beggars.
- D. Do not use foot over bridge as billboard or advertising wall.

**Answer:**

A	Ensure Safety and security 24/7	166
B	keep foot over bridge clean always	103
C	Law and enforcement proper use	17
D	Do not use foot over bridge as billboard or advertising wall.	14



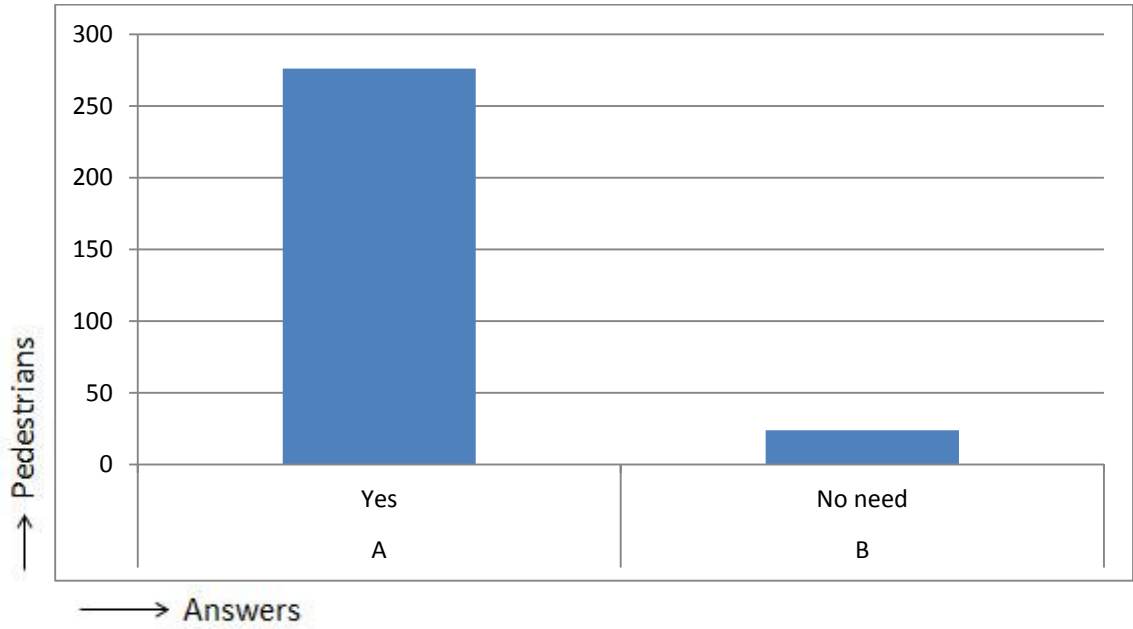
**Figure32: Improvements keys of foot over bridges**

**7. Do you think that police protection need for the pedestrian at night?**

A. Yes, B. No need ,

**Answer:**

A	Yes	276
B	No need	24



**Figure 33: At foot over bridge need security 24/7**

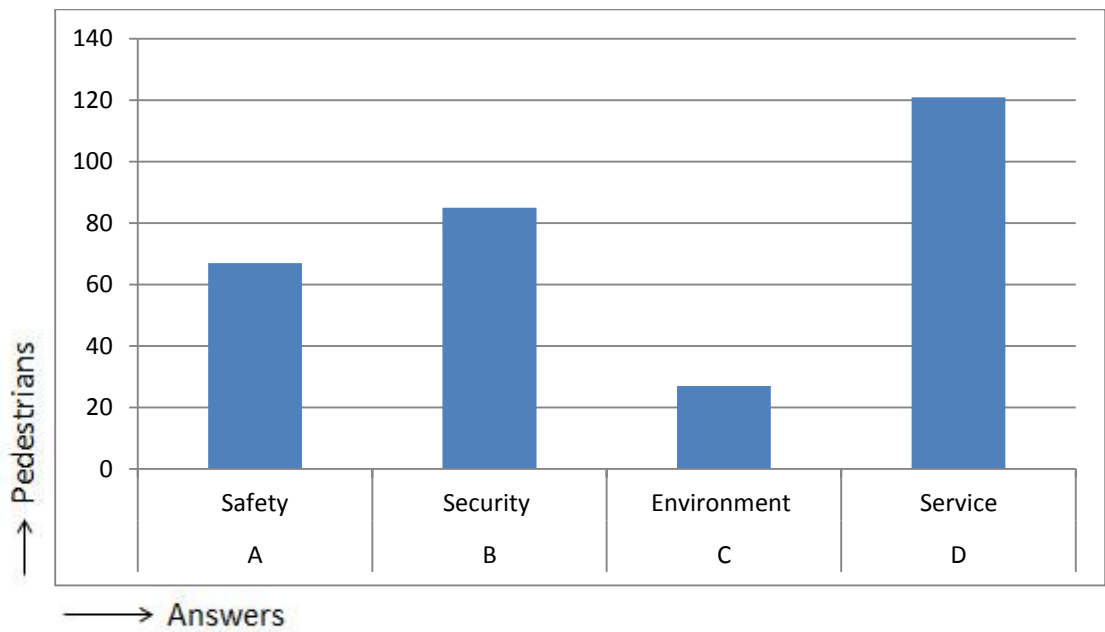


**8. Do you like present foot over bridge facilities?**

- A. Safety
- B. Security
- C. Environment
- D. Service

**Answer:**

A	Safety	67
B	Security	85
C	Environment	27
D	Service	121



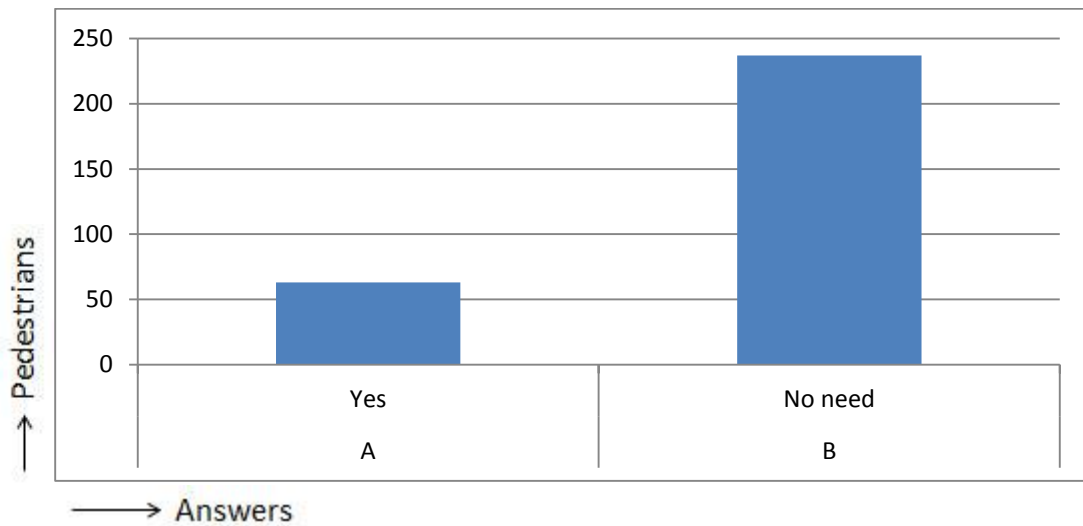
**Figure 34: Why pedestrians like to use foot over bridge**

**9. Do you think foot over bridges lighting facilities is enough?**

A. Yes B. Not enough

**Answer:**

A	Yes	63
B	Not enough	237



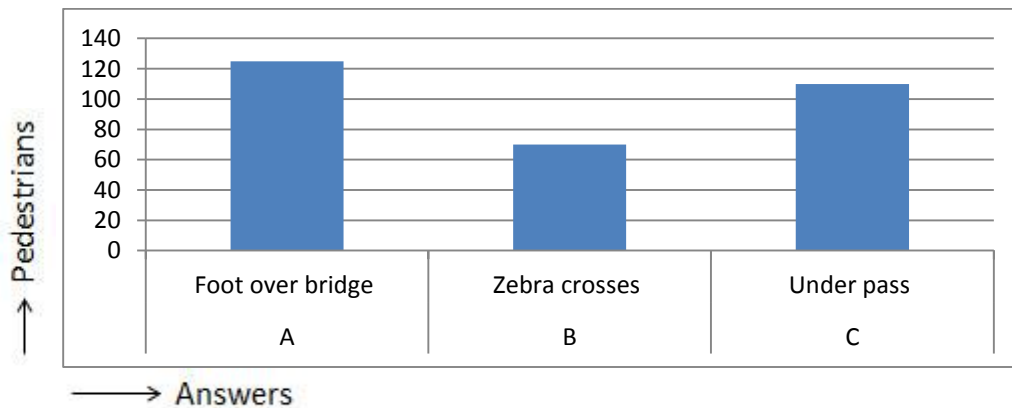
**Figure 35: Foot over bridge lighting facilities**

**10. What is the best way to cross the road for the pedestrian?**

A. Foot over bridge B. Zebra crosses C. Under pass.

**Answer:**

A	Foot over bridge	125
B	Zebra crosses	70
C	Under pass	110



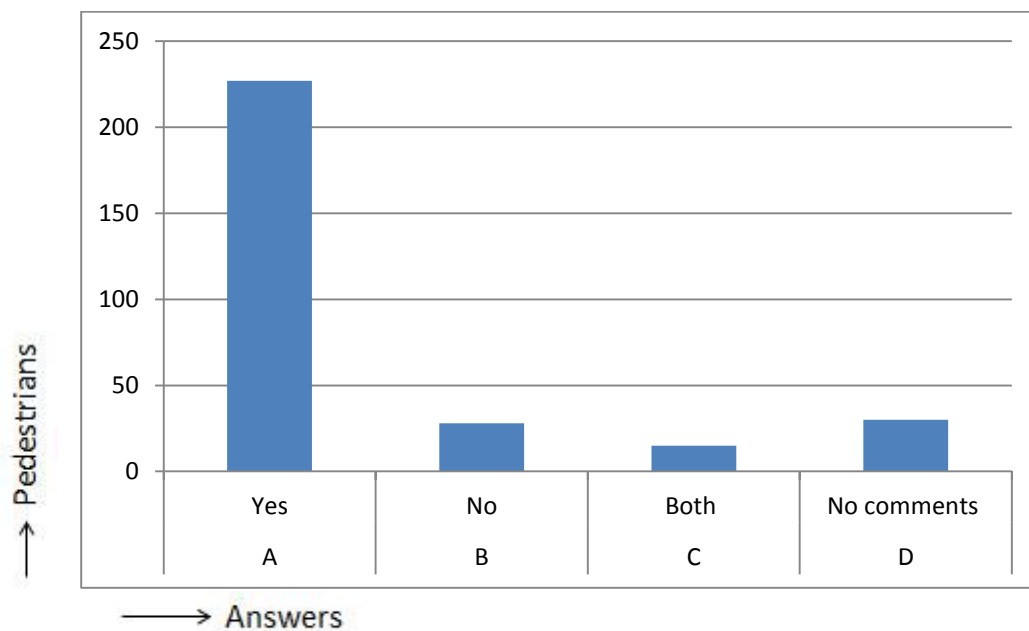
**Figure 36: Pedestrians opinion best way to cross the road**

**11. Do you think that the multiple department of Dhaka city work separately for their own responsibilities, they do not consider much people facilities?**

- A. Yes.                      B. No.                      C. Both                      D. No comments

**Answer:**

A	Yes	227
B	No	28
C	Both	15
D	No comments	30



**Figure 37: Authorities / Departmental working strategies need to rearrangement**

## **CHAPTER 5**

### **CONCLUSIONS AND RECOMMENDATIONS**

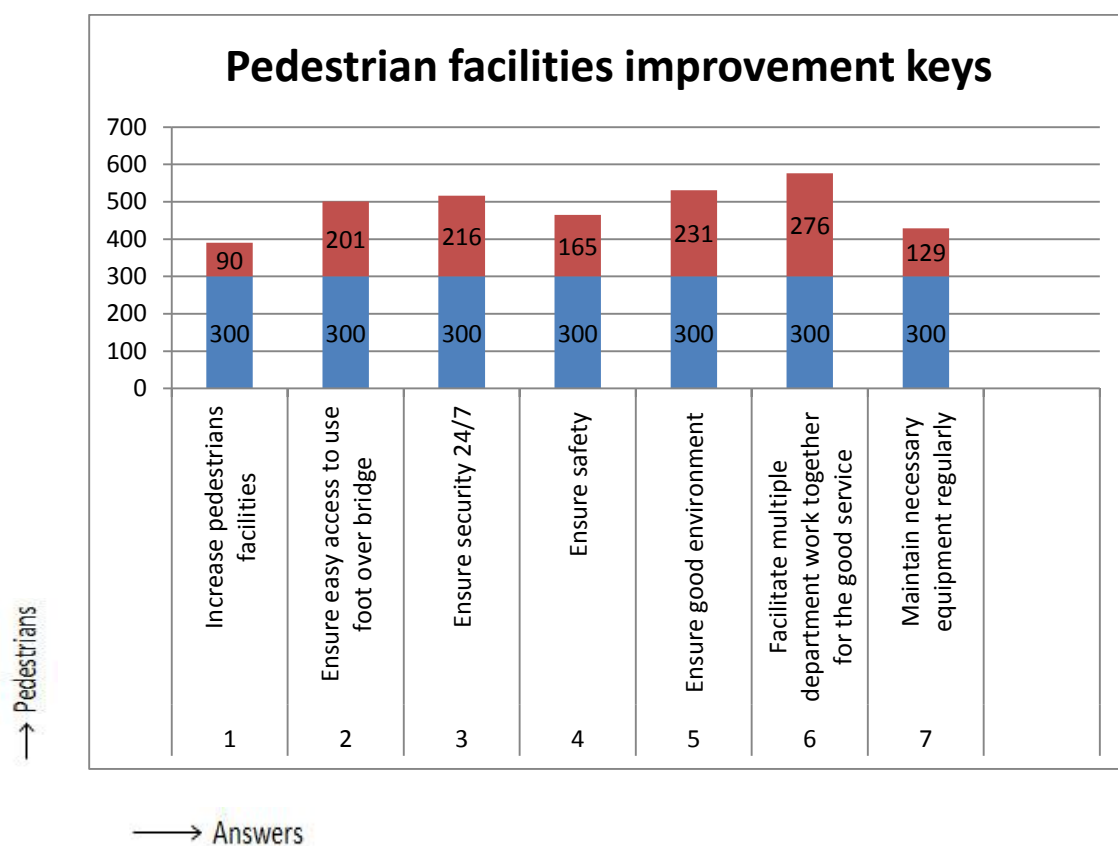
#### **10.1 Conclusions**

Everything is not possible to control either by law enforcement or by making people bound. People have to realize the necessity of using foot over bridge from their inner morality and civic sense. A lot of highly educated people were found who were breaking basic laws. The Sonargaon University students are considered as the most conscious citizen of the country but unfortunately the Sonargaon university bus break the traffic law most of the time illogically. The highly responsible officials of the government break the laws here and there. Not only the irresponsible citizens but also the responsible authority shows their irresponsibility in case of foot over bridge using and maintenance. It is really a matter of great shocking that both citizen and authority are irresponsible about their own task. Avoiding law has become an unwritten law here. To overcome this situation the recommendations should be followed strictly. Every year almost 150 people are being died and a lot of are being injured in various road accident. Government and pedestrians both should think that lives are most valuable and nothing should be compared with it. To save lives we need to be social; we need to follow the traffic rules because life will not come for second time.

## 10.2 Recommendations

After successfully survey we find some important subject to reorganize for the pedestrians of Dhaka city. Our recommendations are as follows-

1. Increase pedestrians facilities
2. Ensure easy access to use foot over bridge
3. Ensure security 24/7
4. Ensure safety
5. Ensure good environment
6. Facilitate multiple department work together for the good service
7. Maintain necessary equipment regularly



**Figure 38:**  
Overall analytical key points to improve foot over bridge facilities and make it user friendly.

### 10.3 Recommendations pie chart

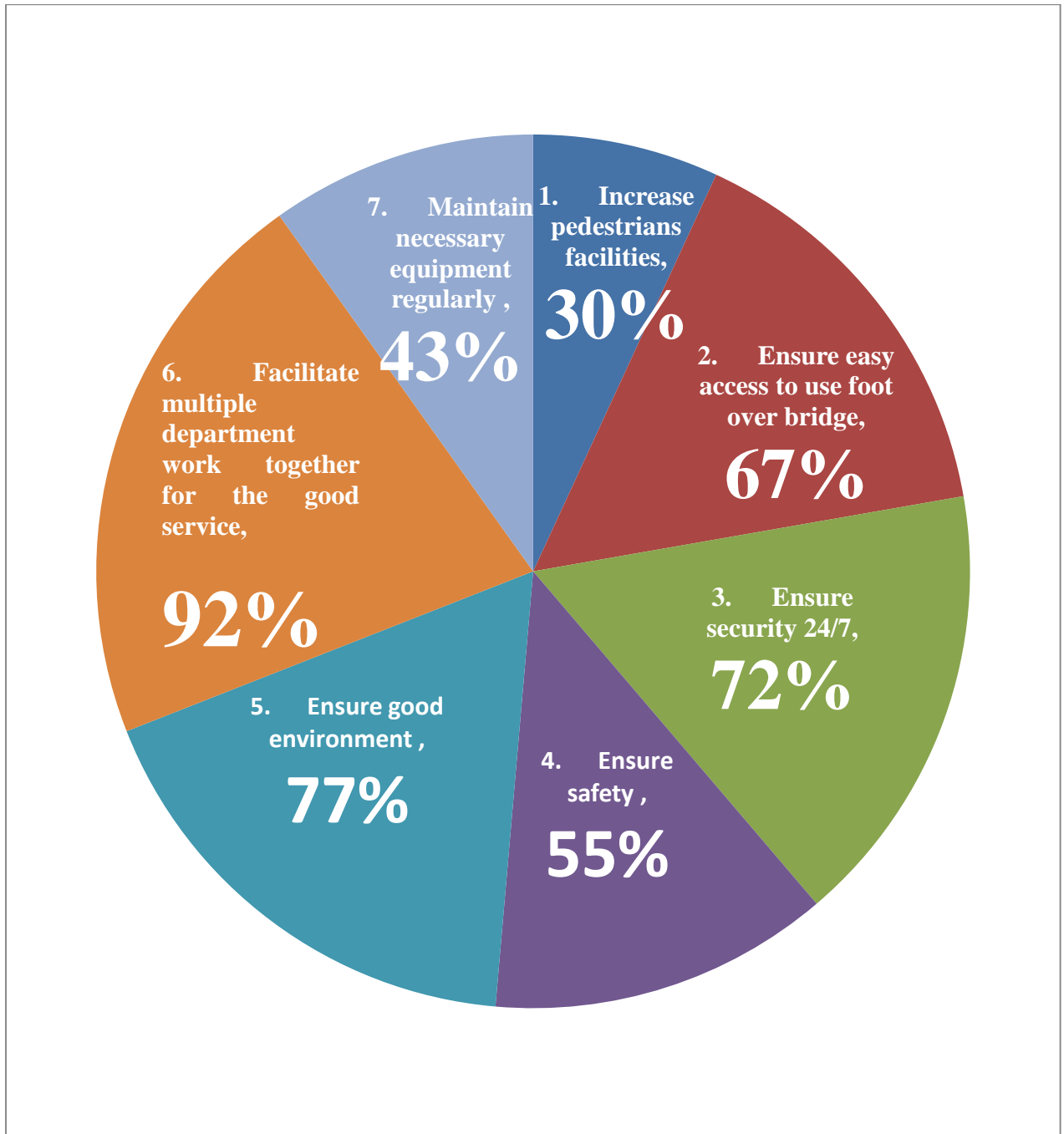


Figure 39: Recommendations pie chart

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