Women’s Accessibility to Urban Facilities in Dhaka

Sadia Afrin

Master of Urban and Regional Planning

Department of Urban and Regional Planning
Bangladesh University of Engineering & Technology
Dhaka, Bangladesh
March, 2008
Women's Accessibility to Urban Facilities in Dhaka

Submitted by
Sadia Afrin
Roll: 040315024(F)

Master of Urban and Regional Planning

A thesis submitted to the Department of Urban and Regional Planning in partial fulfillment of the requirements for the degree of Master of Urban and Regional Planning (MURP)

Department of Urban and Regional Planning
Bangladesh University of Engineering & Technology
Dhaka, Bangladesh
March, 2008
Thesis Acceptance Form

Women's Accessibility to Urban Facilities in Dhaka

Submitted by
Sadia Afrin
Roll: 040315024(F)

Thesis approved as to the style and content by

1. Dr. Roxana Hafiz
   Professor
   Department of Urban and Regional Planning
   BUET, Dhaka

2. Dr. Roxana Hafiz
   Professor
   Department of Urban and Regional Planning
   BUET, Dhaka

3. A.S.M. Mahbub-Ur-Nabi
   Professor
   Department of Urban and Regional Planning
   BUET, Dhaka

4. Md. Musleh Uddin Hasan
   Assistant Professor
   Department of Urban and Regional Planning
   BUET, Dhaka

5. Dr. Fanda Nifat
   Professor
   Department of Architecture
   BUET, Dhaka

Chairman (Supervisor)

Member (Ex-officio)

Member

Member (External)
Candidate's Declaration

It is hereby declared that this thesis or any part of it has not been submitted elsewhere for the award of any degree or diploma.

Signature of the Candidate

Sadia Afrin
Roll: 040315024(P)
Acknowledgements

All praise belongs to Allah, the most Merciful. First of all I convey my gratefulness to Him for giving me the ability to complete the study.

I would like to express my deep and sincere gratitude to my supervisor, Professor Dr. Roxana Hafiz, Head of the Department of Urban and Regional Planning, Bangladesh University of Engineering & Technology (BUET). Her wide knowledge and her logical way of thinking have been of great value for me. Her understanding, encouraging and personal guidance have provided a good basis for the present thesis.

I would like to express my indebtedness to Professor Dr. Farida Nilufar for her valuable comments during the thesis defense. Her valuable suggestions helped to enrich the contents of the thesis.

My heartfelt acknowledgements go to all the teachers and staffs of the Department of Urban and Regional Planning of BUET for their affection and support during my study period at BUET. I am thankful to BUET for the financial assistance provided to complete the study.

I feel obliged to my friends and colleagues for their cooperation and help during this study. I express my heartiest gratefulness to Mr. Tanbirul Hassan, Mr. Mafizur Rahman, Mr. Md. Nazrul Islam and Mr. Mahfuzur Rahman for rendering all possible help during data collection of the study.

Lastly, I owe my loving thanks to my husband Dr. Khan Rubayet Rahman and my daughter Samreen Rubayet Khan. They have lost a lot precious time due to my involvement in the study. My special gratitude is due to my parents and my sisters for their loving support. Without their encouragement and understanding it would have been impossible for me to finish this work.
Abstracts

United Nations declared promotion of gender equity and empowerment as one of the Millennium Development Goals. With globalization and changing pattern of other economic necessities, women in Bangladesh are increasingly playing the dual role of home maker and income earner. Therefore, convenient access to basic urban amenities is required for improving women's quality of life. The objectives of the study is to investigate the present satisfaction level of women users of urban facilities, their expectation regarding the existing urban facilities of Dhaka city, and to suggest some recommendations to make these facilities more accessible to the women users. To achieve the objectives, the study addresses three urban facilities: i. Transport and communication; ii. Infrastructure facilities at the workplace; and iii. Leisure and recreational place. The study is based on both primary and secondary data. Primary data has been collected from questionnaire survey of 210 working women and 100 non-working women and physical survey of the existing urban facilities in Dhaka city. Moreover, secondary data has been collected from books, internet and different conference and journal papers, as well as from unpublished research works. The study used WAS index to measure satisfaction of the working women on the existing urban facilities in Dhaka city. It show that women in Dhaka are dissatisfied with the existing transport and communication service and also with the leisure and recreational facilities having index value 2.141 and 2.134 respectively. However, they are found satisfied with the infrastructure facilities provided in their workplace having index value of 2.596 in a four point likert scale. The study reveals that women need special treatments like safety and security in using the urban facilities. Therefore, the study recommends that more women-only buses and reserved seats for women in public transport, low cost public transport, appropriate route design, enforcement of law and order, and provision of suitable pedestrian facilities for ensuring convenient and comfortable journey of women passengers in the city. Providing adequate infrastructure facilities like day care facilities, separate toilet for women, prayer space, waiting space, and adequate seating arrangement will create women friendly workspace and attract more women to join in the labor force of the country. Moreover, availability of community parks and open spaces will increase women's accessibility to recreational facility. Provision of safe, secure and clean parks and open spaces with adequate lighting, appropriate play equipments, cafe and toilet will make the parks and open space more attractive for women and increase their accessibility to them.
# Table of Contents

**ACKNOWLEDGEMENTS** .................................................................................................................. V

**ABSTRACTS** .................................................................................................................................. VI

**TABLE OF CONTENTS** .................................................................................................................... VII

**LIST OF TABLES** ............................................................................................................................... X

**LIST OF FIGURES** ............................................................................................................................. XI

**LIST OF PHOTOGRAPHS** .................................................................................................................. XII

**LIST OF ABBREVIATIONS** .................................................................................................................. XIII

**CHAPTER 1: INTRODUCTION** ........................................................................................................... 1

1.1 BACKGROUND OF THE STUDY ................................................................................................. 1

1.2 PROBLEM FORMULATION ........................................................................................................... 2

1.3 OBJECTIVES OF THE STUDY ....................................................................................................... 3

1.4 RESEARCH QUESTIONS .................................................................................................................. 3

1.5 RATIONALE OF THE STUDY ......................................................................................................... 4

1.6 OPERATIONAL DEFINITION OF THE STUDY ............................................................................ 5

1.6.1 Women ..................................................................................................................................... 5

1.6.2 Urban Facilities ....................................................................................................................... 5

1.6.3 Accessibility ............................................................................................................................... 5

1.7 SCOPE AND LIMITATION OF THE STUDY ............................................................................. 6

1.8 ORGANIZATIONS OF THE THESIS ............................................................................................. 7

**CHAPTER 2: METHODOLOGY OF THE STUDY** ............................................................................... 9

2.1 INTRODUCTION ............................................................................................................................ 9

2.2 LITERATURE SEARCH AND CONCEPT DEVELOPMENT ....................................................... 9

2.3 SELECTION OF THE STUDY AREA .............................................................................................. 9

2.4 COLLECTION OF BASE MAP ...................................................................................................... 9

2.5 DATA COLLECTION ....................................................................................................................... 9

2.6 PRIMARY DATA COLLECTION ................................................................................................... 9

2.7 SECONDARY DATA COLLECTION ............................................................................................... 9

2.8 DATA ANALYSIS AND DECISION MAKING ............................................................................ 10

2.9 RECOMMENDATIONS AND CONCLUSION .............................................................................. 10

**CHAPTER 3: LITERATURE REVIEW** ............................................................................................... 14

3.1 INTRODUCTION ............................................................................................................................ 14

3.2 HISTORY OF GENDER INCLUSION IN URBAN PLANNING ................................................... 14

3.3 WOMEN'S ACCESSIBILITY TO URBAN SERVICES .................................................................. 15

3.3.1 Women and transport system ................................................................................................. 15

3.3.2 Women and infrastructure facilities at workplace ................................................................. 18

3.3.3 Women and recreational places ............................................................................................. 20

3.4 PLANNING OF WOMEN-FRIENDLY URBAN FACILITIES: SOME CASE STUDIES ................. 22

3.4.1 Cycle of Hope: Tamil Nadu, India ........................................................................................... 22

3.4.2 A sense of security in women-only train carriages: Tokyo, Japan .......................................... 22

3.4.3 Fighting to increase safety: Guayaquil, Ecuador ................................................................. 22

3.4.4 Integrating a gender perspective into public transit: Montreal, Canada .................................. 23

3.4.5 Promoting cycle & pedestrian: Bogota, Colombia ............................................................... 23

3.4.6 Daycare can create positive working atmosphere: Frutti Venezia Giulia, Italy ................. 24

3.4.7 Gender sensitive open space design: St Johann-Park, Vienna ............................................. 24

**CHAPTER 4: PRESENT SITUATION OF URBAN FACILITIES IN DHAKA CITY** ......................... 25

4.1 INTRODUCTION ............................................................................................................................ 25

4.2 TRANSPORTATION SYSTEM OF DHAKA CITY ....................................................................... 26

4.2.1 Road Network ....................................................................................................................... 26
List of Tables

Title                                                                 Page No
Table 1: Sample distribution of working women in Dhaka city          10
Table 2: Outdoor recreational activities of different aged females in Dhaka city  21
Table 3: Motorized and Non-motorized public transport in Greater Dhaka  27
Table 4: Agencies responsible for urban transport infrastructure in Dhaka  29
Table 5: Statistics of Government Daycare in Bangladesh              31
Table 6: Facilities of Parks in the Old Dhaka                          35
Table 7: Distribution of the non-employed women by age category      41
Table 8: Household income level of the non-employed women             42
Table 9: Women's labour force statistics (in millions)                43
Table 10: Barrier to women's employment                                 44
Table 11: Distribution of working women by age category                 46
Table 12: Distribution of working women according to their education and job  47
Table 13: Household income level of working women                      48
Table 14: Provision of transport modes to the respondents              49
Table 15: Transport Problem (Institutional/Design)                     52
Table 16: Women's satisfaction level about transport facility according to their HH income  57
Table 17: Problem faced regarding infrastructure facilities at workplace  59
Table 18: Satisfaction level of respondents regarding infrastructure facilities at workplace  61
Table 19: Preferred time for visiting parks and open spaces            64
Table 20: The Inventory of parks and open spaces in Dhaka city         68
Table 21: Satisfaction level of respondents regarding parks and open spaces  69
# List of Figures

<table>
<thead>
<tr>
<th>Title</th>
<th>Page no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1: Map of the study area</td>
<td>11</td>
</tr>
<tr>
<td>Figure 2: A work flow diagram describing methodology of the study</td>
<td>13</td>
</tr>
<tr>
<td>Figure 3: Map of St-Johann-Park, Vienna</td>
<td>25</td>
</tr>
<tr>
<td>Figure 4: Trip length distribution for each traffic mode in Dhaka city</td>
<td>28</td>
</tr>
<tr>
<td>Figure 5: National machineries for women's development</td>
<td>32</td>
</tr>
<tr>
<td>Figure 6: Marital status of the non-employed women</td>
<td>41</td>
</tr>
<tr>
<td>Figure 7: Educational level of the non-employed women</td>
<td>41</td>
</tr>
<tr>
<td>Figure 8: Marital status of working women</td>
<td>46</td>
</tr>
<tr>
<td>Figure 9: Educational level of working women</td>
<td>47</td>
</tr>
<tr>
<td>Figure 10: Monthly income of working women</td>
<td>48</td>
</tr>
<tr>
<td>Figure 11: Criteria for preferring transport mode</td>
<td>50</td>
</tr>
<tr>
<td>Figure 12: Travel purpose of working women</td>
<td>50</td>
</tr>
<tr>
<td>Figure 13: Transport problems considering social aspects</td>
<td>51</td>
</tr>
<tr>
<td>Figure 14: Distance between house &amp; the nearest park</td>
<td>63</td>
</tr>
<tr>
<td>Figure 15: Frequency of visit to recreational places</td>
<td>63</td>
</tr>
<tr>
<td>Figure 16: Respondent's preferred mode for visiting recreational places</td>
<td>64</td>
</tr>
<tr>
<td>Figure 17: Travel cost for visiting the nearest parks &amp; open spaces</td>
<td>65</td>
</tr>
<tr>
<td>Figure 18: Problems of the respondents while visiting parks and open spaces</td>
<td>66</td>
</tr>
</tbody>
</table>
## List of Photographs

<table>
<thead>
<tr>
<th>Title</th>
<th>Page no</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo 1: Lighting at Metovna, Guayaquil, Ecuador</td>
<td>23</td>
</tr>
<tr>
<td>Photo 2: Cycling is encouraged, Bogota</td>
<td>23</td>
</tr>
<tr>
<td>Photo 3: Walkways at Bogota</td>
<td>23</td>
</tr>
<tr>
<td>Photo 4: Daycare facilities at Lloyd Adriatico</td>
<td>24</td>
</tr>
<tr>
<td>Photo 5: St.-Johann-Park, Vienna</td>
<td>25</td>
</tr>
<tr>
<td>Photo 6: Chaotic condition of the transports in Dhaka city</td>
<td>27</td>
</tr>
<tr>
<td>Photo 7: Dhanmondi Lake, one of the famous open spaces in Dhaka city</td>
<td>34</td>
</tr>
<tr>
<td>Photo 8: Interior seating arrangement of a public bus</td>
<td>53</td>
</tr>
<tr>
<td>Photo 9: Narrow &amp; single door of the bus</td>
<td>54</td>
</tr>
<tr>
<td>Photo 10: Women waiting in the queue</td>
<td>54</td>
</tr>
<tr>
<td>Photo 11: Women pedestrians on the main carriage way</td>
<td>56</td>
</tr>
<tr>
<td>Photo 12: Women workers of Mayee Apparel who are deprived of separate toilet and adequate seating arrangement</td>
<td>60</td>
</tr>
<tr>
<td>Photo 13: Illegal squatting beside Pantha Kunja</td>
<td>67</td>
</tr>
<tr>
<td>Photo 14: Children play equipment in Rama Park</td>
<td>68</td>
</tr>
<tr>
<td>Photo 15: Café restaurant beside the Dhanmondi Lake</td>
<td>68</td>
</tr>
<tr>
<td>Photo 16: Unhygienic condition of the public toilet at Dhanmondi Lake</td>
<td>69</td>
</tr>
</tbody>
</table>
# List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRTC</td>
<td>Bangladesh Road Transport Corporation</td>
</tr>
<tr>
<td>DCC</td>
<td>Dhaka City Corporation</td>
</tr>
<tr>
<td>DTGB</td>
<td>Dhaka Transport Coordination Board</td>
</tr>
<tr>
<td>DMNP</td>
<td>Dhaka Metropolitan Development Plan</td>
</tr>
<tr>
<td>IER</td>
<td>Institute of Education and Research</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MoWCA</td>
<td>Ministry of Women and Children Affairs</td>
</tr>
<tr>
<td>PWD</td>
<td>Public Works Department</td>
</tr>
<tr>
<td>STP</td>
<td>Strategic Transport Plan</td>
</tr>
<tr>
<td>WAS Index</td>
<td>Weighted Average Satisfaction Index</td>
</tr>
<tr>
<td>WID</td>
<td>Women In Development</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

1.1 Background of the study

The role and status of women are important indices to national development, particularly in Bangladesh where about half of the urban population are women (BBS, 2006). The participation of women in economic activities and especially their gainful employment signals a change in traditional status of women and indicates a redefinition of their role in the context of the family and the society at large. No longer are they busy with reproductive works, rather they are showing noticeable contributions in the economy. Accordingly, more women are now being employed in the different sectors of urban economy in Bangladesh.

The recent labor force survey 2005-2006 shows that at present there are about 2.8 million women are economically active in the labour force of the country. Among them, 2.7 million are employed women and their labour force participation rate is 27.4% (BBS, 2007). Everyday a large number of women use various urban facilities while going to work, shopping, taking their children to school, going out for a recreation at parks and open spaces or having medical visit to the health centre etc. In this respect, some pertinent questions arise as whether they are facing any problem in using these facilities? When designing these facilities, do the service providers, planners and designers consider the gender sensitivity of these facilities and special needs of the women? Lack of awareness on the part of planners regarding women’s needs is one of the main reasons of insensitive design that women encounter everyday (UNESCO, 2004). Therefore, women’s need of infrastructure facilities needs to be well address in the infrastructure planning. As Leavitt (1986) says “Women face problems of such significance in cities and society that gender can no longer be ignored in planning practice”.

However, the crucial connections between theory and practice are, still rare and tentative. In developed countries, of all the subfields within planning, theory remains the most male dominated and the least influenced by any awareness of the importance of gender (Susan & Lisa, 2005) In developing country such as Bangladesh, they are simply neglected. As a result, women face difficulty in their everyday life while using different urban facilities such as transport services, infrastructure facilities at workplace and recreation facilities.
This study is driven by the intention to explore the role urban services and facilities play in improving the lives of women in the cities. The intention is also to investigate how different institutions provide and exercise women’s accessibility to urban services and facilities and also gauge level of satisfaction of the women users from these facilities and services.

1.2 Problem Formulation

In developing countries like Bangladesh, scope for a wide range of available jobs is mostly centered in the big cities, particularly in the capital city Dhaka. This economic attraction stimulates the more qualified men and women of rural areas or small towns to migrate to the large city. According to the Population Census, 2001, Dhaka city corporation area has 5333571 populations in total. Among them, 2308176 are women. Here the sex ratio is 131:100 (BBS, 2007). The women employment rate of the Dhaka city is higher than any other city of Bangladesh as Dhaka city is the centre of economic activities of the whole country. The working women in Dhaka city are using different urban services in their everyday life. As a consequence, they are considered as one of the main users of different urban facilities like transportation, educational institute, open space, parks, playgrounds, health care center, office building, public building, shopping center, etc. It should be mentioned here that women use cities and land uses differently from men and many have quite different life styles and daily activity patterns from their male counterparts. Women’s main concern has been that, modern cities, far from being gender neutral in design, appear to be designed and planned primarily to facilitate the activity patterns and needs of the male population (UNESCO, 2004). Therefore, women are encountering different problems in their urban life.

The statement below will give an idea of their problems.

"The other day, in a desperate attempt to go to my workplace in time, I had to resort to riding the local bus. But to my astonishment, I was told off by the busboy at the gate, he shouted "mahila seat nai!" (There is no seat for women). It was in the morning and after an hour or so desperately looking for a CNG scooter, I decided to opt for the bus." Said by Shahuna Akter, Shaymoli (The Daily Star, 2003).

The problem of Shahuna is not any isolated incident in Dhaka city. It is an everyday confrontation faced by several working women living here. The existing design and system of the urban facilities in Dhaka reduce accessibility of women users. Moreover, social barrier like patriarchy society, low security and safety provision in Dhaka city reduce women’s accessibility to urban facilities. The needs of women are, in most cases, different from men.
and this fact has to be taken careful consideration while providing any urban services. The study deals with the working woman only because working women's needs of urban facilities are more acute than the other women. Therefore, the thesis is based on the assumption that if an urban facility can address the needs of the working women, it will be easily accessible by the other women too.

The provision of adequate transport and communication, recreational and infrastructure facilities at the workplace (among others) and access to these facilities improve the lives of working women in the cities. These three facilities will be investigated in the background of unabated urbanization in the Dhaka city. All of these facilities are either directly or indirectly affecting the women's quality of life. For example, if the urban transport is not women friendly or if the women workers have got a place to seat just besides a noisy environment inside the room or if the design provides a lady worker with no toilet facility inside workplace, it is very hectic situation and it may offer more women not to come to the office rather spending time inside house. Hence, only empowerment and awareness building may not supply women labor in the job market. Policy makers must consider the issues about basic women needs in workplace, in transport and also for their recreation in urban life. Therefore, accessibility to these three categories of urban facilities should be enhanced for the working women in any urban area. The accessibility problem of women to these urban facilities is the focus of this study.

1.3 Objectives of the study

The aim of the study is to find out ways to increase accessibility of women to urban facilities in Dhaka city. The specific objectives of this study are as follows:

1. To investigate satisfaction level of women users regarding the existing urban facilities;
2. To explore women users' expectation regarding the use of these facilities;
3. To suggest some planning and policy recommendations based on the findings of the study.

1.4 Research questions

The following research questions will be addressed to achieve objectives of the study:

1. What problems do the women face in using some selected urban facilities in Dhaka city?
ii. How do they gauge their satisfaction on the existing urban facilities in Dhaka city?
iii. Why does it important to consider women user while providing urban facilities in Dhaka city?
iv. What are the expectations of women users regarding the urban facilities in Dhaka city?
v. How can the women accessibilities to urban facilities be increased in Dhaka city?

1.5 Rational of the study

The Millennium Development Goals (MDG) prescribes eight goals in order to achieve sustainable development. The third goal of MDGs is "to promote gender equality and empower women" (UN, 2005). The UNDP Gender related Development Index (GDI) ranks Bangladesh at position 123 out of 174 countries (UN, 2003) which is quite disappointing than other developing countries. The study will highlight that negligence of women’s accessibility to the existing urban facilities in Dhaka city creates obstacle to ensure their equal right. Moreover, it works as a barrier for women advancement. The study will attract the attention of the planners and service providers about the different needs of women users of various urban facilities. It will give them food for thought of mainstreaming gender concept while planning and providing urban services. The research, especially approaches and methodologies, can enhance the ability of infrastructure planner and service providers to better respond to the pressures of rapid urbanization under various constraints are therefore of considerable importance and worthy of investigation and research.

It is often says that "Planning is gender neutral" (Woodsworth, 2003). But the study will raise the concern of the relevant professional dogma that equal provision does not always ensure equity to all categories of users. The existing societal condition disadvantages women and thus calls forth the need for greater acknowledgment of women’s needs in areas of public policy, including spatial planning. It will show that existing urban facilities are not gender friendly. Again, the study identifies the short comings of the existing urban facilities in Dhaka city to give equal accessibility to all categories of users, especially women users. The study will raise awareness on the different needs of women while using urban facilities. The provision of accessibility of women users to existing urban facilities will be measured by the satisfaction index. Moreover, it will also identify the reason behind the limited access to the facilities by the women users. At the end the thesis will give policy direction how to increase accessibility of women users to these facilities.
1.6 Operational Definition of the study

1.6.1 Women

The study only considers the working women who are engaged in gainful work in the Dhaka city. The age range of the target group is determined in between 16 to 60 years, as it is the period when women remain active in the labour force of the country. Again, passing of Secondary School Certificate (SSC) is another criterion of the target group because this is declared by the government as the basic education required for capable work force.

1.6.2 Urban Facilities

Any urban citizen enjoys different urban facilities in Dhaka city. Transport and communication, education facilities, health care services, office building, public buildings, recreational facilities like parks, open space, cinema, etc., shopping centres are some of the dominant urban facilities available in Dhaka city. Though there are various urban facilities enjoyed by the working women, the study is only concentrated to these three categories of urban facility:

i. Transport and communication
ii. Infrastructure facilities for women at workplace
iii. Leisure and recreational spaces.

The study by its nature is broad in focus. Therefore, specific three categories of urban facilities are studied to make the study more objective and concise. In the study transport includes available transport facilities in Dhaka city and communication means the inter linkage among different modes of transport and intra linkage within the same mode of transport. The required infrastructure facilities such as toilet, daycare, prayer space seating arrangement, etc. at workplace are considered in this study for women friendly workplace. Lastly, leisure and recreational spaces refer to parks and open space only.

1.6.3 Accessibility

"Accessibility" is a general term used to describe the degree to which a product (e.g., device, service, environment) is accessible by as many people as possible (Wikipedia, 2008). Accessibility can be viewed as the "ability to access" the functionality, and possible benefit, of some system or entity. Several definitions of accessibility refer directly to access-based individual rights laws and regulations. Products or services designed to meet these regulations are often termed Easy Access or Accessible.
The term accessibility, as applied to urban services, is used in many different senses. It encompasses concepts of the quality and variety of services provided, referral mechanisms, waiting lists and physical access to service across the transportation network (Martin et al., 2002). At its most general level, accessibility can be defined as the ability to secure a specified range of services, at a specified level of quality, subject to specified minimum level of personal inconvenience and cost, whilst in possession of certain level of information (Goddard and Smith, 2001). Furthermore, accessibility is considered a multi-dimensional attribute of the proximal spaces defined for any given urban activity system. It is multi-dimensional because the concept of accessibility in service delivery perspective can be defined in terms of stages (potential, revealed) and dimensions (spatial and aspatial) (Ahmed, 2005 and Guagliardo, 2004). Potential access and revealed access can be said as the potential and actual entry of a given individual or population group into the service delivery system respectively. On the other hand, spatial access emphasizes the importance of spatial/distance variable (as a barrier or a facilitator), while aspatial access stresses non-geographic barriers or facilitators, such as social class, income, ethnicity, age, sex, etc. Thereby barriers to access to urban facilities have to be considered in the context of needs, socio-economic status and cultural setting of diverse groups in society. The study emphasizes on the non-spatial access. The term accessibility used in this study means provision and convenience of using the urban facilities by women users.

The barrier to accessibility can be divided into four types: i) Physical, ii) Social & psychological, iii) Economic and iv) Environmental. The physical barrier of urban services includes no or limited provision of infrastructure, inconvenient infrastructure for the users, no or limited information, poor planning and poor design of the services. Safety, security, mental attitude of the male users and cultural setting of the society are the social barriers which reduces accessibility of women to the urban facilities. Social barriers become prime accessibility barriers for women, when the facilities are physically accessible to them. The economic barrier deals with the cost of any service or facility. Again, hostile environmental condition like disaster and extreme weather reduces accessibility to any urban facility.

1.7 Scope and limitation of the study

The study has incorporated the concept of mainstreaming gender in the provision of urban facilities for Dhaka city. It will attract the attention of the planners and service providers to
the specific needs of the women in using these facilities. Thus, it will increase awareness about the problems of women users. The recommendations of the study could be incorporated in guidelines of providing the urban services to make them user friendly.

The study focuses on working women based on the assumption that if the urban facilities are friendly to them, they will be friendly to the other women too. Though many urban facilities are important for the working women but the study concentrated on the three urban facilities only due to limited time and resources. Again, although the researcher tried the best to give equal attention to each facility, it was not always possible due to limited access to the available literature on different infrastructure services. Time was the main constraint here.

Gender dimension in urban planning is a new phenomenon in Bangladesh. Hence, there is a very limited available literature on it. How important are the infrastructure facilities for women in work place! This exclamatory mark surely offers new ideas to explore things by doing research and of course when it comes to the end of developing countries. In search for secondary information to put supporting ideas in this regard, very few literatures have been explored both from the soft copy or hard copy format. However, some interesting papers have been found those are focusing some care for women friendly work station in office buildings.

1.9 Organizations of the thesis

The thesis comprises of six chapters. The chapter one introduces to the thesis problem and its aims and objectives. It also consists of research questions which are solved through the study. The chapter two describes the methodology of the study where tools and techniques of data collection and analysis are explained in detail. The chapter three gives an overview of the history of inclusion of women in urban planning. It also review some literatures related to the selected urban facilities to develop a concept required to understand the thesis. Furthermore, the chapter portrays some good initiatives to increase women's accessibility to urban facilities in other countries to learn from their experience. The chapter four depicts the present condition of the urban facilities in Dhaka city and their institutional framework. The chapter five illustrates women status in Bangladesh especially in urban areas. It describes women accessibilities to the labour force of the country. The most interesting feature of this chapter is to identification of barriers to women's employment participation which comes from the survey of 100 non-employed women in Dhaka city. The chapter six demonstrates the socio-economic condition of the working women and their accessibilities to
the urban services in Dhaka city. The findings of this chapter come from the survey of 210 working women in Dhaka. Finally, the chapter seven is the concluding chapter of the study. It consists of discussion and recommendations of the study together with a direction for future research.
Chapter 2: Methodology of the Study

2.1 Introduction
The title of this chapter is self explanatory. It describes the methodology of the study in detail. The study is descriptive in nature. So, a descriptive methodology was followed to achieve the aim and objectives of this study. The data used in this study come from both primary and secondary source. The chapter describes data collection method and data analysis tools and techniques. It should be mention here that the study followed both qualitative and quantitative approaches to find out the results.

2.2 Literature search and concept development
The early stages of the study covered a search of literature in the form of books, journals, reports and other published materials to explore a theoretical framework of the study. Some good examples of well designed urban facilities from different developed countries were also studied to learn lessons from them.

2.3 Selection of the study area
Dhaka City Corporation (DCC) area was chosen as the study area. Dhaka city is the capital of Bangladesh and center of all economic activities. The 54.5 sq. miles area under DCC is a predominantly built up conglomeration of about 5.4 million people and urban functions (BBS, 2002). Here the average household size is 4.8 persons and the male-female ratio is 131:100. Women's involvement in different sectors of the Dhaka's economy makes them more visible than ever before. A major part of these working women is facing various problems while using the urban facilities. Therefore, Dhaka city corporation area is chosen as the study area.

2.4 Collection of base map
A digital map of the study area was collected from the Urban Planning Department of Dhaka City Corporation (DCC). It gives an overall idea about the study area. Moreover, it gives clear picture about the existing transportation system of the city.

2.5 Data collection
Both primary and secondary data were collected to conduct the study.

2.5.1 Primary data collection: Primary data was collected through two types of surveys.
i) **Physical survey (Observation)** of the three urban facilities was done to explore their present conditions to fulfill the working women’s needs. To make the study manageable within time frame, a small representative sample size of three different urban facilities has been taken. Physical survey of 5 different mostly used transport modes (bus, human hauler, rickshaw, CNG auto rickshaw & walking) was conducted. Moreover, six different workplaces (NGO Forum for DWSS, Sheltech (Pvt.) Ltd., Bangladesh bank, Mayco Apparel, DCC and WaterAid Bangladesh) have been visited and 7 parks and open spaces (Ramna Park, Zia Uddan, Patna Kunjo, FarmGate Park, Dhanmondi lake, Gulshan lake-side park and Baridhara lake side park) were taken as sample for the study.

ii) **Two questionnaire surveys** were conducted during June to November, 2007 and March to June, 2008. One questionnaire survey was conducted among the 100 non-employed women (housewife and other) who are capable to join the workforce to know about their socio-economic condition and reason of not being involved in the workforce. Another questionnaire survey was conducted among the 210 working women. To conduct the later questionnaire survey, Dhaka city is divided into 10 geographical zones (see table 1) and 21 samples was randomly collected from each zone. Average time for a questionnaire survey was around 20 min.

<table>
<thead>
<tr>
<th>SI</th>
<th>Zone Name</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dhanmondi, Sukrabad, Kalabagan</td>
<td>21</td>
</tr>
<tr>
<td>2</td>
<td>Kalayampur, Shantinagar</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>Lalmatia, Mohammadpur</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>Gulshan, Hatirjheel</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>Uttara, Baggan</td>
<td>21</td>
</tr>
<tr>
<td>6</td>
<td>Motijheel, Kakrail</td>
<td>21</td>
</tr>
<tr>
<td>7</td>
<td>Kawranbazar, FarmGate</td>
<td>21</td>
</tr>
<tr>
<td>8</td>
<td>Rampura, Malibagh</td>
<td>21</td>
</tr>
<tr>
<td>9</td>
<td>Mirpur</td>
<td>21</td>
</tr>
<tr>
<td>10</td>
<td>Old Dhaka</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Total Dhaka City</td>
<td>210</td>
</tr>
</tbody>
</table>

Source: Questionnaire survey, 2007

2.5.2 **Secondary data collection**: The secondary data was collected from books, journals, theses and internet.

2.6 **Data analysis and decision making**
All collected data and information were analyzed using SPSS 12 and Microsoft Excel. In data analysis, descriptive statistics (frequency, mean, standard deviation, cross tab) and multiple response frequency were used to have both qualitative and quantitative data representation.
Photographs are used to show the design deficiency of existing facilities. The women perception about the urban facilities was measured using Weighted Average Satisfaction (WAS) index (see equation 1). Responses for each question range from $j$ to $n$ which represents the continuum of a four-point scale from 'highly dissatisfied' to 'highly satisfied'. To remove the central tendency a four point Likert scale was used in the study. A score, $s$, is given to each response category where scores are: highly dissatisfied = 1; dissatisfied = 2; satisfied = 3; highly satisfied = 4. The WAS index was calculated to express women users' satisfaction regarding existing urban facilities.

$$\text{WAS} = \frac{\sum \rho}{\sum \rho}$$

Equation-1

Where $\rho =$ percentage of respondents who express an opinion of their satisfaction

2.7 Recommendations and conclusion

At the final stage of the study, some planning and policy recommendations was suggested to make the selected urban facilities more accessible for women based on survey results. Special emphasis was given on planning and design issues related to women in Dhaka city.
Figure 2: A work flow diagram describing methodology of the study

Problem statement

Objectives formulation

Literature search and concept development

Selection of study area

Collection of Base Map

Data collection

Primary data collection

Secondary data collection

Physical observation (5 transport modes, 6 offices & 7 parks)

Questionnaire survey of non-employed (100 Sample)

Questionnaire survey of working women (210 Sample)

Books, Theses, Internet & Journals

Data analysis

Findings of the study

Discussion & recommendation

Source: Author, 2007
Chapter 3: Literature Review

3.1 Introduction

This chapter briefly describes the history of gender perspective in urban planning. Some literatures about urban transport services, infrastructure facilities at workplace and recreational spaces of the city are reviewed in this chapter to give an overview of women's accessibility to these urban amenities. Special attempt has been made to explore literatures in respect to Dhaka city. At the end of this chapter, some good examples of other countries are sited to demonstrate that women's accessibility to urban services could greatly be increased through special measures taken by the planners and decision makers.

3.2 History of gender inclusion in urban planning

Traditional urban planning, strongly centralized and focused on the organization of industrial-capitalist activities in space, separated commercial, industrial and residential areas and enhanced the gender and social division of work; male dominance, as well as other types of dominance, are reflected in the urban landscape; as Wilson argues (1992), one of the first planning initiatives in history, the town planning movement, aimed at excluding women and children from the urban realm. Traditional urban planning reduced modern cities to functional enclaves and ghettos - home being the dictated female locus (Alvares, 2008).

The history of Urban and Regional Planning shows the discipline has evolved from a physically-oriented model, politically repressive and economically regressive, into a more multidisciplinary, participatory and redistributive model over the 20th century; it also reveals that the discipline evolution has been markedly influenced by social movements, and particularly, feminist movements.

Feminist movements were born in Europe and in the U.S. by the end of the 19th century tied to conditions of work, health and housing, but took a rest after the voting campaigns of years 1910 to 1922. The Second World War brought both the need to incorporate more women into the labor force and the need to adopt economic rehabilitation policies; furthermore, it brought a definite discouragement to segregating ideologies in a general way. The second phase of the feminist movement is therefore born, with Betty Friedan and Simone de Beauvoir questioning unequal rights (Alvares, 2008).
By the end of the 1960s, the welfare state bankruptcy together with student movements around the world disclosed an ongoing crisis related to citizenship rights and practices, and claimed for equal rights among human beings (Alvares, 2008). By the end of the 1970s and in the following decade, feminine thought had entered the university and had created a gender theory, meaning both symbolic constructions and social relationships (McDowell, 1999), according to which issues related to gender opportunities should be incorporated in all spheres of public life. Starting in 1985, the concepts of gender management and gender budgeting argue for the inclusion of the gender issue in public policies and its actual correspondence in public budgets, respectively (Alvares, 2008). The worldwide conferences ECO-92 and Beijin-1995 demonstrated the relevance of feminism for the world (Women’s Forum, 2002).

3.3 Women’s accessibility to urban services

Physical provision of any services not always ensures accessibility to the users specially the women users. They should also be affordable and convenient for the users. Otherwise, the users will deny the service. When it comes to women users, any urban facility should be physically available, financially affordable and socially acceptable. The socially issues like safety, security and cultural acceptability get more priority to women users than male users of any urban amenity. In this study accessibility is defined as “any urban facilities are accessible to women when these facilities are physically available and convenient to use”.

Urban services can greatly influence women’s quality of life in the city. Improved transport system and safe and secure workplace with daycare facility can increase women’s participation in the labour market. Well-being of an individual greatly depends on his/her participation in the labour market. Again, women’s recreational facilities is also significantly depends on the safety and security of the parks and open spaces. Otherwise, women cannot enjoy the facility. The following sections will focus on the accessibility of women to the selected urban services. Most of the findings of these sections are explored from literature survey.

3.3.1 Women and transport system

The core findings of all existing evidence is that women are responsible for disproportionate share of the household’s transport burden while at the same time have more limited access to available means of transport (Peter, 2001). Public transport is generally less satisfactory on
non-radial and non-peak routes, on which women rely more than men. Urban transport system that carry people to and from employment centres are often inadequate for women, who must combine income-generating activities with household and familial activities such as taking children to school and visiting the market etc (World Bank, 1999). Most of the economic and social responsibilities of women involve travel, and the total time and effort spent on travel is major constraint on women’s access to resources and services, and hence their opportunities for improving their economic condition (Zohir, 2003). Urban transport data is rarely disaggregated and the importance of non-motorized forms of transport is often not recognized. A generalization can be made that include (Peter, 2001):
- More women than men have no mode of transport at all and walk
- More women than men are depending on public means of transport
- Women are less likely than men to have access to motorized means of transport
- Women are less likely than men to use bicycles or other intermediate mean of transport.

Poor transportation system gives people no choice other than to inefficiently allocate their time and money. On the contrary, an efficient and effective urban transport system is a powerful tool for improving the efficiency and accessibility of the labour market, and providing better access to education and health services. Therefore, policy makers have a responsibility to deliver a transportation system that is efficient, responsive to user requirement, and sensitive to non user concerns (Jeff and McElory, 97). A GTZ sourcebook for policy-makers in developing country (2007), named “Gender and Urban Transport: Fashionable and Affordable” shows that addressing gender in urban transportation project generates a number of benefits such as:

1. It increases economic rates of return on investment in infrastructure and increases the profitability of mass transport system.
2. It meets demand for transportation services through a better understanding of the divergent needs, preferences and constraints of end users, both women and men.
3. It lowers transaction costs by optimizing the transport system for all users.
4. It increases access to employment, education, and services that ultimately raise productivity.
5. It enables women to better meet the needs of the household, for which they have primary responsibility and ultimately strengthens the base economic unit of the household.
Though a few transport plans in Bangladesh identified urban women as prime users but recommendations made for women were not materialized by the implementers. Therefore, the existing transportation system of Dhaka city offers poor accessibility to its women users. Literature on "women and transport" in Bangladesh context is very limited. In its study “Gender dimension in transport in Dhaka Metropolitan Area” in March 1997 Nari Uddag Kendro (NUK) identified that 8.8% of the total household income is spends on transport. The study also shows that about 51% of women commute everyday in Dhaka city and they face following major problems:

- Affordability, accessibility and security
- Female commuters were exposed to harassment
- Footpaths were dirty and crowded and
- Transport providers preferred male passengers because of too slow movement of women passengers.

Khan and Afrin (2005) identified similar findings for the female pedestrians of Dhaka city. They recognized that safety and security is the primary problem of female pedestrians. Women are often harassed by eve-teasing while traveling on foot.

Insecurity of commuting works as one of the major barrier for women to travel alone in Dhaka city. More than 21% of female garment workers mentioned that they faced sexual harassment on their way to work. Approximately 6% of female employee employed at different jobs left their first jobs due to long distance between workplace and home or for the reason of insecure travels (Paul-Majumder, 2001). This insecurity also discourages women to avail the opportunity of skill training or higher education, which are essential factors affecting upward occupational mobility.

DITS studied the mobility of women and found that a modal switch for women occurs after monthly income of Taka 5000 when walk trips declines and rickshaw use rapidly increases (DITS, 1993). Though about 49% of the respondents claimed for separate transport for women, DITS recommends at least 16 seats reserved for women. Another study on “Mirpur road demonstration corridor project: social assessment and public awareness campaign” suggests “buses for women at peak time” in response to their demand (BTF, 2002).
The recent strategic transport plan for Dhaka city (STP, 2005) tried to address needs of women city dwellers. It has the following objectives which could improve mobility of women:

i. The provision of safe and reliable public transport system at prices, which are affordable by individuals

ii. The provision of road and street infrastructure to serve the different functions required by different users

iii. The integration of different modes of transport

iv. The creation of a "Pedestrian First Priority" system to enhance the provisions and protection for pedestrians.

The problem of this plan is it has not addressed the accessibility and affordability issues for women. Only the safety issue such as harassment in the street and public transport has been taken into consideration for making suitable provision for women. It suggested the policy measures below:

i. Strengthening law enforcement measures; and

ii. Review the existing provision of women in public transport to respond positively to the demand of women's special needs such as security and safety in transport system.

3.3.2 Women and infrastructure facilities at workplace

The infrastructural environment of the workplace is very essential for the productivity and security of workers since they stay in the workplace almost half of the day. The workplace is just like a second accommodation to them. A secure and healthy workplace increases workers' productivity since it encourages workers to work in good health and without tension. In most of the cases, women are employed in low paid jobs where the risk of health and death is high. If the workplace is insecure and unhealthy, then these risks rise even more.

The physical working environment of the garment industry is very inhuman in Dhaka city (Begum, 2001). The poor working environment in industrial sector results in some common occupational diseases among the female workers like aches in eyes, head, leg, back, waist, shoulder, physical weakness, breathing discomfort, cough, chest pain, gastric stomach pain, jaundice, etc. Paul Majumdar (2001) in her study “Impact of working conditions and terms of employment on women's labor force” identified that about 18% of female workers are
suffering from urinary tract infection. Specially in garments industries, there are many restrictions on workers' using toilet. For this, the female workers drink very little water so that they do not have to go to toilets and the results in urinary tract infection of the women employee.

The occupational diseases, hampers not only the productivity of women, but also their participation in the labour market. The findings of the survey "Barriers to Female employment" show that in more than 5% cases, women left their first job because of illness (BIDS, 1992). Among men, this number is 3.5%. Since the risk of diseases is more in industries the number of drop out among women from labour market is higher in the industrial sector. Women cannot continue their work in risky industries for long time. It was found that average length of service for women employed in the industrial sector is about 6.5 years, whereas the average length of service for women employed in service sector is more than 9 years. The average length of service for women employed in the garment industry is much narrower. It was only 4 years (BIDS, 1997). It means that when she is built as an efficient worker, just ten she is dropped out from the labour market.

Another reason of mental stress among working women is due to the young children they leave behind at home. The employer class is not at all concerned about child care facilities at workplaces, whereas it is an important necessity for female workers. The absence of this important facility makes female workers suffer from acute mental stress. Because of thought about young children, mother workers become inattentive during their work. This lack of attention severely affects the productivity of mother workers. For this inattentiveness, they make mistakes in their works. Moreover, because of non existence of day care facilities at workplaces, many female workers had to leave their jobs. A study carried out in Dhaka city shows that more than 4% of female workers left their jobs to take care of young children or to give birth to (Paul-Majumder and Zohir, 1993). Again the rate is 7% among the female garment workers (Paul-Majumder, 1998). The survey titled "Health status of the garment workers in Bangladesh" conducted by BIDS found the effectiveness of daycare facilities to enhance female workers' productivity. The survey shows that out of the 39 garment factories included in the survey, only one factory provided child care facility. The employer of this industry told that this facility increased the productivity and attendance rate of female workers. This also reduced his repair and mending cost (BIDS, 1997 & Paul-Majumder, 2001)
The other physical infrastructures that the women employee requires are prayer room, rest room, canteen facilities, etc. Provision of these facilities may create favourable working-environment for women, which in turn could increase their productivity and contribute to owner's profit.

3.3.3 Women and recreational places

Meyer and Brighthill define "recreation as activity voluntarily engaged in during one's leisure time and primarily motivated by the satisfaction or pleasure derived from it" (Mayer & Brighthill, 1959). In short, recreation may be defined as participation, in its broadest sense, in any pursuits other than those associated with work and necessary tasks of a personal and social nature which a person undertakes freely for purposes of relaxation or entertainment or for his own personal or social development (Burton, 1971). In fact there are two main positive functions which recreation performs: it provided entertainment, and it provides a means for personal and social development. Access to the natural open spaces is a central value in modern society. Therefore, there are wide ranges of theoretical discussions on "presence of" and "physical accessibility to" urban open spaces of cities, as lack of open spaces is detrimental to urban life and accelerates disabilities of the city. Jacquelin Burgess et al. (1988) in their study "People, Parks and Urban Green: A study of Popular Meaning and Values for open spaces in the city" mentioned that urban green spaces are highly valued by urban and landscape designers for their contribution to the quality of life in cities.

A range of studies has shown that women generally spend more time than men in neighbourhood squares and parks (Harth, 2007) and also consider them to be more important (KGSt, 2004). This is attributed to their child-minding role, but also to their greater desire for social contacts and their more pronounced interest in nature and greater health consciousness (KGSt, 2004). Women are still more frequently accompanied by children; children's play areas are therefore particular centres of attraction for them, and easy access to green spaces is more important for them (Harth, 2007). Women gives more attention to safety and security, and some women, especially of the older generation, regard green spaces as unsafe, which keeps them from frequenting them. Women prefer less extensive activities and quieter, more protected positions from which they can keep events under observation (Harth, 2007).

Recent studies clearly show (Paravicini et al., 2002; Harth, 2007) that gender-specific presence in and appropriation of green spaces and parks vary strongly. For instance, the presence of women in green areas, parks, and squares increases markedly if their
appropriation wishes are taken into account, if, for example, pleasant scenes are available, if
the design itself and rules of use impose quieter appropriation patterns, if a sense of security
prevails, and if the aesthetic and atmospheric standards apparently more precious to women
than men are met. Then women will not only be present in greater numbers but there will be
considerably fewer gender-specific differences in behaviour.

However, in case of Dhaka city, there is not enough literature that can express the need of
open spaces in urban life only for women. Huq (1992) pointed out that most of the urbanites
(75.1%) in Dhaka are more interested to spend their leisure time in home-based and indoor
recreational activities. The similar observation is also applicable for three forth female city
dwellers of Dhaka city (Nasreen, 1990). Her study shows that only 25.5 of urban women are
involved in outdoor recreational activities. Their lower involvement in outdoor recreation is
the result of several obstacles restricting their participation. For example, crime and anti
social activities have restricted the city dwellers to go out and enjoy parks and open spaces in
the city. Therefore, safety and security are two important issues that should be consider
while mainstreaming gender issue in open space designing.

Moniza Biswas (2002) in her study “Pattern and trend of recreation activities in Dhaka city”
showed outdoor recreation activities of the different aged female in Mohammadpur area,
Dhaka city. The study finds out that going to the park is the main attractive outdoor
recreational activity of teennaged females, taking food in restaurant is the main activity of
middle-aged females whereas jogging is the main activity of aged female in the city (Table
2).

<table>
<thead>
<tr>
<th>Activities</th>
<th>6-19 yrs</th>
<th>20-35 yrs</th>
<th>35-55 yrs</th>
<th>55+ yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>%</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Go to park</td>
<td>12</td>
<td>48</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Go to the play field</td>
<td>5</td>
<td>20</td>
<td>26</td>
<td>23</td>
</tr>
<tr>
<td>Jogging</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Play football</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Outing with family</td>
<td>2</td>
<td>8</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Play cricket</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Take food in restaurant</td>
<td>0</td>
<td>0</td>
<td>51</td>
<td>45</td>
</tr>
<tr>
<td>No activities</td>
<td>6</td>
<td>24</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25</strong></td>
<td><strong>100</strong></td>
<td><strong>112</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Biswas, 2002
3.4 Planning of women-friendly urban facilities: Some case studies

Urban planners and decision makers are increasingly realizing the women need of urban services. Some good initiatives are taking place in other countries to increase women's accessibilities, especially in developed countries. Lessons can be learned from those initiatives. Provision of bicycle for women, women only carriage in metro train (public transport), lighting in mass transit system, between two stop drop of night bus and provision of cycle way and pedestrian ways increased women's users accessibility to transport system of India, Japan, Ecuador, Canada and Colombia respectively. Again, Italian case study shows that establishment of day care facility at workplace create positive working atmosphere for female employees. The last case study illustrates how gender aspects were considered in resigning a public park in Vienna that satisfied its women users and increased their number.

3.4.1 Cycles of Hope: Tamil Nadu, India

In the early 1990s, the National Literacy Mission introduced bicycles to women in Tamil Nadu. Men were engaged to teach women how to cycle. Women were offered loans for bicycle purchase. The bicycles were introduced to empower women rather than to address their transportation needs, but cycling has proven to be an efficient way to do both. In this particular program, bicycles helped women to complete their work faster: they reported having significantly more leisure time. Women also stated that they could be more involved in economic and social tasks because they could confidently travel to other villages (Rao, 2002).

3.4.2 A sense of security in women-only train carriages: Tokyo, Japan

The Tokyo metro system, although being one of the largest and most efficient urban rail systems, is sometimes 200% over capacity with people being transported to work in crowded conditions. These crowded conditions become a place where women can be harassed or touched by men, which led to the introduction of women-only carriages in the Kanto (The Tokyo metropolitan) and Kansai (Osaka and Kobe) areas (GTZ, 2007).

3.4.3 Lighting to increase safety: Guayaquil, Ecuador

Safety is one of the prime concerns for women transport users. Lighting in a Mass transit system such as Metrovia could be an efficient means to increase safety during operating hours as found in Guayaquil, Ecuador (See Photo 1) (GTZ, 2007).
3.4.4 Integrating a gender perspective into public transit: Montreal, Canada

In Montreal, fear of violence reduces night use of public transportation by women. Since 1992, the Comité d’Action Femmes et sécurité Urbaine (CAFSU) has been actively promoting ways to increase women’s sense of security in and access to the urban environment—specially by instituting in 1996 the “Between Two Stops” service, which allows women to get off the bus at night in between scheduled bus stops at a location closer to their destination. Because women are the principle users of public transportation, this program generate an increase in ridership as well as more security for all users. Lastly,

3.4.5 Promoting cycle & pedestrian: Bogota, Colombia

Cycle ways promote greater safety to all population, such as this one in Bogota, Colombia (See Photo 2). Alamedas in Bogota were built on the side of dusty roads showing that pedestrians were more important than automobiles (See Photo 3) (GTZ, 2007).
3.4.6 Daycare can create positive working atmosphere: Friuli Venezia Giulia, Italy

In Italy, childcare for infants is still a poorly addressed social issue. The supply of child care services for children under three years of age in Italy is low; four percent, compared to 40 percent in the Nordic countries. Lloyd Adriatico is also the first private company in the Friuli Venezia Giulia region of Italy to offer daycare facilities to its employees (See Photo 4). Costs range from an affordable 330 euros to a still moderate 500 euros per month, depending on the seniority of the employee-parent. Located in the main building and open from 8 am until 5:30 pm, working parents can always visit their children in their lunch breaks. Spread out over 300 square meters, the kindergarten boasts two of everything to cater to the different needs of infants and toddlers: kitchens, sleeping areas, playrooms and changing rooms. The centre has the capacity of 26 children. After establishment of the daycare centre the management realized that having a balanced lifestyle creates a positive working atmosphere and motivates employees (Allianz, 2004).

3.4.7 Gender sensitive open space design: St.-Johann-Park, Vienna

The St.-Johann-Park (now Bruno-Kreisky-Park) was redesigned in 2001 by the landscape planning firm Koselicka (See Fig 3 and photo 5). It is a large city park in one of the busiest areas of Vienna with an old stand of trees and large meadows.

The Viennese St.-Johann-Park was fundamentally transformed on the basis of a competition for “gender-sensitive park design.” A balanced ratio between the sexes was to be achieved, and girls in particular were to be encouraged to appropriate public open spaces by expanding their radius of action and increasing their presence. The background to the competition was the realisation that the lack of public open spaces in large sections of the Vienna inner city.
and of playgrounds designed with youth interests in mind had led to girls being largely displaced by more assertive groups.

Variously structured spaces of varying size were created. A diagonal stretching from a residential area to an underground railway station divides the park into two parts: the “Small Freedom” and “Great Freedom.” The “Small Freedom” is structured on a small scale and fitted out more intensively. It is situated close to the adjacent housing, so that is quick to reach and socially well monitored. The “Great Freedom” consists of wide, open meadowland with minimal structuring. The football cage was dismantled and special areas for activities favoured by girls were provided, like volleyball, badminton, and quieter activities in protected areas. The sense of security was improved by ensuring a clear all-round view and good lighting on the main paths. There are also park keepers who ensure that the rules are kept to.

Figure 3: Map of St.-Johann-Park, Vienna

A study was conducted on use of the park before and after redesign. A number of striking changes were noted. The number of female users in all age groups increased, most markedly among adolescents (Harth, 2007).
Chapter 4: Present Situation of Urban Facilities in Dhaka City

4.1 Introduction

The chapter briefly describes the present condition of urban facilities in Dhaka city. As the study deals with transport system, infrastructure facilities at workplace and recreational spaces (open space and parks), description of their present condition in Dhaka city will help reader to orient with study context. The chapter also identifies the organizational framework of these urban services.

4.2 Transportation System of Dhaka City

Transportation facilities are a fundamental need in modern societies. Therefore the provision of a transport system that the majority can benefit from is a requirement. Transport contributes to economic growth but also to problems such as traffic congestion, air pollution, accidents and a number of other side effects. Today the basic need of access and mobility is badly provided for in Dhaka. To begin with today’s traffic congestion, insecurity and misuse of street space poses serious threats to urban development. Lack of relevant measures and firm decisions to cope with the complexity of traffic has created chaotic conditions (see Photo 6). Different types of modes using the same road space characterize traffic environment. Delays have tripled in the last three years. Inadequate traffic management, conflict of jurisdictions, poor coordination among organizations and increasing air pollution are some other main problems.

4.2.1 Road Network

Though transport system of Dhaka is mainly road based, road network of the city had never been planned in a systematic way by following specifically in cognizance with the well developed process of trip generation, trip distribution, modal split and route assignment (Khan, 2006). As a result, an irregular pattern of network has been developed organically. Road network of Dhaka city is composed of 199 km of primary roads, 109 km of secondary roads, 152 km of collector roads and about 2540 km of access roads and others (Quiam, 1995). With the exception of some well planned residential areas, in most of the areas the road network is quite narrow and alignment is poor.
4.2.2 Traffic modes

Traffic on the Dhaka Urban highways is mainly buses and trucks representing 56% of all movements with auto rickshaws (13%), rickshaws (11%) and car/jeep (10%) (Mannan & Karim, 2001). The situation within city is quite different. Buses and trucks are representing very small proportion of movements, only 11% in the city, rickshaw representing 45%, auto rickshaw 18% and car/jeep 14% of all movements (JHIC, 2000). Table 3 shows information about public transport in greater Dhaka.

Table 3: Motorized and Non-motorized public transport in Greater Dhaka

<table>
<thead>
<tr>
<th>Description</th>
<th>Bus</th>
<th>Minibus</th>
<th>Taxi</th>
<th>Auto-tempo</th>
<th>Auto-rickshaw</th>
<th>Rickshaw</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle fleet in use</td>
<td>4792</td>
<td>3946</td>
<td>1531</td>
<td>1470</td>
<td>150000</td>
<td>179639</td>
<td></td>
</tr>
<tr>
<td>Occupancy</td>
<td>52</td>
<td>36</td>
<td>2.2</td>
<td>2.2</td>
<td>1.6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Seat capacity</td>
<td>249184</td>
<td>150218</td>
<td>4593</td>
<td>20680</td>
<td>53790</td>
<td>280000</td>
<td>681603</td>
</tr>
<tr>
<td>Vehicle per 100,000 population</td>
<td>70.1</td>
<td>57.8</td>
<td>22.4</td>
<td>21.5</td>
<td>262.0</td>
<td>2195.3</td>
<td>2529.1</td>
</tr>
<tr>
<td>Seat per 100,000 population</td>
<td>3653.9</td>
<td>1805.9</td>
<td>67.2</td>
<td>301.2</td>
<td>785.9</td>
<td>4300.6</td>
<td>11097.6</td>
</tr>
</tbody>
</table>

Source: Mannan and Karim, 2001

The number of vehicles operating on Dhaka’s road is estimated to be in excess of 250,000 comprising just over 100,000 motorized vehicles and about 150,000 non-motorized vehicles, among which there are about 180,000 public transports. Among the public transports, buses have a legal seating capacity of 52 passengers, minibus have a legal seating capacity of 32 passengers, taxis have a legal seating capacity of 3 passengers, rickshaws have a legal
seating capacity of 2 passengers, and auto tempos or human haulers range in size from 10 to 14 seats (STP, 2005). There are very small numbers of bigger buses and most of the buses are owned by Bangladesh Road Transport Corporation (BRTC).

Family members of lower income households need to make long and dangerous walks daily. Almost 50 percent of the population is poor and approximately 60 percent of them use walking as their main mode of transport.

4.2.3 Travel characteristics

In Dhaka about 40% of trips are on foot while almost half of the remaining trips are on NMT (DTCB, 2005). By contrast in American cities about 5% of trips are made without motorized vehicle, and in European and Japanese cities, about 20-50% of trips are made by without motorized vehicle. Because of lower income level, majority of the population in Dhaka city are unable to afford private transport and are dependent on low cost public transport. In many parts of Dhaka, rickshaws and other NMT account for 50% or more of the overall traffic flow. After pedestrians, the rickshaw is the second largest mode of transport in the city.

4.2.4 Trip length and mode choice

Statistical data on trip length distributions by different modes in kilometers are not known with any certainty. However, based on household survey it is assumed that in Dhaka metropolitan, majority of short distance trips are undertaken by walk and the proportion of trips undertaken by taxis and rickshaws are relatively independent of trip distance (See Fig. 4).

Figure 4: Trip length distribution for each traffic mode in Dhaka city

![Trip length distribution for each mode](source: DUTP, 1996)
The average trip length in Dhaka metropolitan is 54 minutes but this average is very much weighted by the number of walk trips and the short time taking for trips. Walk trips that form a complete trip averaging 14 to 15 minutes but bus trips average 54 minutes with other mode falling between these times.

4.2.5 Institutional framework

Some core agencies of the government are responsible to maintain and operate the transportation system in Dhaka city (see table 4). Pedestrian ways are maintained by the DCC and the services are provided by the road design authority as well. All the responsible authorities are from the government's side. So sometime the services are requiring immediate improvement but fail to get the proper maintenance. Again, the conflict of jurisdiction and the poor coordination among the organization are major problem for transport system of Dhaka city.

Table 4: Agencies responsible for urban transport infrastructure in Dhaka

<table>
<thead>
<tr>
<th>Sub-sectors of transport</th>
<th>Infrastructure (fixed assets)</th>
<th>Infrastructure (moveable assets)</th>
<th>Operation and maintenance assets</th>
<th>Regulation and Enforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>RHD, RAJUK, DCC, LGED, BRTC</td>
<td>BRTC, Private operators</td>
<td>RHD, BRTC, Private operators</td>
<td>BRTA, DMP</td>
</tr>
</tbody>
</table>

Source: Khan, 2006

4.3 Infrastructure facilities at the workplace in Dhaka city

Infrastructure facilities at workplace ensure secure and healthy working environment for both men and women employee. A secure and healthy workplace increases workers' productivity and encourages them to continue their work. A secure work place is much more significant for women workers as women are physically different from men and most of them belong to reproduction age.

4.3.1 Physical condition of workplace

In Bangladesh, generally the physical condition of workplace, specially that in the industrial sector, is not favourable for work. It was found from a study that the infrastructure of those work places is worse than other work places where women are employed in large numbers. Findings showed that the physical working environment of the garment industry is very inhuman (Begum, 2001). Most factory buildings have very narrow space and insufficiency of air. Moreover, in most of the industries the number of toilet is insufficient and pure water is
also absent. Besides, rest room, ambulance and canteen facilities that they deserve according
to the labor laws are also absent. According to labor law, every work place must have doctor
and a nurse. But findings of survey showed that in 80 percent of the garment factories, there
is no doctor (Paul-Majumder, 2005). Above all, in most factory building there is no
arrangement to combat fire accidents.

Because of all these insecurities women in the industrial sector work with different hazards in
suffocating atmosphere. Among these hazards, the most prominent are various disease
hazards, fire hazards, heat and sound hazards, etc. As a result of these risks, they are
frequently attacked by different occupational diseases like aches in eye, hand, leg, back,
stomach pain, jaundice, etc. (Paul-Majumder, 2005).

In the institutional sector, the service sector has more or less congenial infrastructural
working environment. In most of the service-oriented organization, the sitting arrangement of
men and women are separated. In many organizations, women have the facilities of rest
room, canteen and separate toilet which women workers have legal rights according to labour
laws. However, about 17% of women employed in the institutional service sector reported
that one of the main reasons for their dissatisfaction in the job was the scarcity of separate
toilet for women (BIDS, 1992).

4.3.2 Provision of day care facilities at workplace

According to Bangladesh Labour Force Survey 2005-2006 about 2.8 million urban female
aged above 15 years are engaged in different occupations. A large number of working women
has children, who have none to take care of them in absence of their mothers or taken care by
the maid servants. Therefore, to ensure these women’s presence in the workplace and to
increase their attention in work, it is required to establish a considerable amount of quality
governmental and non-governmental daycare centre as per their needs. But it is matter of
regret that till now this issue is ignored and negligence in providing effective measures
against this issue is visible.

According to National Labour Act 2006, any organization having 40 female employees must
have a daycare centre but practice of this act is very limited in a numerous organizations.
Most of these organizations are Dhaka-based. A nongovernmental organization named
'Karmojibi Nari' conducted a survey in 55 garments in Dhaka city during June, 2007. The
study shows that only 15 (27%) garments have their own daycare centre. The most of the
daycare centre are very poor in quality and unsuitable for children. Ms. Arifa Akter Amin, the
field coordinator of this organization said, "Most of these centre are established to follow
government rules and to attract foreign buyers". (Daily Prothom Alo: 3rd October, 2007). The
table 5 shows that 13 government daycare centres are available in Dhaka City. The capacity
of government daycare centre is 50 children for middle class daycare and 80 children for
lower class daycare.

Table 5: Statistics of Government Daycare in Bangladesh

<table>
<thead>
<tr>
<th>Target Group</th>
<th>No. of Day care</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle Class working women</td>
<td>6</td>
<td>All in Dhaka City</td>
</tr>
<tr>
<td>Lower class working women</td>
<td>7</td>
<td>All in Dhaka city</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1 in 5 divisional town (Khulna, Chittagong, Rajshahi, Sylhet, Barisal)</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>1 in 14 different districts</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>All over Bangladesh</td>
</tr>
</tbody>
</table>

Source: Daily Prothom Alo: 3rd October, 2007

A few organizations of Dhaka city provide day care facility to their women employees at
minimal fees but only the employee of that organization are entitled to enjoy that facility.
Some organization which have day care facility are Bangladesh Bank, IER at Dhaka
University, Department of Women & Child Affairs, UNICEF, SODA (School of
Development Alternative), Acid Survival Foundation (ASF), ICDDR,B, Care Bangladesh.

A large number of the labour force work in RMG and earn foreign remittance. The number of
BJMEA enlisted garments is 4395. More than 90% of labour force in RMG sector is women.
In spite of this, most of these garments do not have daycare facilities. Phulki, a
non-governmental organization has about 100 daycare centres. It established 23 daycare
centres for garments workers in Dhaka city.

4.3.3 Institutional arrangement for women’s development

Beijing Platform for Action emphasized that primary responsibility of implementation of
policy of women affairs lies with the governments and hence governments should establish
national machineries towards advancement of women at the highest level. In constitution of
the commitments made at national and global level, Bangladesh has set up comprehensive
national mechanism and institutions for the advancement of women. The organogram stated
below explains the structure of the mechanism. Ministry of women and children affairs has
been made the nodal ministry with the responsibility of coordination of the implementation of the national policy (see Fig.5).

**Figure 5: National machineries for women's development**

4.4 Parks and open spaces in Dhaka city

4.4.1 Rapid recline of parks and open spaces

Natural features, lush green spaces and water bodies surrounding the habitations that prompted James Taylor to remark in 1824, "Dhaka looks like the Venice of the orient" no longer exist. High land value and intense population pressure are resulting in unabated encroachment on open space, filling up of ditches and ponds. In 1970 many trees of historic Dhaka were cut and the water bodies filed (Nilufar, 1999). While comparing Dhaka and
Calcutta cities, Prof. N. Islam (1998) wrote, "Calcutta has more parks, open spaces, trees and these are better maintained. Most of its ponds and other water bodies are also better kept". Lack of consciousness, initiative and most of all insensitivity of both public and private sectors towards ecology, environment and socio-cultural factors has led to rapid decline of open spaces and water bodies, and increasing loss of accessibility to the open spaces and water bodies.

4.4.2 Accessible parks and open spaces

According to the local standard (one acre of parks and open spaces per 1000 population from KDA master plan) Dhaka city needs 3900 acres i.e. 11% land area for parks and open spaces. Only 5% of the land in old Dhaka and 12% in new Dhaka are green and open (DMDP, 1995). Presently there is only 0.0134 acre parks or open space remained per 1000 population in old Dhaka and most parks are smaller than the standard local parks (Nahrin et al, 2004). The sum total of open space including roads, footpaths, parks, play fields, lakes, ponds constitute about 17-18% of the area of Dhaka city (Daily Janakantha, 5 March, 2002). Dhaka Structure Plan (1995) advocates reservation of at least 20% of the city area as open space. Presently the open spaces with in Dhaka City Corporation (DCC) are 10%. Creation of open spaces from existing stock of about 500 acres of DCC and PWD land would increase the percentage slightly (Nilufar, 1999). Over the last 30 years or so government authorities have completely destroyed Tikatuli Parks, Park of Uttara Sector One, Azimpur Park and Shahid Park of Mohammadpur (Nilufar, 1999). Like Dholai khal many water bodies and their tributaries have also been filled. If the present trend continues nothing will be left of designated parks, little open spaces, the few trees, ponds and water bodies in Dhaka city. At present DCC has 42 developed parks; those are situated in different parts of the city. Besides these parks, there are some other famous open spaces in Dhaka city like Sabrawardi Udéyan, Shishu Park, Central Shahid Minar, Bunga Bhaban, Laltigh Fort, Boro Katra, National Assembly Complex, Baldha Garden, Ramna Park, Botanical Garden, Dhanmondi Lake (see Photo 7), etc.

According to the study of Nabi (1978) Dhaka city possessed 0.55 acres of open space per 1000 population. Nahrin et. al (2004) showed that 52 out of 90 wards (about 60.1% of total DCC area) of Dhaka city are deprived of park and playground. Out of 90 wards only 36 wards (24.9% of total DCC area) have open space ranging from 0.01 acre to 0.21 acre per
1000 population. Only 4 wards (3.11% of DCC area) have open spaces between 0.64 acre and 0.85 acre.

Photo 7: Dhannondi Lake, one of the famous open spaces in Dhaka city

4.4.3 Provision of essential amenities in parks and open spaces

Some services and amenities are essential for any open space. Open spaces lose its attraction to urban dwellers in absence of these facilities such as walkways, seating arrangement, lighting, flowers, etc. Inadequacy of essential elements in the parks is another problem of parks and open spaces in Dhaka city (Nahrin et al, 2004). A study on 15 parks of the old Dhaka (DCC Zone-2 and Zone-3) shows poor recreation facilities in these parks (See Table 6).

4.4.4 Institutional framework of urban recreational spaces

The Dhaka City Corporation is the prime department, which is carrying out various duties catering to the civic needs of the people. In Dhaka city most of the open spaces and parks belongs to this organization. At present, it has 42 parks within the city. Some of the parks are leased out to the private organizations. The rest of the parks are taken care of by the conservancy department of DCC. Besides DCC, Public Works Department (PWD) processes a great share of open spaces of Dhaka city. Most of the government staff colony has neighbourhood parks which have been maintained by the PWD. Furthermore, there are some amusement parks within the Dhaka city which are owned and operated by the private organization like wonderland, Shishu Mela, etc.
<table>
<thead>
<tr>
<th>Name</th>
<th>Area (in Acre)</th>
<th>Seating</th>
<th>Walkways</th>
<th>Boundary with gate</th>
<th>Vegetation</th>
<th>Seasonal Flower</th>
<th>Water Features</th>
<th>Space-signage</th>
<th>Rest Rooms</th>
<th>Café Restaurant</th>
<th>Toilet</th>
<th>Litter bin</th>
<th>Shade Shelter</th>
<th>Proper lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swarnibahar Park</td>
<td>0.7</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baldha Garden</td>
<td>3.38</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bahadur Shah Park</td>
<td>1.98</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose Garden</td>
<td>7.1</td>
<td>●</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siraj Ud Dowlah Park</td>
<td>0.5</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sukkaturi Park</td>
<td>0.5</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Road Park</td>
<td>0.33</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazaribagh Park</td>
<td>3.70</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gujamahal Children Park</td>
<td>0.86</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amligola Park</td>
<td>0.2</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bakshi Bazar Park</td>
<td>0.43</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aampur Park</td>
<td>1.98</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nawabgonj Park</td>
<td>2.0</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rasulbagh Park</td>
<td>2.5</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bashiruddin Park</td>
<td>2.0</td>
<td>●</td>
<td>●</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Naquin et al., 2004
Chapter 5: Bangladeshi Women’s Status and Their Participation in Employment

5.1 Introduction

This chapter gives an idea about women’s legal right and inclusion of gender equity aspect in our national policy framework to demonstrate women’s legal status in our country. It also briefly described national women’s advancement policy and countries progress towards Millennium Development Goal (MDG)-III to give an overview of their social status. Again, this chapter informs about present status of women’s involvement in labour force of the country. Moreover, the chapter contains the survey results of the 100 non-employed women which identify the barriers to women’s employment participation in Dhaka city.

5.2 Legal rights and gender equality

The Constitution of Bangladesh (Article 28) guarantees equal rights to men and women in all spheres of public life. Article 29 enables States to take affirmative action for the advancement of any backward section of citizens including women. It is clear from these Constitutional provisions that on one hand equality is ensured, while on the other the unequal status of women is recognized by reserving the right of making special provision in their favour [in Article 28 (iii)]. Women are guaranteed equality with respect to men before the law in all matters except for those covered by personal laws. Bangladeshi women therefore enjoy the same rights as men in areas covered by civil and criminal laws, but in critical areas of their lives like marriage, divorce, inheritance, guardianship and custody of their children they are covered by religious laws of the respective communities. These differ for each religious group however all of them are discriminatory towards women in various degrees. Even in the public sphere, women de facto legal rights are often very fragile.

National legal provisions and enforcement mechanisms recognize the unequal status of women and the need for protectiveness towards women which is perceptible in the Criminal Procedure Code and Civil Procedure Code by which women are exempted from arrest for debt or appearance in court if they observe purdah, and may automatically be granted bail in criminal cases. Discriminatory features outweigh the protection that is accorded to women in some other civil and religious laws. According to the citizenship Act of 1951, citizenship by birth or by marriage can be transmitted through the father and husband only. A woman can
neither pass it to husband or her children as marriage of a Muslim man with a non-Muslim is considered valid but not the reverse. A wife’s domicile and nationality is entirely dependent on her husband’s.

The Government has ratified the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1984 and the Optional Protocol to CEDAW in 2000 as a demonstration of political will to establish substantive equality of women although still maintaining reservations to articles 2 and 16.1 of the Convention both of which are critically important to guarantee human rights of women. This has been deeply criticized and remains a priority issue on the advocacy agenda of the women’s movement.

Since Liberation of the country, various measures have been taken to ensure equal rights of women. Important laws formulated or amended so far to ensure equality and protect women’s legal rights include: (i) Muslim Family Law Ordinance of 1961, (ii) Dowry Prohibition Act of 1980 and its amendment in 1986; (iii) The Family Court Ordinance of 1985; (iv) The Child Marriage Restraint Act of 1929; (v) Muslim Marriage and Divorce Registration Act of 1974; and (vi) Women and Children Repression Act (Special Provision) 1995 and amendment in 2000. While The Dowry Prohibition Act 1980 forbids the giving and taking of dowry and The Suppression of Violence against Women and Children 2000 provides strict measures against dowry related violence the practice nevertheless continues.

Contrary to Constitutional provisions that guarantee equality for all citizens, girls in Bangladesh are subjected to unequal treatment and are particularly vulnerable to sexual abuse, sexual exploitation, early marriage, trafficking and prostitution, rape, sexual harassment and acid attacks. The National Plan of Action against Sexual Abuse and Exploitation of Children including Trafficking in 2002 prepared a draft Child Labour Policy in an attempt to address such exploitation in concrete ways. In response to increased acid violence against girls and women, the Parliament has passed the Acid Crime Prevention Act 2002 and the Acid Control Act of 2002. In addition, the Speedy Trial Tribunal Bill 2002 for speedy trial of 5 types of serious crimes included murder and rape has been adopted.

5.3 Gender equality in national policy framework

5.3.1 Rights guaranteed in the constitution

The Constitution of Bangladesh grants equal rights to men and women. According to Article 10, “steps shall be taken to ensure participation of women in all spheres of national life”. The
Constitution, in its preamble in para 3, further pledging that it shall be a fundamental aim of the state to realise through the democratic process a socialist society, free from exploitation — a society in which rule of law, fundamental human rights and freedom, equality and justice, political, economic and social, will be secured for all citizens. The Constitution demonstrates an understanding of the prevailing socio-cultural practices, which places women as a class in a subordinate and vulnerable position thus empowers the states for “making special provision in favour of women or children or for any backward section of citizens (Article 28.4)”. It may be noted that the constitutional guarantee of equality of men and women is envisaged in equal participation of women in public or “all spheres of national life”. As the personal laws of each community govern personal spheres of life of citizens, women are faced with numerous discriminatory laws in family relations, marriage, child custody and inheritance.

5.3.2 Women in development plans

Women have been considered a distinct target group in the post-liberation development process in Bangladesh. However, in the initial period, women were considered as a target beneficiary group and their inclusion in the plan reflected a post war-rehabilitation and welfare approach. Only from the eighties (Second Five Year Plan 1980-85) there has been a growing recognition of the critical importance of women’s participation in development and at the same time severe discriminations faced by women within all spheres of life. The commencement of the Second Plan also conformed to the Second World Conference on Women held in Copenhagen in 1980. The Second Five Year Plan, for the first time demonstrated a multi sectoral model involving women’s participation in health, education and employment sectors and women were considered as agent of development rather than passive beneficiary. In the Third Five Year Plan (1985-90) reduction of gender imbalances found a place as a priority objective and made more elaborate programmes on women’s development and emphasized the need for women’s participation in the mainstream of socio-economic activities. The Fourth Five Year Plan (1990-95) placed women with the context of macro framework with multi sectoral thrust and the Plan gave particular focus on gender dimension of poverty in its poverty alleviation programmes. As a follow-up process the Fifth Five Year Plan (1997-2002) in its macro framework incorporated policy to “bring women in the mainstream of development activities with a specific objective to reduce gender disparity in the areas of socioeconomic developments as well as to ensure promotion and protection of women’s human rights through implementation of CEDAW”. The Plan recognized the multi
sectoral approach in mainstreaming women's development and also emphasized the policy and advocacy role of MoWCA.

5.3.3 Gender gaps in the PRSP

The very target of the PRSP is "to reduce the number of people living below the poverty line" and a major criticism has been that this target is not gender sensitive and does not take account of ways to adequately bridge gender gaps. The question of how the PRSP will mainstream and increase the pro-poor economic growth of women remains unanswered.

5.4 The national policy for women advancement

The National Policy for Women's Advancement was declared on International Women's Day on 8 March 1997. It clearly spells out the commitments and policies for promotion and protection of women's human rights, education and training, health and nutrition, political empowerment, legal and administrative reform to eliminate violence and oppression against women (MWCA). Its main focus is on eradicating gender disparities at all levels of the society and to create better opportunities for women to ensure their equal participation in both private and public spheres of life.

**Objectives of the Policy:**

- To establish equality between men and women at all levels of national life.
- To ensure empowerment of women in all sphere of state, society and family.
- To establish women's human rights.
- To develop women as educated and efficient human resources.
- To acknowledge women's contribution in social and economic sphere.
- To eliminate all forms of discrimination against women and girls.
- To take adequate measures to ensure women's health and nutrition.
- To meet the needs of women specially in difficult circumstances.
- To ensure security for widows, divorced, unmarried and childless women.
- To reflect gender perspective in mass media by projecting positive image of women.
- To provide support services in the advancement of women

The government changed this policy in 2004 but that policy was not widely acceptable among the women organizations. Their protestation against the 2004 policy forced government to change the policy again. In the 8 March 2008 government declared new National Women Advancement Policy 2008. This new policy has similarity with the 1997
policy. It has established women’s equal rights and ensured women empowerment. In the 2008 policy maternal leave is fixed five months and one third seats of national parliament reserved for women.

5.5 Women and Millennium Development Goal

Gender equality is a core development issue, which needs to be addressed properly. Bangladesh has achieved considerable progress in women empowerment and removing gender gaps. It has been observed from labour force survey 2005-2006 that of the total employed population of 47.4 million, 36.1 million were male and 11.3 million were female (BBS, 2007). Percentage of female students in different educational institutions has increased over the years. In 1981, the female student in primary school was 38.8%, which increased to 49.0% in 2001. The increase of female students in the secondary school is from 25% in 1981 to 51.9% in 2001. The percentage of girl students also increased in the colleges and the universities (BBS, 2006). However, women’s participation in public sector/government Service is still low. In 1991, the percentage of female employees was 7.9% and in 2002, it increased to 9.7%. Again, Bangladesh Parliament has 300 seats and 30 seats were reserved for women up to 2005. Recently the number of reserve seats has been raised to 45 (BBS, 2006).

5.6 Socio-economic status of the non-employed women

5.6.1 Household size and dependency

The survey was conducted among 100 non-employed women whose age is in between 16 to 60 years. Most of them were housewife comprising about 67% of the total respondents. Their average household size is 5.35. Among them, about 70% belong to single income earner family whereas 16% has dual income earners.

5.6.2 Age

Average age of the respondents was 32 years with standard deviation of 7.6 years. About half of the respondents have age in between 21 to 30 years. Again, about one third of the respondents are in the age group of 31 to 40 years and one tenth of the respondents are in the age group of 41 to 50 years respectively. None of them are below 20 years and only one percent is in the age group of 51 to 60 years (Table 7).
Table 7: Distribution of the non-employed women by age category

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= 20 yrs</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21-30 yrs</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td>31-40 yrs</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>41-50 yrs</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>51-60 yrs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>210</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2008

5.6.3 Marital status

About 80% of the respondents are married followed by 12% unmarried women. Again, only 6% is divorcee/separated women and 2% is widow respectively (see Fig. 6).

![Figure 6: Marital status of the non-employed women](source)

5.6.4 Educational level

The study shows that 39% women are HSC degree holders followed by 24% bachelor degree holders (See Fig. 7). About 22% of the respondents are highly qualified having master degree. Again, 16% women passed their SSC.

![Figure 7: Educational level of the non-employed women](source)
5.6.5 Household Income level

Middle income group dominated among the total respondents having 72%. This group does not come to the job market due to various reasons such as conservativeness prevail among this social group, poor commuting system of the city, inadequate supporting facilities at the workplace, etc. The respondents belong to higher income group comprise 16% (Table 8). They are relinquished to the city job market because of their well to do economic condition of the family. Lastly, lower income respondents consist of 12% of the total respondents. They mainly refrain from job due to poor supporting facilities for women at workplace (specially day care service) and mismatch between their educational background and job expectation.

<table>
<thead>
<tr>
<th>HH income level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low&lt;12500 Tk.</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Middle 12500-55000 Tk.</td>
<td>72</td>
<td>72</td>
</tr>
<tr>
<td>High &gt;55000 Tk.</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2008

5.7 Women's access to urban labour market

Well-being of an individual greatly depends on his/her participation in the labour market. In Bangladesh women participation in the labour market is still minimal. But in urban areas, women are more visible in the construction and informal sectors, which are characterized by lower returns and unequal wage rates. Increasingly, however, women are becoming involved in the formal manufacturing sector. With the advent of readymade garment (RMG) industries in Bangladesh, women's independent migration has increased significantly. Salma Khan, in her book *The Fifty Percent: Women in Development and Policy in Bangladesh*, argues that in the late 1980s there were about 1.5 million people working in the garments industry, and that more than 90% consists of women workers. Petra Dennecker, in her book *Between Conformity and Resistance*, states that in 2002 there were about 1.5 to 4 million garment workers, of which 80% were women. These estimates show that it is impossible to reveal the exact number of people employed in the garment industry, as the number of workers continues to change overtime. According to the BGMEA Member directory 2003-2004, there are about 524,304 people engaged in the RMG industries located in the DCC areas (BGMEA, 2005).
In urban areas of Bangladesh, economically active women labour has increased by 0.6 million over seven years (from 1999-2000 to 2005-06). During this time, the number employed women has increased from 2.0 million to 2.7 million whereas unemployed women remain constant at 0.2 million. An upward trend (from 26.5% to 27.4%) was found in women's labour force participation rate during 1999 to 2003, and then it was stagnant at 27.4% till 2005-06 (see Table 9).

Table 9: Women's labour force statistics (in millions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically active population (15+)</td>
<td>2.2</td>
<td>2.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Employed population</td>
<td>2.0</td>
<td>2.5</td>
<td>2.7</td>
</tr>
<tr>
<td>Unemployed population</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Not in labour force</td>
<td>5.9</td>
<td>7.1</td>
<td>7.5</td>
</tr>
<tr>
<td>Labour force participation rate (%)</td>
<td>26.5%</td>
<td>27.4%</td>
<td>27.4%</td>
</tr>
</tbody>
</table>

Source: BBS, 2007

5.8 Barriers to women's employment

The study tried to identify the barrier to women's employment from the survey of 100 non-employed women in Dhaka city. It identifies that the multiple factors affect women's decision of not being employed in Dhaka city. The study shows that lack/poor infrastructure facilities at workplace (22%) is the prime barrier for women's employment decision. Again, the almost same proportion (20%) of women does not have enough education background to get their desired job. Therefore, they cannot join the labour force of the country. About 18% of women are restrained from employment due to their child birth and or child care. The non-existence of daycare facility at workplace forces them to leave their jobs. Among the respondents 54% had two children and 11% had more than two children. About 12% women did not involve in the job market due to insecure commuting to work in the city. Approximately one tenth of the women informed that their family member (husband, parents or in-laws) is unwilling about their job. The prevalence of this type of case is higher among the middle income group. It also found that well to do economic condition works as barrier to women's employment having 7% of the total respondents. About 5% women cannot join labour market because of their illness. Moreover, other reasons contribute about 4% of women's unemployment (Table 10).
Table 10: Barrier to women’s employment

<table>
<thead>
<tr>
<th>Barrier to Women’s employment</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child birth/ Childcare</td>
<td>61</td>
<td>18</td>
</tr>
<tr>
<td>Illness</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Unwillingness of family member</td>
<td>38</td>
<td>11</td>
</tr>
<tr>
<td>Well to do economic condition of the family</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>Lack/poor of supporting infrastructure facilities</td>
<td>72</td>
<td>22</td>
</tr>
<tr>
<td>Insecure commuting</td>
<td>41</td>
<td>12</td>
</tr>
<tr>
<td>Lack of educational qualification to get desired job</td>
<td>68</td>
<td>20</td>
</tr>
<tr>
<td>Other reasons</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>333</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2008
Chapter 6: Women's Accessibility to the Selected Urban Facilities in Dhaka city

6.1 Introduction

This chapter discusses the socio-economic background of the working women in Dhaka city and their accessibility to the transport system, infrastructure facilities at workplace and recreational places. It also gives findings related to the four research questions of the study except the fifth one. The findings presented in this chapter come from the following surveys:

i. Questionnaire survey of 210 working women in Dhaka city
ii. Physical survey of 5 different transport modes, e.g. bus, human hauler, rickshaw, CNG auto rickshaw & walking
iii. Observation survey of six organization, e.g. NGO Forum for DWSS, Sheltech (Pvt.) Ltd., Bangladesh Bank, Mayce Apparel, DCC and WaterAid Bangladesh
iv. Observation survey of 7 parks and open spaces, e.g. Ramna Park, Zia Uddan, Patua Kunjo, Farm Gate Park, Dhanmondi Lake, Gulshan lake-side park and Baridhara lake side park

6.2 Socio-economic background of the respondents

6.2.1 Household size and dependency ratio

Sample size of the questionnaire survey is 210. Average household size of the respondent is 4.86. Each respondent's household has 2 income earners on an average. Therefore, the dependency ratio has been observed 1:2.43 among households of the respondents.

6.2.2 Age

Average age of the respondents is found 30 years with a standard deviation of 6.5 years. Most of the respondents belong to the age group of 21 to 30 years, comprising about 61%. It is followed by age group of 31 to 40 years (29%) and age group 41 to 50 years (6%) respectively (see Table 1). Presence of women aged below 21 years and above 50 years are less than 5%.
Table 11: Distribution of working women by age category

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;= 20 yrs</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>21-30 yrs</td>
<td>128</td>
<td>61</td>
</tr>
<tr>
<td>31-40 yrs</td>
<td>61</td>
<td>29</td>
</tr>
<tr>
<td>41-50 yrs</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>51-60 yrs</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2007

6.2.3 Marital status

About 62% of the respondents are married followed by 35% unmarried women, 2% divorcee/separated women and 1% widow respectively (see Fig. 8).

Figure 8: Marital status of working women

6.2.4 Status in the household

Only 4% women are household head being the prime income earner and decision maker of the household. About 62% of working women belong to housewife being additional income earner of the household and the rest 34% working women belong to other category (Sister, sister-in-law, daughter and daughter-in-law).

6.2.5 Educational level

The survey finding reflects that education is one of the main criteria of working women in Dhaka city. Fig. 9 shows that maximum respondents (41%) have completed their bachelor degree whereas a slightly little percentage of the respondents (29%) have completed their masters degree. Women with PhD degree are very limited counting only 1%. HSC and SSC degree holders are 18% and 11% respectively.
6.2.6 Profession/Jobs

The result of survey shows that 32% women are in service worker position followed by 18% in professional or technical position, 15% in clerical position, 14% in garments or production sector, 10% in sales or commercial worker position, 8% in administrative or managerial position, 3% are self employed and rest 1% engaged in other category of jobs. Table 12 shows that higher educated women are engaged in professional and technical job category whereas most women with educational level below bachelor degree are engaged in garments or production sectors of the economy.

Table 12: Distribution of working women according to their education and job

<table>
<thead>
<tr>
<th>Job Category</th>
<th>Education (Frequency)</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SSC</td>
<td>HSC</td>
<td>Bachelor</td>
</tr>
<tr>
<td>Professional, Technical</td>
<td>6</td>
<td>0</td>
<td>20</td>
</tr>
<tr>
<td>Admin, managerial</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Clerical works</td>
<td>4</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Sales workers</td>
<td>4</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Service workers</td>
<td>1</td>
<td>9</td>
<td>29</td>
</tr>
<tr>
<td>Garments/Production</td>
<td>14</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Self employed</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>33</td>
<td>85</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2007

6.2.7 Type of organizations

The study demonstrates that around 70% of the respondents are working in private organizations, 20% of them are engaged with government organization and only 10% of them...
are working in non-governmental organizations. Among the private organizations, women are mostly employed in bank, garments and educational institutions.

6.2.8 Household income level

Monthly household income of the respondents varies in between 7500 taka to 150000 taka with an average 30402 taka. Two thirds of the respondents belong to middle income group households. Most of these women work to support their family and to strengthen their family’s economic condition. The respondents from lower income households and higher income households are 13.8% and 8.6% respectively (Table 13). In the lower income group women’s income earning works are recognized as extremely essential to survive their family in Dhaka city. On the contrary in the higher income group, women work mainly for their mental satisfaction.

<table>
<thead>
<tr>
<th>HH income level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low &lt;12500 Tk.</td>
<td>29</td>
<td>13.8</td>
</tr>
<tr>
<td>Middle 12500-55000 Tk.</td>
<td>163</td>
<td>77.6</td>
</tr>
<tr>
<td>High &gt;55000 Tk.</td>
<td>18</td>
<td>8.6</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Questionnaire Survey, 2007*

6.2.9 Monthly income of the respondents

About half (45%) of the respondents earn monthly income 5001-10000 taka. 21% of the respondents have monthly income below 5000 taka followed by 20% of the respondents having monthly income 10001-15000 taka and 14% of the respondents having more than 15000 taka (see Fig. 10).

*Figure 10: Monthly Income of working women*

*Source: Questionnaire Survey, 2007*
6.3 Women's accessibility to transport facility

6.3.1 Provision and preference of transport mode among the respondents

Though women have access to all modes available in Dhaka city, they face difficulties to avail these services due to different problems described later in this section. It is often tougher for women to get on board to any public transport service during peak hours after having unequal competition with the male passengers. Therefore, BRTC started women only 52 seated bus service in two routes i) Mirpur-12 to Azimpur and ii) Tongi to Motijheel. This bus service runs twice a day during week days. Regrettably, women from certain part of the city are only benefited by this appreciable initiative of the BRTC. Attempt is also taken in the private sector to reserve some seats for women in every public bus and mini bus but during office hours these seats are often occupied by the male passengers.

Among all available transport modes, rickshaw and bus are top two popular modes chosen by working women of Dhaka city. Rickshaw ranks first being chosen by about half of the working women as the most used and preferred mode respectively whereas bus ranks second using by 37% of the respondents and preferred by 25% of the respondents. For the most used transport mode, third and forth positions are taken by walking (4%) and CNG auto-rickshaws (3%) respectively. On the other hand, these positions are taken by CNG (9%) and taxi cab (7%) respectively as the most preferred mode. As it is observed from table 14, taxi cab is the least most used transport mode among the respondents and walking is preferred by none.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Most Used</th>
<th>Most Preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Walking</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>CNG</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Rickshaw</td>
<td>108</td>
<td>51</td>
</tr>
<tr>
<td>Bus</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>Human Hauler</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Taxi Cab</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Own car</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Office car</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2007

Working women's consider several criteria for preferring transport modes. The Figure 11 shows that the respondents mainly search for comfortable (32%), easily available (28%) and cheap (16%) transports. Comfort of rickshaw riding is the main reason of popularity of this mode among the respondents and bus is popular among them as an easily available and cheap transport. Safety and security is the prime factor for 10% of the respondents in choosing
transport mode whereas privacy and fastness are equally preferred (both having 7%) by female transport users.

![Figure 11: Criteria for preferring transport mode](image)

6.3.2 Transport expenditure

The respondent's household transport expense varies between 500 to 20000 taka. Average household transport expense of the respondent is 3000 taka with a standard deviation of 2500 taka. The study illustrates that respondent's household spend 10% of the total household income for transport purpose. Besides, average transport expense of the respondent is 1100 taka.

6.3.3 Travel purpose of the respondents

About 35% of the total trips are compulsory for working women commuting to workplace. Women's fascination to shopping designates one-third of their total trip which is followed by 20% recreational visit. They also visit for other purposes but percentage of these types of visit is less than 10% in each case (see Fig. 12).

![Figure 12: Travel purpose of working women](image)
6.3.4 The major transport problems experienced by the respondents

The transport problems faced by women workers are divided into two major categories:

i. Social problem

ii. Institutional and design problem

Social problems of the existing transport system of the Dhaka city is closely related with safety and security concern of the women travelers. These problems discourage working women to travel alone during day time and endanger their movements during early morning or late night. Eve-teasing comprising 29% of the total response is identified as the most important social problem that embarrasses the working women irrespective of their age (See Fig.13). However, their security is also jeopardized by snatching/theft and pick-pocketing, measuring 38% of the total response. Several respondents claimed that these two social problems have increased over the last one year.

Unfriendly behaviour of the bus driver/ helper (21%) and fear of getting a push deliberately by the male passengers (11%) encourage women to keep away from mass transit. Driver and helper of the bus often try to avoid female passengers due to their slower movement than male passengers. The incidence of physical harassment (1%) is also happen when waiting for the buses in the same queue with the male passenger.

Figure 13: Transport problems considering social aspect

![Transport Problem (Social)](image)

Multiple response accepted

*Source: Questionnaire Survey, 2007*
The present transport system is unfriendly to the working women due to its institutional and design problems. The study shows that working women often face traffic jam (19%) and crowded bus (11%) which make their journey uncomfortable (see table 15). Again, present bus service lost its reliability to the respondents due to its irregular bus schedule (13%), absence of regular stoppage (4%) and inadequate route design (6%). Therefore, need for a reliable transport service is apparent.

Furthermore, there is not enough design considerations for seat planning inside the buses, mini buses and also in the passengers' waiting places for women. The reserved seat for women located beside the driver seat which is too hot and congested which gives the women uncomfortable feeling (7%). Inadequate seat spacing (10%) and single and narrow door of the bus (7%) two other design problems that make bus service gender insensitive transport mode. The lady passengers do not get enough time to get down from the buses (8%) especially in the busy intersections. Therefore, women passengers are facing severe threats to accidents.

The study also identify that women pedestrians are often forced to walk in the street instead of footpath, even in areas where footpaths are provided because of design problem and different interventions in footpath (4%). Pedestrian walking on the road increase the risk of traffic related pedestrian injuries.

Table 15: Transport Problem (Institutional/Design)

<table>
<thead>
<tr>
<th>Transport Problem</th>
<th>Frequency</th>
<th>Percentage of frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic jam</td>
<td>187</td>
<td>19%</td>
</tr>
<tr>
<td>Design problem and different interventions on footpath</td>
<td>36</td>
<td>4%</td>
</tr>
<tr>
<td>High transport fare</td>
<td>42</td>
<td>4%</td>
</tr>
<tr>
<td>Inadequate route design</td>
<td>63</td>
<td>6%</td>
</tr>
<tr>
<td>Irregular bus schedule</td>
<td>130</td>
<td>13%</td>
</tr>
<tr>
<td>Absence of regular bus stoppage</td>
<td>45</td>
<td>4%</td>
</tr>
<tr>
<td>Crowded bus</td>
<td>111</td>
<td>11%</td>
</tr>
<tr>
<td>Bus does not halt for loading/unloading</td>
<td>77</td>
<td>8%</td>
</tr>
<tr>
<td>Bus has a single and narrow door</td>
<td>70</td>
<td>7%</td>
</tr>
<tr>
<td>Inadequate seat spacing</td>
<td>102</td>
<td>10%</td>
</tr>
<tr>
<td>No separate queue</td>
<td>64</td>
<td>6%</td>
</tr>
<tr>
<td>Seat beside the driver is uncomfortable</td>
<td>74</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>1001</td>
<td>100%</td>
</tr>
</tbody>
</table>

Multiple responses accepted
Source: Questionnaire Survey, 2007

6.3.5 Findings from observation survey

Design interventions can often play pivotal role for offering a convenient and secured transportation system especially for the women passengers. However, the observation survey
reveals that there is not enough design considerations for seat planning inside the buses (see Photo 8), mini buses and also in the passengers' waiting places for women in Dhaka city. Some supporting photographs would help understanding the situation in detail.

**Photo 8: Interior seating arrangement of a public bus**

First, considering the interior environment of the passenger buses (both bus & minibus), ladies seats are found at the front portion of the bus. In public bus running along route no 9, 14 and 36 has only 4 seats that is not enough to offer seating facility to all lady passengers. Again, the seat length for 4 ladies passengers was only 4 feet which is not suitable in any design aspect (the body ellipse and depth recommends at least 2.5 feet seating place per person as mentioned in interior design standard, HCM, 2003). Besides, the frontier side of the buses has got only 1.5 feet high seating places just beside the engine so it is very much inconvenient arrangement to serve the women passengers.

However, the observation survey also reveals that some women passengers complain several times to the drivers but fail to make them understand about their problems inside the buses. Again most of the public buses has single door. The width of the bus door is also found narrow (2.5 feet) Furthermore, the helper standing on the door makes the door width narrower. Therefore, female passenger finds it difficult to get on board or get down from buses after compete with the male passenger (See Photo 9). Some of the female passengers face physical harassment in this situation. Especially the situation is tougher for women with younger children. They often take alternative modes to go to their destination when traveling with their children. An interesting point to be noted from the observation survey that the lady
passengers do not get enough time to get down from the buses especially in the busy intersections. For instance, women passengers are facing severe threats to accidents.

Photo 9: Narrow & single door of the bus

Almost all the waiting bus stops, it is found common that all passengers must stand in the queue on the footpath (See Photo 10). Therefore, the footpath becomes occupied and this offers uncomfortable situation for women passengers standing there for long time. Some Street Romeo’s often get the opportunity of eve teasing some female passengers who are waiting for the buses/ human haulers. The incidence of physical harassment also happens when waiting for the buses in the same queue with the male passenger.

Photo 10: Women waiting in the queue

Inadequate facilities in the bus stoppage were also apparent especially information about timetable of bus services was absent in all bus stoppages. Better design considerations of bus
stops may certainly offer better bus stoppage service for the women passengers. Recommendations would be cited in the last chapter in the line of analysis of this present data.

In general human hauler has 9 to 15 seats but none of these seats is reserved for women. The congested seating arrangement of the human hauler makes the women uncomfortable. Besides, loading and unloading problem of human hauler is similar like that of the bus service. In spite of it, many working women from lower income group mostly use it for traveling to and from the workplace because of its low fare and frequent stoppage.

Rickshaw is mostly popular among the working women because it provides the convenience of door-to-door service and is well suitable for individual (1 or 2 persons) travel, for diverse trip purposes and to diverse locations. Rickshaw travel typically involves the use of local roads within neighbourhoods as well as collector roads which connect residential neighbourhoods with employment, educational and other locations. In addition, rickshaws are well suited to the very narrow roads that exist throughout much of Old Dhaka as well as the large informal neighbourhoods that have developed more recently. The design of rickshaw has not changed significantly from the time they were first introduced and still it is very popular among the female urbanites. Despite the important role that rickshaw now plays in the Dhaka transport sector, there are continuing effort to limit the number and the manner in which they operate. In lieu with this, rickshaw has been stopped in most of the major roads of Dhaka city. Again in some roads there are separate lanes for rickshaw. Most of women feel insecure while traveling through rickshaw during night as the threat of snatch theft is more for this transport mode.

CNG auto rickshaw popularly known as CNG, is the main transport mode for 3% of the respondents. These respondents are mainly from the middle income group who can not afford private car and do not like to take the hassle of the public bus. CNG also provides the convenience of door-to-door service which is another reason of its popularity among the working women. Regrettably it is often tough to get CNG during pick hours. Again, though the actual fares are supposed to be established by meters installed in each CNG, drivers generally operate on the basis of negotiated fares and do not use the meter. Whenever, the meter is used for fare fixation driver demands extra 5/10 taka from the female passengers which increases the actual travel cost of the passengers.
The questionnaire survey result demonstrates that walking is less popular among the female pedestrians. The observation survey reveals that reasons behind this observation are:

- Poor condition of footpath (holes, surface irregularities and water accumulation);
- Illegal occupancy by street vendors and hawkers;
- Obstruction created by parked cars and solid waste strip;
- Stored or abandoned building materials & debris.

As a consequence, women pedestrians are often forced to walk in the street instead of footpath, even in areas where footpaths are provided (See Photo 11). Pedestrian walking on the road increase the risk of traffic related pedestrian injuries.

6.3.6 Women's satisfaction about the transport facility in Dhaka city

Table 16 illustrates that a majority of the respondents are 'dissatisfied' consisting of 50% followed by 30.5% 'satisfied' and 18.6% 'highly dissatisfied' respondents. According to the equation 1 in the methodology section (chapter 2), the respondent's WAS Index Value for transport facilities has been measured as 2.141. The index value is measure at a four point likert scale where 1=highly dissatisfied; 2= dissatisfied; 3=satisfied; 4=highly satisfied. Therefore, working women in Dhaka city are ‘dissatisfied’ about transport facilities.

Table 16 also illustrated that the satisfaction of the respondents positively correlated with their affordability. The satisfaction of the women increases with the increase of their household income. It is assumed in the study that respondents transport affordability depends on their household income. The respondents of the higher income household can afford better transport service having their own private transport. Private transport makes their journey comfortable and increases their transport satisfaction. This finding is also reflected by 1% highly satisfied respondents from the high income group.
Table 16: Women’s satisfaction level about transport facility according to their HH income

<table>
<thead>
<tr>
<th>HH income category</th>
<th>Transport satisfaction</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly dissatisfied</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Low &lt;12500 Tk.</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>31.0%</td>
</tr>
<tr>
<td>Middle 12500-65000 Tk.</td>
<td>28</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>17.2%</td>
</tr>
<tr>
<td>High &gt;65000 Tk.</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>11.1%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>18.5%</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2007

6.3.7 Expectation of working women about transport facility

Almost all respondents ask for women friendly transport services. The result of the study shows that about 70% working women expects women only bus service. They (98% of the respondents) also want 20 reserved seats for women in the public transport. Again, some of them (30%) demand office vehicle support from their employers. Sensible behaviour of the bus drivers and helpers is another requirement which is demanded by the 40% of the respondents. About 15% women demand safe footpath for them. These are the major expectations of the respondents. In addition, they suggest for taking measures to reduce traffic jams of the city. They expect that overall situation of the transport system of Dhaka city will be safe and secure for them even when traveling alone in public bus or in footpath.

6.4 Women’s accessibility to infrastructure facilities at workplace

6.4.1 Provision of infrastructure facilities at workplace

Though the rate of women employment has increased over the year, their need for having adequate infrastructure facilities especially at the workplace has not been widely recognized in our country. Therefore, about one fourth of the respondents have complained that they have no infrastructure facility especially for women at their workplace. In some offices infrastructure facilities for women are limited to the separate toilet facilities for them. The study shows about 65.2% of the respondents had separate toilet at their workplace. Those who do not have it demand for separate toilet for women at their workplace. Again 36.7% women have waiting space, 19.5% have prayer space and only 5.7% have daycare facility available at their workplace.

---

1. Women friendly transport service offers easy access, safety and security to its women users and women feel convenient to use it.
6.4.2 Expenditure of infrastructure facilities at workplace

Almost all infrastructure facilities at the respondent’s workplace are free of cost except for day care facility. In workplace which has day care centre, female employee can take the benefit of it after paying of monthly charge per children if necessary. The charge of the day care centre varies depending on quality of the service provided there. It varies from 50 to 1500 taka per children.

6.4.3 The major problems faced by the working women

The study shows that non-availability of prayer room and absence of privacy in the prayer space is the most important problems of working women as identified by about 44% of the total response. These two problems work together as barriers to say their prayers on time during office hour. Being a citizen of the muslim country, most of the respondents are muslim. They miss their two times prayers everyday as complained by many respondents of the study. Daycare facility seems very essential for working mothers. Many women sacrifice their job due to non-availability of daycare facility at their workplace. Those women have none to look after their younger children in absence of her. In the study about 11% of the total response identified ‘non-availability of daycare facility at their workplace’ as a major problem. Again, 1% of the response reported that daycare facility at their workplace is too expensive to be afforded by them. In the absence of daycare facility most of the working mothers take alternative arrangement to look after their children which gives them guilty feeling and makes them worried about their children’s safety and security. Mental unrest of these working mothers resists them to pay full attention at their professional works.

Although the study identifies that most working women enjoy separate toilet facilities at their workplace, the table 17 demonstrates that location (supported by 4% responses) and unclean and unhygienic condition (support by 17% responses) of the toilet makes the women uncomfortable to use the office toilet regularly. A female Assistant Professor, Titumir College, Dhaka said, “I suffered from urinary infection and fever during June 2007. Then I consulted with a specialist doctor from Lab Aid. After diagnosis he informed that my problem arose from not urinating on time”. She admitted, “I generally had the tendency of not using college toilet due to its location and unclean condition”. Again, about 10% of the total response identify that non-availability of waiting space at workplace and canteen facility create problem for female employee. In absence of waiting space women have to stand up for long time while visiting workplace for any official purpose. Moreover, working women felt
uncomfortable due to insufficient scaling arrangement at office spaces as reported by 3% of the total response.

### Table 17: Problem faced regarding infrastructure facilities at workplace

<table>
<thead>
<tr>
<th>Major problems</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expensive day care facility</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>No daycare center at workplace</td>
<td>42</td>
<td>11%</td>
</tr>
<tr>
<td>No separate toilet for women staff</td>
<td>45</td>
<td>12%</td>
</tr>
<tr>
<td>Unclean toilet</td>
<td>67</td>
<td>17%</td>
</tr>
<tr>
<td>Feel uneasy due to toilet's location</td>
<td>15</td>
<td>4%</td>
</tr>
<tr>
<td>Lack of privacy in the prayer space</td>
<td>37</td>
<td>10%</td>
</tr>
<tr>
<td>No prayer room</td>
<td>131</td>
<td>34%</td>
</tr>
<tr>
<td>Insufficient seating arrangement</td>
<td>11</td>
<td>3%</td>
</tr>
<tr>
<td>Others (Waiting space, canteen, etc.)</td>
<td>39</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>389</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Multiple responses accepted

Source: Questionnaire Survey, 2007

6.4.4 Women's need for day care facility

Among the respondents, 41% women have younger children aged less than 10 year but only 5.7% have daycare centre available at their workplace. Thus, the majority of these women need support from their family to look after their children during office hours. Due to nuclear family structure of Dhaka city most women (15% of total respondents) depend on the maid servants to look after their children. Again regarding this issue working women's dependency on mother in law and mother is almost similar counting 8.6% and 7.2% respectively. About 6.4% of the working women manage to look after their children with the help of their husbands. Moreover, 3.3% women depend on their sister or sister in law and only 0.5% on their father in law. However, observation survey depicts a result that there are some private day care centers in the heart of Dhaka city but the working women are unable to send their kids in those day care centers. Difficult transportation system and cost of daycare centre are the reasons behind their inability.

6.4.5 Findings from observation survey

The observation survey is conducted in six organizations (Bangladesh Bank, Shelltech (Pvt.) Ltd, NGO Forum for DWSS, Mayce Apparel, Dhaka City Corporation (DCC) and WaterAid Bangladesh). All of these organizations have a large number of female employees but the finding shows that only one organization (Bangladesh Bank) has daycare centre for female employee. Bangladesh bank has started its daycare centre from August 2006. The employee of the Bangladesh Bank can enjoy this facility with monthly charge of 1000 taka per child. Mr. A K M Azizur Rahman, Joint Manager (Admin) said, "This centre has ensured safety and security, cleanliness, adequate space and learning environment for the children".

59
Management of the daycare centre allowed only children aged between 6 months and 10 years. One female employee of the bank complained that the charge of the daycare centre is too expensive to be afforded by all level of female staff.

Except DCC and Mayee Apparel, other four organizations have separate toilet facilities for their female employees. Though these two organizations have common toilet facilities for their staff, female employee complained that these toilets are often unclean. Most of the time waste bin is absent in the toilet. Therefore, female staffs fail to maintain their menstrual hygiene because of inadequate facility at the common toilet. One female staff complained that she needs to take one or two days leave every month during her menstrual period because the common toilet of her office does not have any waste bin. Moreover, the location of the toilet makes her uncomfortable to go there in front of her male colleague.

The observation survey reveals that none of these organizations have prayer space for female. Common prayer space at DCC and NGO Forum for DWSS discourages women employee to say their prayer in time due to lack of privacy and socio-cultural environment of the country. The questionnaire survey also identifies that non-availability of prayer space is the major problem of women employee. Observation also reveals that none of these organizations has any prayer room for women within the office complex.

Two out of six organizations surveyed in the study, do not have waiting space within the vicinity of the office space. Therefore, the women visitors who come to the office for any purpose have to stand up for long hours outside the office. Waiting space at workplace also gives women the scope of relaxation during office hours.

Only one organization (Mayee Apparel) out of six has the problem of inadequate seating arrangements for female staff. This garment has 600 employees. Near about 65% of the employee are female who work there on shift basis. Instead of it, the organization failed to provide adequate seating arrangement for its female garment workers (See Photo 12). Inadequacy of space is the major reason behind it. Therefore, privacy of women staffs is not ensured there.

Photo 12: Women workers of Mayee Apparel who are deprived of separate toilet and eating arrangements.
6.4.6 Women’s satisfaction about infrastructure facilities at workplace

Interesting result is stated about women’s satisfaction on infrastructure facilities at workplace. Here, their satisfaction depends on some specific criteria like: toilet facility, prayer room, day care center, canteen and waiting room. The study demonstrates that almost 61% women are 'satisfied' with the infrastructure facilities at their workplace. In total, 37% respondents claim dissatisfaction with the present systems and facilities in the workplace. However, daycare centre, prayer rooms and clean toilet options are the major points for this dissatisfaction. Following the equation 1 (see Chapter 2) WAS Index value for the infrastructure facilities at workplace has been calculated as 2.596. The index value is measured at a four point likert scale where 1=highly dissatisfied; 2=dissatisfied; 3=satisfied; 4=highly satisfied. Therefore, the finding from questionnaire survey shows that working women in Dhaka city are 'satisfied' about the infrastructure facilities at their workplace which contradicts the finding from observation survey.

It is revealed during study that because of their low expectation, most of the working women are happy even though they face problems due to poor infrastructure facilities at their workplace. Their involvement in the labour force and their economic freedom than a housewife, give them mental satisfaction which is reflected by the 61% satisfied respondents. Moreover, the most of women are non-complaining and they do not have enough courage to show dissatisfaction against their employers.

Table 18: Satisfaction level of respondents regarding infrastructure facilities at workplace

<table>
<thead>
<tr>
<th>HH Income category</th>
<th>HH Income category</th>
<th>Satisfaction level on infrastructure facilities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Highly dissatisfied</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Low &lt;12,500 Tk</td>
<td>Frequency</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>0.0%</td>
<td>65.5%</td>
</tr>
<tr>
<td>Middle 12,500-55,000 Tk</td>
<td>Frequency</td>
<td>1</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>0.1%</td>
<td>76.8%</td>
</tr>
<tr>
<td>High &gt;55,000 Tk</td>
<td>Frequency</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>5.6%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Total</td>
<td>Frequency</td>
<td>11</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>5.2%</td>
<td>31.9%</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2007

Table 18 illustrates satisfaction level among the respondents from different income group. It exhibits that working women's satisfaction level on infrastructure facilities at workplace increases with increase of their household income. The dissatisfaction is the highest among the respondents from lower income group households whereas opposite picture is observed in the respondents from middle and higher income group households. The last two categories of
respondents are found satisfied at available infrastructure facility at their workplace. About 11.1% respondents from higher income group household are found highly satisfied.

6.4.7 Expectation of working women about infrastructure facility at workplace

The respondents want equal opportunity at their professional work. Therefore, they expect some support from their employers and from male colleagues. About 70% of the respondents expect that their employers will understand their need of prayer space. Being citizens of a muslim country, most of the women are religious minded and they want to continue their religious norms even in the office. About 42% of the respondents demand for day care facility at their workplace. They think daycare facility is one of the important determinants which could accelerate women involvement in professional works. "At present daycare centre are not easily available. Increase of reliable private daycare centre would work as an alternative of daycare centre at our workplace" said by a sensible working mother. About 80% of the respondents ask for separate toilet for women. The result also shows that almost 20% respondents want waiting space. The equal demand was raised for adequate seating arrangements. Specially the garments workers raised the last demand because they are suffering from inadequate seating arrangement. The most garments of the city do not have any waiting space for its employee.

6.5 Women's accessibility to leisure and recreational Place (Park and open space)

6.5.1 Provision of leisure and recreational places

All the open spaces and parks in Dhaka city are accessible by women. Though there are several large parks in the Dhaka city, the provision of community parks and open spaces is very limited. In most of the cases, the respondents have to travel a long distance to reach any parks. Figure 14 shows that most of respondent do not have parks within their community. They have to travel more than ½ miles (walking distance) to reach the nearest parks and open spaces in the city. The long travel distance reduces their recreational opportunity. Only 3% of the respondents have parks and open spaces within ½ mile distance. On the contrary, a majority of the respondents (65%) has to travel more than 2 miles to go to the nearest parks. Thus, distance of the park works as a barrier for the respondent's recreational visit to that places.
As reflected by Fig. 15, visiting recreational places is not admired as leisure activity by the working women in Dhaka city. Poor safety and security, longer distance, busy schedule of the working women and lack of adequate facilities are the reasons behind this finding. A significant percentage of women (18%) did not visit any park or open space during last one year. However, 42% women went to parks and open spaces hardly (once or twice in a year) followed by 30% occasional visit (monthly, bi-monthly or quarterly). Frequent visitor (weekly or daily) were very negligible among the respondents counting only 10% which shows a very poor scenario.

6.5.2 Preferred timing for visiting recreational places

Most of the respondents (67%) visit parks or open space during afternoon whereas 10% prefer evening for this purpose (Table 19). They find these two times most suitable for recreational visit after office hours. As in the morning working women have to go to their
workplaces, visiting parks during morning is often neglected by them comprising only 5%. None of the respondents goes to park at night due to our social system and their safety and security concern. It should be mentioned here that about 18% of the respondents did not visit parks and open spaces last year. Therefore, their preference of timing is not included in the calculation.

<table>
<thead>
<tr>
<th>Preferred Time</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Noon</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Afternoon</td>
<td>141</td>
<td>67</td>
</tr>
<tr>
<td>Evening</td>
<td>21</td>
<td>10</td>
</tr>
<tr>
<td>Night</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Did not visit last year</td>
<td>38</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: Questionnaire Survey, 2007*

### 6.5.3 Preferred mode for visiting recreational places

For visiting recreational places, rickshaw is the most popular preferred mode (49%) among the respondents followed by 27% CNG. Both bus and walking are equally preferred by working women for visiting parks and open spaces comprising 9% individually. As it is observed from Fig. 16, women usually give low priority for choosing car (5%) because of parking problems of the existing parks and open spaces located within the city. Respondent's choice of other modes for visiting parks is very minimal (only 1%).

*Figure 16: Respondent's preferred mode for visiting recreational places*

![Preferred mode for visiting recreational places](image.png)

*Source: Questionnaire Survey, 2007*

### 6.5.4 Expenditure for visiting recreational places

Monetary expenditure for visiting parks and open spaces involves two types of cost: i) travel cost and ii) entry fee. Expenditure significantly depends on transportation cost only rather on enjoyment fees of the services. However, state owned parks do not charge any entry fee but
exception can be observed in Shishu Park and Botanical Garden. Entry fee for Shishu Park is Taka 20 per person and for Botanical Garden is Taka 5 per person only. On the contrary, each amusement park has certain entry fee based on its quality of service. Most of these parks are either owned by or leased to private organizations.

Most of the respondents consisting of 82% spend more than 10 taka per visit to go to the nearest parks and open spaces because of the long distance from the respondent’s house. The figure 17 illustrates that 9% working women pay nothing for their traveling to the recreational spaces as they go there on foot. Again, 8% women pay 5 to 10 taka for visiting the nearest parks from their house and the rest 1% women’s travel cost is 1 to 5 taka to go to the parks.

Figure 17: Travel cost for visiting the nearest parks & open spaces

![Travel cost for visiting parks & open spaces](source)

Source: Questionnaire Survey, 2007

6.5.5 The major problems faced by the respondents

Figure 18 demonstrates the major problems of the working women while visiting parks and open spaces. It shows that the respondents feel unsafe and insecure to go to the parks and open spaces measured by 20% of the total response. The criminal and antisocial activities are rampant in parks and open spaces. They create threats to safety and security of women. The insecurity feeling of women prevents them to go to these recreational places alone. The women in Dhaka try to avoid these places at night only for safety and security reasons.

Again, they feel discouraged for visiting Park because of its filthy/dirty condition (18%). It is often found that the fallen plants leaves and waste thrown by visitors are not properly swept. The negligence of cleaner in performing his duty gives a dirty look to the beautiful parks.
Moreover, in public spaces like parks and open spaces ladies' toilets are often found dirty as reported by 18% of the total response. Poor toilet facility and its unhygienic condition are the major reasons of rare visit by the respondents.

Figure 18 also illustrates that illegal squatting and inadequate lighting, together measured by 14% of the total response, resist the respondent's plea for visiting parks and open spaces. These two factors create the feeling of insecurity among the respondents.

**Figure 18: Problems of the respondents while visiting parks and open spaces**

![Table showing problems faced by women]

Multiple responses accepted

Source: Questionnaire Survey, 2007

About 14% of the total responses were complaints against the inadequate seating arrangements. Though every park has more or less seating arrangement but the provision is less than requirements. Specially during afternoon and evening (two most preferred time by the respondents) when the most visitors come to the recreational places, inadequacy is often observed even in the popular parks and open spaces such as Ramna parks, Dhanmondi lake, etc. Moreover, a large number of parks and open spaces in Dhaka have inadequate amenities to attract women visitors as reflected by respondent's complaints for walkways (7%), inadequate plants (6%) and absence of water feature (3%).

**6.5.6 Findings from observation survey**

The physical survey is conducted in seven parks and open spaces in Dhaka city. Among these parks, Pantha Kunja, FramGate Parks, Gulshan Lake Side Parks, Baridhara Lake Side Parks are owned by DCC and the rest three parks (Ramna Park, Dhanmondi Lake and Zia Uddan)
are owned by PWD. Two (Glushan Lake Side Park and Baridhara Lake Side Park) out of seven parks are maintained by the local community based organization. Maintenance of the two parks is good. Being located in aristocratic areas of the city, they become recreational place of the rich.

All of the parks surveyed are the major recreational places of the city. It is observed during the physical survey that women do not prefer Pantha Kunja and FramGate Parks because of their location. Both of these parks are located in between the major roads of the city. Again, the illegal squatting threatens the working women to pass through these parks alone during day time (See Photo 30). Moreover, these parks do not have adequate facilities for the women visitors.

Photo 13: Illegal squatting beside Pantha Kunja

The inventories of the seven parks from observation survey are summarized in table 20. It is observed from table 20 that all parks have four facilities in common such as seating, walkways, boundary with gate and tree but their quality varies from parks to parks. The inadequate provision of seating arrangement forces the visitors to seat on the ground. Usually women go to the parks to enjoy the natural beauty of open spaces and parks but seasonal flower beds are absent in Pantha Kunja, FramGate Park and Baridhara Lake Side Park. Among the seven parks, Pantha Kunja has the less facility. Though the FramGate Park has similar facilities like Pantha Kunja, it has few shaded shelter in addition. In spite of it, FramGate Park is unpopular among the working women. The reason behind this finding is described earlier.
Table 20: The inventory of parks and open spaces in Dhaka city

<table>
<thead>
<tr>
<th>Parks</th>
<th>Seating</th>
<th>Walkway</th>
<th>Boundary with gase</th>
<th>Tree</th>
<th>Seasonal Flower</th>
<th>Water Features</th>
<th>Space-signage</th>
<th>Rest Rooms</th>
<th>Café Restaurant</th>
<th>Toilet</th>
<th>Litter Bin</th>
<th>Shaded Shelter</th>
<th>Proper-lit.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karuna Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dhanmondi Lake</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panthu Kishore</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prin Gate Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gulistan Lake Side Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sondhura Lake Side Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zo Uddan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey, 2007

Ramna Parks and Dhanmondi Lake are the two most popular parks of Dhaka city. These two parks have many facilities to attract women visitors. They have Café restaurants, public toilet, litter bin and shaded shelter which are key determinants to ensure visits by women. Moreover, these two parks have comparatively good security system which is another reason of popularity among the female respondents. Many working women prefer these two parks for jogging and morning walk. The children play equipments, café restaurants and boating facility in the lakes of these two parks create scope for family recreation (See Photo 14 & 15).

Photo 14: Children play equipment in Ramna Park

Photo 15: Café restaurant beside the Dhanmondi Lake

They attract many women to spend their leisure time there with their family. Although the public toilets of these parks have female chamber but poor maintenance create major problem for women to gain access to these recreational places (See Photo 16). The rest four parks visited during the survey do not have any toilet facility for women. The observation survey also identify that space signage and rest room are lacking in all the parks and open spaces.
They do not have proper lighting except Gulshan Lake side Park. The proper lighting reduces antisocial activities and gives the working women the feeling of safety and security.

Photo 16: Unhygienic condition of the public toilet at Dhanmondi Lake

6.5.7 Respondent’s satisfaction level on Parks & open spaces

The study shows that none of the respondents are highly satisfied on the present provision of accessibility to parks and open spaces, although only 10% go there frequently. Table 21 presents that about one third of the respondents are satisfied on the current state of the parks and open spaces of the city whereas about half of the respondents are dissatisfied. However, highly dissatisfied women were one fifth of the total respondents. The respondent’s WAS Index for parks and open spaces is measured 2.134 following the equation 1 (see Chapter 2). It is measured at a four point likert scale where 1=highly dissatisfied; 2=dissatisfied; 3=satisfied; 4=highly satisfied. Therefore, working women in Dhaka city are ‘dissatisfied’ about parks and open spaces.

Table 21: Satisfaction level of respondents regarding parks and open spaces

<table>
<thead>
<tr>
<th>HH income category</th>
<th>Satisfaction level on parks &amp; open spaces</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Highly dissatisfied</td>
<td>Dissatisfied</td>
</tr>
<tr>
<td>Low &lt;12500 Tk.</td>
<td>Frequency</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>18.5%</td>
</tr>
<tr>
<td>Middle 12500-55000 Tk.</td>
<td>Frequency</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>16.6%</td>
</tr>
<tr>
<td>High &gt;55000 Tk.</td>
<td>Frequency</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>28.6%</td>
</tr>
<tr>
<td>Total</td>
<td>Frequency</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>% within row</td>
<td>18.0%</td>
</tr>
</tbody>
</table>

Source: Questionnaire Survey, 2007
The table 21 also shows that satisfaction of the respondents increases slightly with increases of the respondent’s household income. Satisfaction is more among the respondents from higher income group whereas dissatisfaction is steadily prevail among the respondents from other income groups. As observed from the study dissatisfaction is created from longer travel to reach the recreational places, inadequate safety and security, and absence of proper amenities in the parks and open spaces. “After day long office work it takes almost 2 hours to come back to my house. When I come home it is already dark outside. Here the parks and open space do not have adequate lighting. Therefore, it is unsafe to go to park during evening. I do not want to be mugged” Ms. Rozena Begum, a development worker continue, “It is better to stay at home and watch TV”.

6.5.8 Expectation of the respondents about recreation places

Most of the respondents want better accessibility to open spaces and parks. About 80% of them expect that provision of standard parks and open spaces will be increased. Again, 57% demand community parks within their walking distance. Near about 79% respondents request for safety and security in recreational places for their free movement. To stop the criminal and antisocial activities, 38% of them request to increase guards in the bigger parks and open spaces of the city. About 35% women expect a café restaurant in the parks so that they can take food there. Near about 26% respondents recommend to appoint more cleaners in the recreational places. They expect that all cleaners will perform their duty regularly and give clean looks to the parks and open spaces. Lastly, nearly 17% request to increase number of seasonal flower beds to increase natural beauty of these recreational places in the open spaces and 12% ask for more seating arrangements.
Chapter 7: Recommendations and Conclusion

7.1 Introduction

The chapter contains discussion section which summarized the findings of the study in light with all five research questions. The attempts have been undertaken to give some recommendations based on the literature review, findings of the study and judgment of the researcher. The study suggests a set of policy recommendations to increase women users’ accessibility to transport service, infrastructure facilities at workplace and recreational places (parks and open spaces) in Dhaka city. Again, the chapter includes direction for future research on this issue. Lastly, it ends with conclusion.

7.2 Discussion

The study establishes that present urban facilities in Dhaka city are not women friendly. While providing the urban services planners and responsible institution neglect the women users’ need which creates lots of suffering for them. The working women in Dhaka city are facing numerous problems while traveling to any destination, working in the office and passing their leisure time in the recreational places (parks and open spaces).

The study portraits the sufferings of the working women while using these facilities. It shows that eye-teasing, snatch theft and transport workers and male passengers’ behaviour threaten the safety and security of the women and reduces their accessibility to the transport services in Dhaka city. Traffic jam, lack of reliable services and poor interior design of the transport mode makes the respondent’s journey inconvenient. The study also demonstrates how the working mothers face barriers to advance their professional career due to non-availability of daycare facilities at their workplace. Some problems are very common for all working women irrespective of their marital status such as lack of prayer space, waiting space and separate toilet for women staff. The study identifies that the provision of recreational facility in Dhaka are not favourable for women. Absence of a community park and longer distance to the city park reduce women’s recreational visit. Only a few women visit the parks or open spaces regularly. Poor safety and security is the main factor that reduces the accessibility of women to the urban open spaces. Criminal and antisocial activities, poor provision of amenities discourage working women to go to the parks and open spaces. At present women cannot freely move there.
The study used WAS index to measure satisfaction of the working women on the existing urban facilities in Dhaka city. The index value is measured at a four point likert scale where 1= highly dissatisfied, 2= dissatisfied, 3= satisfied and 4= highly satisfied. It is tough for the women to be satisfied on the existing condition of the urban facilities. This finding is also reflected by the index values except infrastructure facilities at workplace. The index value for transport facility, infrastructure facilities at workplace and recreational facility are 2.141, 2.596 and 2.134 respectively. Therefore, the satisfaction is lowest for transport facility whereas it is highest for infrastructure facilities at workplace. The index value for infrastructure facilities at workplace showed that the respondents are satisfied on this particular service. However, the study also reveals that the Bangladeshi women are non-complaining by nature and they do not have enough courage to show their dissatisfaction against their employers. Moreover, working women have comparatively better economic freedom than the housewives. Therefore, their better economic solvency influences the satisfaction level. The study also reveals that most of the workplace does not have adequate infrastructure facilities for women workers in Dhaka city. In spite of it, the working women compromise their comfort for career development.

The study shows that working women needs special treatments in using the urban facilities of Dhaka city. In developing country like Bangladesh, all the urban facilities are male dominated but it should be realized that women’s needs are different than men. The negligence of women’s needs reduces their accessibility to urban facilities. Safety and security is more concern of women users than the male users. Failure of any service to provide safety and security reduces women’s accessibility to that facility which is very common for all urban services studied in the research. Again the study identifies that women’s travel pattern is slightly different than that of man’s and it should be considered in urban transport planning. Women friendly workspace design is needed to increase women’s labour force participation in our country. Moreover, design modification could increase women’s accessibility to the parks and open spaces as shown in the case study of St.-Johann-Park, Vienna.

The study illustrates women’s expectation of women only buses, office buses and special seats in every transport modes. They also expect sensible behaviour from male passengers and from transport workers. Working women also needs daycare facilities for their younger children. They expect prayer space, waiting space and separate toilet at the vicinity of their workplace. Regarding recreation and leisure facilities, they need community parks where
they can refresh themselves and at the same time their children can play there. Biswas (2002) showed that taking food out and jogging are two important activities that the adult women expect at the outdoor recreational place. They need safety and security for their free movement in the recreational places. Adequate seating arrangement, proper lighting and separate toilet are some other special treatments that the women need in the recreational places.

There are several scopes to increase women user’s accessibility to the urban facilities. Accommodation of respondent’s expectation and suggestion should be considered carefully. This will increase their accessibility to the urban facilities significantly. The study described some good example of women responsiveness of urban services in the literature review chapter. Adaptation of these measures in Dhaka city context will increase women user’s accessibility. Moreover, some recommendations based on the findings of the study are suggested later in this chapter to make the urban facilities more women friendly.

It could be summarized from the study that to increase working women accessibility to the urban facilities measures are specially required to reduce inconvenience of female transport users, to increase the provision of infrastructure facilities at women’s workplace, and to increase the provision of recreational facility for female users and to reduce inconvenience in using them.

7.3 Recommendations

7.3.1 Recommendations for transport facility

7.3.1.1 Women only public transport and reserved seat for women

Measures are required to promote women friendly mass transit within the city. It will increase physical accessibility of women passengers. In Tokyo women only carriage is introduced in the metro (see section 3.4.2). Adapting this concept, special bus service only for women passengers should be introduced in the major routes during peak hours. Moreover, BRTA could ensure 16 reserved seat for women in the regular public bus as suggested by DITS (DITS, 1993).

7.3.1.2 Providing safe, secure and low cost transport facilities

It is clear from the findings of the study that providing secure and low-cost transport service is very important for increasing women worker’s social security and thereby to ensure
women's participation and sustainability in the labour market. Low cost women friendly public transport will reduce women's transport cost and make transport service easily accessible to women. Again, well lit transport and bus stoppage will increase women passengers' safety and security during night time (see section 3.4.3). To ensure women safety during night time "between two stops" service could be introduced in Dhaka city (see section 3.4.4).

7.3.1.3 Appropriate route design with regular bus stop
At present women only buses run along the two routes only (see section 6.3.1). Other public transport routes are also inadequate to meet the need of women. Appropriate route design for bus and minibus are needed to fulfill women's need. Introduction of different routes with regular bus stop could increase women's accessibility to transport facility. Restriction should be provided to get on board or get down from bus only at bus stop. This will reduce travel time of women and minimize their risk of accident.

7.3.1.4 Enforcement of law and order
Improvement in law and order situation of the city is required to reduce pick pocketing, snatch theft and physical harassment of women passengers. It will increase free movement of women and encourage their involvement in economic activities. Again, promoting better traffic management through enforcement of traffic rules and regulations will reduce traffic jam. Thus it will reduce travel time of women as every day they lose the valuable time in traffic jam.

7.3.1.5 Promotion of non-motorized transport mode
The study identifies rickshaw as the most popular mode among the women in Dhaka city. They use it the most. But rickshaw is currently restricted in major roads in Dhaka city. Therefore, non motorized transport should be encouraged at the community level for short distance. Special measures could be taken to promote other non motorized transport like cycling at the community level. In Tamil Nadu, India women get loan to purchase bicycle (see section 3.4.1).

7.3.1.6 Providing better pedestrian facilities
Everyday a large number of women travel on foot. Building up quality walkways will encourage women to move on foot (see section 3.4.5). Again, proper lighting of the footpath is essential for ensuring a safe and secure walking environment. Therefore, proper lighting of
the footpaths should be ensured. Illegal occupancy on the footpath should be removed for easy movement of women.

7.3.1.7 Creation of favourable social environment
Awareness campaign about the need and importance of women’s mobility will reduce negative attitude of transport workers as well as male passengers. It will create favourable social environment for them. Again, punishment is required for eve-teasing which is a social crime.

7.3.1.8 Women friendly transport design
Last but not least, appropriate design criteria should be considered in designing bus and bus stoppage for ensuring convenient and comfortable journey of women passengers. For the case of passenger, every bus stoppage should have its sign and information about timetable of buses. Promotion of buses with better interior design and wide door will make women’s journey comfortable. Furthermore, promotion of two doors public bus will help women to get on board or get down from buses easily.

7.3.2 Recommendations for infrastructure facilities at workplace

7.3.2.1 Providing Day care facility
Provision of daycare will have highly positive impact on the skill of female employees and their participation in the job market. This facility will increase mother worker’s sincerity to their job and will reduce their absenteeism. Therefore, every organization should provide day care facility for its women employees. National Labour Act 2006 also ensured that. This act makes it compulsory to have a daycare centre in any organization that has 40 female employees. Establishment of the daycare centre will create a positive working atmosphere and motivates women employees (see section 3.4.6).

Daycare centre could be established within the vicinity of the office area so that women can accompany their children in their way to office and drop them there before office hour. The organization could subsidize the expense of daycare facility of their women employee to guarantee their affordability. However, many owners/managements cannot provide this facility despite their intention due to space problems. In such case in densely located working places, a day care can jointly be established by the several organizations to serve their female employees. NGOs can help the owners/managements by providing this facility.
7.3.2.2 Provision of prayer space for the women
The cultural and religious values of women should be respected and in line with this, prayer space should be ensured in every organization which has women staff. Privacy and sacredness of the prayer space should be maintained. In Dhaka city many large commercial building accommodate several organizations. In that case a separate prayer room can be designated for female staffs of the commercial buildings. In case where separate prayer space is not feasible for few female staff, separate timing for common prayer room may be a good solution. In the later case, strict maintenance of timing should be ensured by the organization.

7.3.2.3 Providing toilet facility for women staffs
On an average, office time is eight hours in Dhaka city. Therefore, women needs separate toilet for maintenance of their personal hygiene during this long time. It will reduce the prevalence of urinary tract infection of female employee which is very common (18% among the female employees) in Dhaka city (Paul majumdar, 2001). In those offices which have common toilet for the employee, hygienic condition of the toilet should be ensured by regular cleaning. Provision of waste bin should be mandatory in every toilet so that women staffs can use it for their menstrual hygiene practice.

7.3.2.4 Provision of waiting space
Sometime working women have to visit different organizations for official purposes. In absence of waiting space, they have to stand up for a long time which becomes hectic for them. Every organization should have a waiting space to facilitate women visitors. Again, female staff of the organization could also use it for taking rest if required during the office hours.

7.3.2.5 Ensuring adequate seating arrangement for women staffs
Privacy of the working women is greatly hampered in different offices due to inadequate seating arrangement. Provision of adequate seating arrangement will create comfortable working environment for women staffs in the office. It will secure their privacy and reduce their mental stress. Moreover, it will reduce the chances of their physical harassment by the male colleague in the congested workplace specially in the garment industries.

7.3.2.6 Providing health facilities
Provision of health facilities greatly eliminates the health insecurities arising from occupational hazards of the workplaces (see section 3.3.2). In this regard, the labour law, which requires employers to employ a doctor in the working place is to be made effective.
without delay. The government of Bangladesh can quite easily implement this labour law by providing incentives to the owners. In the 'Urban Primary Health Care' project (recently undertaken by the government), working females should be provided treatment facility on priority basis. Health security of female workers will greatly be increased if health insurances can be provided for them.

7.3.2.7 Raising awareness

Raising of awareness about close connection between women's labour force participation, their survival in the labour market and their labour productivity may be the most effective step to ensure both social, economic and health security of women employees. The employers and male colleagues should be made to understand that safe and secure workplace is the most productive workplace. They should understand that ensuring security in the workplace is essential not only for the interest of the workers but also for the interest of the employees since security influences productivity of the women employees.

7.3.3 Recommendations for leisure and recreational places

7.3.3.1 Provision of community parks

The study recognizes that about 65% of the women have to travel more than 2 miles to reach the nearest park and open spaces. Distance from home is the most important factor in determining whether someone will use an open space. From a human use perspective, open spaces need to be distributed throughout the metropolitan area, although each one does not need to be extremely large. Therefore, provision of community parks will increase working women's physical accessibility to recreational places. It should be made mandatory to have a community park in every housing project irrespective of government or private developers. The community parks could be provided in government khash land where it is available.

7.3.3.2 Provision of regulation to conserve open space

In Dhaka only 52 of 90 wards have parks (Nahrin et al, 2004) and it is declining day by day (Nilufar, 1999). A regulation for conservation of open spaces and parks should be provided. It will prevent illegal encroachment of parks and open spaces of Dhaka city which became a common practice nowadays. Even the open spaces where the public cannot enter, have value to humans. Therefore, measures are required to preserve them.

7.3.3.3 Introducing participatory design process

There are significant differences between man and women in terms of how they use parks and open space (Biswas, 2002 & Harth, 2007). However, significant variety within groups
means that it is vital to have a participatory design process or very flexible open space designs in order to cater for such internal diversity. Gender-sensitive participation procedures need to be ensured.

7.3.3.4 Ensuring safety and security for women
Security is a necessary condition for women users of parks and open spaces. Establishment of open structures, visual connections with the surroundings, and through supervision in the parks and open spaces will increase the safety and security for the women visitors. The sense of security could be improved by ensuring a clear all-round view and good lighting on the main paths as it was done in the case of St.-Johann-Park, Vienna (see section 3.4.7). Again, criminal and anti-social activities should be stopped by increasing number of security guards. Good security system will reduce illegal activities there. Proper lighting in parks and open spaces will enhance women’s feeling of safety and security during night time. Moreover, public awareness and participation for parks preservation and maintenance is a good instrument. Local community can play important role for preventing any type of misuse of the parks.

7.3.3.5 Provision of different amenities to attract women users
To attract women users to the parks and open spaces, provision of family recreation facilities should be increased such as play equipments for the children, exercise equipments for the adults, provision of boating facility and good quality café restaurant. Availability of good quality walkways will draw attention of many health conscious women. It will give them scope to have a walk or jogging in the open air and refresh their minds. The study identifies that provision of good walkways in Ramna Park is one good reason of its popularity among the working women. Again, provision of separate toilet for women and adequate seating arrangement in recreational places will reduce the suffering of the women visitors. Therefore, women’s recreational visit to parks and open spaces will increase

7.3.3.6 Ensuring atmospheric quality and aesthetic view
Atmospheric quality is of key interest, especially for women. Authority should take proper measures to ensure cleanliness of the existing parks and its public toilet. Appointment of cleaners would help in this regard. Proper measures should be taken for protecting parks and open spaces from waste throwing and urinating here and there. Increased number of dustbin with proper placing will also help solid waste management of the recreational places.
Gardening with seasonal flowers and colourful plants will boost up natural beauty of parks and open spaces. Proper maintenance of the recreational places should be ensured by cutting grass regularly.

7.4 Future Research

Being descriptive in nature significant issues remain unsolved which could be dealt in future study such as measuring design efficiency of urban facilities for women. The study is broad focus covering accessibility of working women in three urban facilities. Detail study of women friendliness of individual urban facility will bring more specific findings. Women accessibility to public bus service of Dhaka would be an appealing topic for further research. Determination of women only bus route design is another interesting topic for future study. Future research with detail design considerations can be carried out in the line of women responsive transport system to make people aware about the problem. A study could also be done to explore the impacts of workplace's infrastructure facilities on professional performance of women. More intensive research is needed into the consequences of changes in gender relations for outdoor behavior. The spatial variability of women's accessibility to open space could be chosen as a future research topic. There is also scope to study women's accessibility to the other recreational service like shopping that is not included in this study. Accessibility of women's to existing shopping centers of Dhaka city could create great interest for future researcher.

7.5 Conclusion

Women workers in the mega city Dhaka is increasing day by day. In the present study, it has been well observed that the basic urban amenities are not increasing at the same rate to offer a better service for the women urbanites. In this regard, comprehensive plans are essential to emphasize women needs in urban planning while designing the basic amenities and urban services in Dhaka. Much effort and extra money do not require solving these emerging problems. Integrating women's need into the urban facilities is just a matter of extra perspective. The existing urban facilities of Dhaka city is not gender neutral and it is time for the policy makers and experts to stop assuming it is. It is time to think of how to make urban facilities affordable, giving the women real choices and real access to opportunity and better quality of life. This will benefit not only the women, but also the men. Ensuring women's
accessibility to urban facilities will benefit the city as a whole. Then the city becomes more competitive in the global market place and more efficient in providing services.
References


BGMEA, 2005. The profile, Dhaka


Daily Prothom Alo, 3 October, 2007

Daily Janakantha, 5 March, 2002

DCC.2007. Dhaka City Map, Urban Planning Department, Dhaka


DTCB, 2005. Strategic Transport Plan for Dhaka, Dhaka


Fjellstrom, K., 2002. GTZ Sourcebook: Overview and cross-cutting issues of urban transport introductory module, GTZ


GoB, The Constitution of Bangladesh, Dhaka

GoB, National Labour Act 2006, Dhaka


81
Annex 1: Questionnaire for Non-employed Women

Women's accessibility to urban facilities in Dhaka

Researcher: Sadia Afrin, MURP Student, BUET, Dhaka

Information collected here will strictly be used for educational purpose only

1. General Information:

1.1 Questionnaire Id: ____________________________
1.2 Name of the interviewer: ____________________________ Signature: ____________________________
1.3 Date: ____________________________

2. Identity of Respondent:

2.1 Name: ____________________________ Age: ____________________________
2.2 Father's Name/ Husband's Name: ____________________________
2.3 Address: ____________________________
2.4 Status of the respondent: ______ (Household Head=1, Housewife=2, Others=3)

3. Socio-economic information of the respondent:

3.1 Marital Status of the respondent:
1. Married
2. Unmarried
3. Divorcee
4. Widow

3.2 Educational level of the respondent:
1. SSC
2. HSC
3. Bachelor
4. Masters
5. PhD
6. Others (specify): ____________________________

3.3 Household Size: ______ Persons

3.4 Number of children (if any): ______ (Children ≤ 10 Years)

3.5 Number of income earning member in your household: ______ Persons

3.6 Monthly household income: ______ Tk.

4. Reason for not involving in the workforce:

4.1 Why do not you work? (Multiple)
1. Child birth/ Childcare
2. Illness
3. Unwillingness of family member
4. Well to do economic condition of the family
5. Lack of supporting facilities
6. Insecure commuting
7. Lack of educational qualification to get desired job
8. Others (Specify): ____________________________

Thank you
Annex 2: Questionnaire for Working Women

Women's accessibility to urban facilities in Dhaka
Researcher: Sadia Afrin, MURP Student, BUET, Dhaka

Information collected here will strictly be used for educational purpose only

1. General Information:
   1.1 Questionnaire Id: [Blank]
   1.2 Interview starting time: [Blank] Interview ending time: [Blank]
   1.3 Interview Result: [Blank] (Complete=1, Incomplete=2)
   1.4 Name of the interviewer: [Blank] Signature: [Blank]
   1.5 Date: [Blank]
   1.6 Location: [Blank]

2. Identity of Respondent:
   2.1 Name: [Blank] Age: [Blank]
   2.2 Father's Name/Husband's Name: [Blank]
   2.3 Status of the respondent: [Blank] (Household Head=1, Housewife=2, Others=3)
   2.4 Name of the Organization: [Blank]
   2.5 Type: [Blank] (Government=1, NGO=2, Private=3)
   2.6 Organizational Address: [Blank]
   2.7 Residential Address: [Blank]

3. Socio-economic Information:
   3.1 Socio-economic information of the respondent:

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Education</th>
<th>Job Category</th>
<th>Monthly Income (BDT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Married</td>
<td>1. SSC</td>
<td>1. Professional/ Technical</td>
<td>1. ≤5,000</td>
</tr>
<tr>
<td>2. Unmarried</td>
<td>2. HSC</td>
<td>2. Admin/ Managerial</td>
<td>2. 5,001-10,000</td>
</tr>
<tr>
<td></td>
<td>5. PhD</td>
<td>5. Service Workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Others (specify)</td>
<td>6. Garments/ Production</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>7. Labor</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Self employed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Others (specify)</td>
<td></td>
</tr>
</tbody>
</table>

3.2 Household Size: [Blank] Persons
3.3 Number of income earning member in your household: [Blank] Persons
3.4 Monthly household income: Tk.

4. Transport and communication:

4.1 Transport expense (Monthly):

<table>
<thead>
<tr>
<th>HH Transport expense (Tk.)</th>
<th>Own Transport Expense (Tk.)</th>
</tr>
</thead>
</table>

4.2 What is your reason for travel?
1. Workplace
2. School/college/university
3. Shopping centres
4. Escorting children to school
5. Health centre
6. Recreational visit
7. Others (Specify) ...............

4.3 Which mode of transport do you use most? (1= Walking, 2= CNG, 3= Rickshaw, 4= Bus, 5= Human Hauler, 6= Taxi Cab, 7= Own car, 8= Office car, 9= Motor cycle, 10= Others)

4.4 Which mode do you prefer most? (1= Walking, 2= CNG, 3= Rickshaw, 4= Bus, 5= Human Hauler, 6= Taxi Cab, 7= Own car, 8= Office car, 9= Motor cycle, 10= Others)

4.5 Reason for your preference?
1. ........................................................................................................
2. ........................................................................................................
3. ........................................................................................................
4. ........................................................................................................

4.6 What problems do you face regarding transport and communication facility?

Cultural/Social:
1. Snatching theft
2. Harassment by street Romas
3. Eve-teasing
4. Getting a push deliberately by male passenger
5. Pick-pocketing
6. Helper stand on the door/ driver’s behaviour

Institutional:
1. Traffic jam
2. Design problem and different intervention on footpath
3. High transport fare
4. Inadequate route design
5. Irregular bus schedule
6. Absence of regular bus stoppage
7. Crowded bus
8. Bus does not halt for loading/unloading
9. Bus has one door and narrow door
10. Inadequate seat spacing
II. No separate queue
12. Seat beside the driver is uncomfortable

4.7 Please rate transport and communication according to your satisfaction level:
1. Highly dissatisfied
2. Dissatisfied
3. Satisfied
4. Highly Satisfied

4.8 What is your expectation regarding transportation facilities?

4.9 Please give your recommendation for better transportation facilities for working women.

5. Infrastructure urban facilities for women:
5.1 What supporting urban facilities do you enjoy in your workplace?
1. Day care
2. Separate toilet for women
3. Prayer space
4. Waiting space
5. Nothing of above
6. Others (Specify)

5.2 What problem do you face regarding infrastructure urban facilities for working women?
1. Expensive day care facility
2. No day care centre at workplace
3. No separate toilet for women staff
4. Unclean toilet
5. Feel uneasy due to toilet’s location
6. Lack of privacy in the prayer space
7. No prayer room
8. Insufficient seating arrangement
9. Others (Specify)

5.3 Your expense for infrastructure facilities (if applicable): [_________] Tk./Month
5.4 No of children: [______]
5.5 Who take care of your children? [______________________________]

5.6 Please rate infrastructure urban facilities for working women according to your satisfaction level:
1. Highly dissatisfied
2. Dissatisfied
3. Satisfied
4. Highly Satisfied

5.7 What is your expectation regarding infrastructure urban facilities for women?
5.8 Please give your recommendation for better infrastructure urban facilities for working women

6. Leisure and recreational space (Park & open space):

6.1 How often do you go to the park?
   1. Frequently
   2. Occasionally
   3. hardly
   4. Other (Specify) .................. .........

6.2 Which time do you prefer to go there?
   1. Morning
   2. Noon
   3. Afternoon
   4. Evening
   5. Night
   6. Did not visit last year

6.3 Which mode do you prefer to go there?
   1. On foot
   2. Rickshaw
   3. CNG
   4. Car
   5. Bus
   6. Other (Specify) ..................

6.4 What is the distance between your home & the nearest open space & parks?
   1. < ¼ mile
   2. ¼ to 1 mile
   3. 1 to 2 miles
   4. > 2 miles

6.5 What is the travel cost to go there?
   1. No cost
   2. Less than 5 Tk.
   3. 5-10 Tk.
   4. More than 10 Tk.

6.6 What problem do you face regarding leisure and recreational space (Open space & parks)?
   1. No walkways
   2. Inadequate plants
   3. absence of water features
4. Inadequate seating arrangement
5. Poor toilet facilities
6. Filthy/Dirty
7. Unsafe & insecure
8. Illegal Squatting
9. Inadequate lighting

6.7 Please rate leisure and recreational space according to your satisfaction level.
   1. Highly dissatisfied
   2. Dissatisfied
   3. Satisfied
   4. Highly Satisfied

6.8 What is your expectation regarding leisure and recreational space?
.................................................................................................................................
.................................................................................................................................

6.9 Please give your recommendation for better leisure and recreational space (Open space and parks) for women users.
.................................................................................................................................
.................................................................................................................................
.................................................................................................................................

Thank you.