

Bus Service for 'Women Only' in Dhaka City: An Investigation

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Abstract

Public buses in Dhaka City are inadequate in numbers and mostly remain over-crowded which is not accessible for many people, particularly the elderly or disabled and the women. Considering the travel problems of women, in the early 1980s Bangladesh Road Transport Corporation (BRTC) had provided services of 'women only' bus (called 'women-bus'). However, the operation was stopped immediately after some days of its inauguration. Later on, in several times, BRTC initiated similar project but could not survive for various reasons. Lastly, again in July 2008, only 5 buses have been launched in one route for 'women-only' bus service. This paper explores the existing route, frequency, and service quality of the 'women-only' bus and investigates why this service could not survive in the past or lessons learnt from the previous failures. The 'women-only' bus service was observed and interviews of the passengers have been done for exploring the existing situation of the service whilst a Focus Group Discussion (GFD) was done for investigating transportation problems of women, their perception about 'women-only' bus service, and expectations about the service. The success of 'women-only' bus service may provide insights for expansion or improvement of the service, which in turn could help solving the transportation problems of women.

Introduction

Dhaka is one of the fastest growing and highly dense cities of the world. The city comprises of about 12 million people within its 1,529 sq km land area (GoB, 2000). The rapid spread of the city and growth of its population over the past decade has led to a massive demand for transportation. However, this increased demand for transportation has not been matched by providing sufficient investment in transport infrastructure, services and management (Rahman, 2008). As a result, traffic and transport condition of the city have seriously deteriorated. Transport environment of the city could be characterized by congestion and delays, inadequate traffic management, high accident rates, increasing air pollution problems, public transport crisis, and unaffordable and inaccessible public transport for many people (Rahman, 2007). Bus is the only mode of mass public transit available in Dhaka City. However, bus service of the city is in unsatisfactory condition due to lack of proper maintenance, planning and management, and uncontrolled development (Olsson and Thynell, 2004). Whatever, it plays the dominant role in providing public transport facilities carrying about 1.9 million passenger trips per day (Mahmud and Haque, 2008). Among the public transport modes available in Dhaka City bus is the cheapest, which also provides the highest passenger-km travel of the city (STP, 2005; Rahman, 2007). In terms of the trips, present modal share of bus of the city is 44% (STP, 2005). In a city inhabited by more than 12 million people, predominantly representing the middle and lower-middle class, a well-organized low-

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cost bus transportation system is yet to emerge to resolve the city transportation problems (Andaleeb, et al. 2007). It is estimated that there are around 7,100 buses operating on fixed routes in Dhaka; however, the current demand is more than that (STP, 2005). Even though some operators are purchasing few new large buses there are still too few standard buses. It is obvious that the number of high capacity buses and their service level has to be increased quickly to cope with today's demand (Olsson and Thynell, 2004). Long waiting time, delay on plying, overcrowding, lack of comfort, and long walking distance from the trip origin are the common problems of public transport in Dhaka City (Haque, 2000). Without few exceptions, owners/operators of the buses do not pay attention to the passenger comfort.

The majority of women in Bangladesh are active in the social, cultural, economic, and political activities for which they need public transport to meet up the daily necessities. Between 1981 and 1991, the female labor force participation in Dhaka increased from 4% to 14% and nearly 18% in 1999 (Shefali, 2000). While inadequate transport services adversely affect everybody of the city, women commuters face particular mobility constraints. The transport services currently provided by bus are insecure and unsafe for women. They are severely disadvantaged in accessing the existing facilities due to extreme over-crowded buses (Olsson and Thynell, 2004). Women bus riders have long endured groping and verbal abuse every day (www.springwise.com). Due to cultural background in Bangladesh it is difficult for them to compete with men for getting in the bus and grabbing the seat. Bus operators, with their major focus on maximizing returns, are less inclined to accommodate the specific needs of women. As a result, women of the city are facing multiple problems while travelling. Even sometimes attitude towards their mobility is restrictive (often bus drivers/conductors simply do not let them get on the bus during peak times). Consequently, often they are forced to look for alternatives of bus such as cycle-rickshaw or other informal modes or walk for travel.

Only the Bangladesh Road Transport Corporation (BRTC), the state owned authority for providing bus services, addresses the concerns of women's transport by introducing the special bus service for 'women-only' (called 'women-bus'). For the welfare of women, BRTC has been providing the 'women-only' bus service in four different routes of Dhaka City during the peak hours. Whatever, there are several problems and limitations of the service. Even, in the past the service had been stopped and re-started several times.

Objectives and Methodology

The major objective of the paper is to explore the overall situation of the 'women-only' bus (or 'women-bus') service in Dhaka City. The detailed objectives are to identify women's perception about the service, investigate the major problems associated with the service, and finally providing some suggestions for improving the service.

The research was based on both the primary and secondary data. The project report about the 'women-only' bus service of BRTC has been studied and reviewed to have a thorough understanding on route and frequency of service, and the history of service or the previous initiatives of such. Books and journals related with bus service for women were also studied. To collect the primary data a questionnaire was prepared for interviewing the passengers of 'women-only bus' to know about the overall service situation and the problems. About 120 on-board passengers from different route had

been selected in convenience random sampling method and the interview was conducted in bus. Beside this, a focus group discussion (FGD) was conducted with women representing the different interest-groups of the society to explore their expectations and perceptions about the 'women-only' bus service. Key informants (i.e. officials of BRTC, planners, bus operators, and the drivers/conductors of bus service) also had been interviewed for identifying the problems and prospects of the project. The primary data was collected in regular week days of September 2009 with normal sunny weather. Whatever, the study had limitations of non-availability of relevant literature for Dhaka City. Not any such study was ever made in Bangladesh before this initiative.

Necessity of 'Women-Only' Bus Service

Research on gender aspects of urban transport in developing countries is both less extensive and conclusive than in developed countries (Peters, 2001). Having the greater variety of social classes, economic situations and cultural backgrounds in urban context of developing countries, there are likely to be greater differences in travel patterns between the female and the male members of the same household (Peters, 2001). Women are more likely to walk or use public transport than men and less likely to have access to a private car (Turner and Fouracre, 1995). Women are more dependent on public transport than men, especially when they are lower-income (Peters, 1999). Much of the gender and transport literature shows that poor women often face a higher transport burden than men (Venter, et al. 2007). The most predominant mode of travel for women of low-income group in Dhaka is walking. Besides walking, non-motorized transport (NMT) or some informal mode is the most accessible mode available for women; which is often much more expensive than formal public transport (Rahman, 2009). A World Bank study on Dhaka, Bangladesh revealed that 35% of female commuters relied on cycle-rickshaws as their sole mode of transport (Peters, 1999).

Existing bus service in Dhaka City is very poor. Passengers, particularly the women, are facing many problems while travelling by bus. The major problems usually they face are hazard of sexual harassment or lack of personal security due to crush loading or overcrowding, bad behaviour of the drivers and conductors, long que and waiting time, fare and ticketing is not women friendly, and lack of information about the journey (Zohir, 2003). Women have very poor accessibility to bus due to overcrowding. Moreover, groping or otherwise touched indecently by the conductors/drivers or male co-passengers is an exasperating reality for women using public bus in Dhaka City. Waiting time for buses increased heavily; sometimes, passengers have to wait more than an hour to get a bus for a trip. In general, drivers are not interested to carry women passengers as they are slow mover, have more security problems, take more space, and need a complete halt for boarding or alighting. There are few seats reserved only for women in buses but often those are occupied with men (demanding 'equal rights'); neither the driver nor the conductor makes an attempt to make them available for women. Moreover, often the conductor announces 'no seats for women are available' to avoid women passengers. The conductors are often reluctant to give changes to the women while purchasing tickets. Due to lack of information, the women travelling by bus for the first time are ignorant about the available services for the desired route.

From the FGD it was found that the 'physical harassment' (such as groping or otherwise touched indecently) is the main problem for women while traveling by bus in Dhaka

City. The other problems reported was 'misbehave of conductor/driver', 'problems of getting in (boarding) and off (alighting) the bus', 'overcrowded and no seat is available', and 'long waiting time', etc. This information reveals that public transport would be more convenient, safe, and friendly for women if these problems are tackled. 'Women-only bus' service could trigger almost all the above mentioned problems reported by the women passengers.

International Perspective

Transport literature reveals that different cities had taken various initiatives to ease the problems of women travelling by public transport. For example, the Mexico City had started a women-only bus service to protect female passengers from groping and verbal abuse which is common in the city's packed public transportation system. They had created women-only subway cars years ago; and the same concept has been brought to the city's crammed buses, which is known as the *Athena Program*. There are 22 buses, all with pink signs on the front to distinguish them, serving 3 different busy routes throughout the day (www.springwise.com, www.nytimes.com).

Pakistan also introduced 'women-only' bus service few years ago to tackle the problem of physical harassment of the female travellers. The buses with having male drivers and female conductors started plying in different city routes. The 'women-only bus' has a pink-colored strip all around the bus (<http://www.pakpositive.com>). Dubai introduced the 'women-only' bus in April 2009. There were complaints that bus drivers often do not stop to pick up women passengers because of non availability of seats. There are only 12 seats reserved for women in each bus. As the seats are few, women commuters in Dubai had been demanding more seats in the buses. Addressing the demand of women commuters, the Roads and Transport Authority (RTA) of Dubai had the plan of introducing a bus service exclusively for women by the end of 2008 (<http://www.gulftraffic.com>).

Women-only coaches in the subway or trains have also appeared in Egypt, India, Brazil, Taiwan, the Philippines and Japan. Women-only taxi service are operating in Russia (called 'Pink Taxi') from 2006, in UK (called 'Pink Ladies') from 2006, in Dubai from January 2007, and in Iran (www.springwise.com). 'Women-only' bus has been introduced also in Japan. All the initiatives of special service exclusively for women was made only for ensuring safe and secured public transport for the women, which is free from groping or physical harassment.

'Women-only' Bus Service in Dhaka City

'Women-only' bus ('women-bus') service plying in Dhaka City is the unique example of privilege and honor for the women. BRTC has active role of providing bus service for women or blind and disable people as a part of its social welfare activities. It is the only organization providing 'women-only' bus services in Dhaka City for better transportation of women. BRTC has provided some buses to the leaseholders to operate in fixed routes for the purpose of 'women-only' bus services.

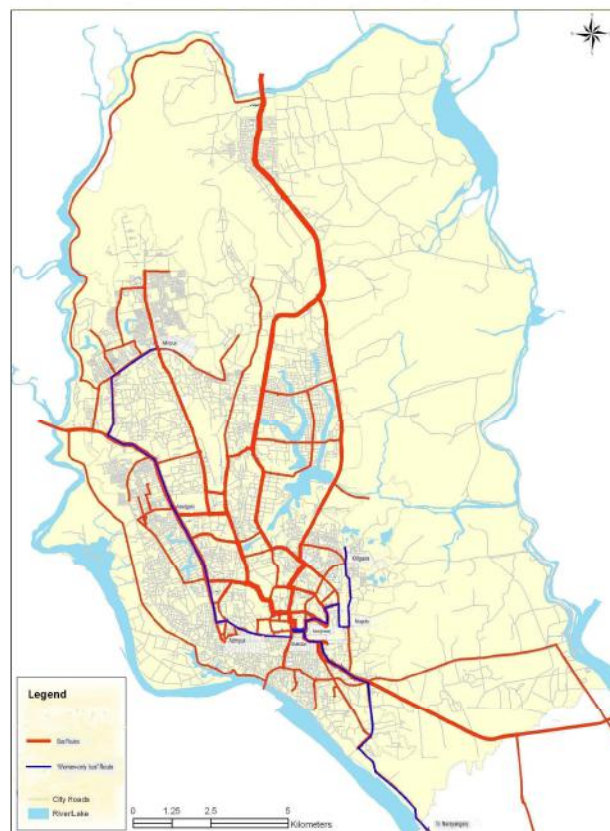
The Past Initiatives

Discussion with the BRTC officials reveals that it had provided 'women only' bus services since the early 1980s. During the first initiative, only 4 buses were provided in

one route. However, such service was withdrawn immediately after inauguration due to various reasons.

Again in 1997, BRTC started 'women-only' bus service for the students and working women. Bus for the ready-made garment (RMG) workers was another initiative of BRTC in 1998 (Zohir, 2003). However, these were also closed down soon. In 2001, again the newly elected government of the country took an initiative for providing 'women-only' bus as a priority program of its first 100 days activities.

In August 2004, BRTC launched 22 buses for women passengers but due to lack of proper maintenance by the leaseholders the number of buses declined to 11. The, then, routes were: Taltola-Gulistan-Motijheel; Rayerbagh-Gulistan-Motijheel; Pagla-Gulistan-Motijheel; Savar-Gabtoli-Gulistan-Motijheel; Gazipur-Tongi-Gulistan-Motijheel; Mirpur-Eden College-Gulistan-Motijheel; and Gabtoli Mazar Road-Gulistan-Motijheel. Again, BRTC re-started this service from July 2008.



Source: Prepared by the author.

Fig. 1: The 'women only' bus routes in Dhaka City.

Present Situation

In July 2008, BRTC has launched again the special bus service for women in Mirpur-Gulistan route and Khilgaon Taltola-Gulistan route (BRTC, 2009). From the field

observation it was found that only 6 buses are now plying in 3 different routes. The BRTC officials informed that everyday 2 buses leave Mirpur Circle 10 at 7:40am and 8:10am respectively and arrive Gulistan via Asad Gate, Sciencelab, and Azimpur whilst another 2 buses leave Khilgaon Taltola at 7:30am and 8:15am respectively and arrive Gulistan via Bashabo, Mughda and Motijheel. Beside these, a bus leaves Narayanganj BSCIC at 7:30am to reach Gulistan via Pagla and Jatrabari and another bus leaves GPO at 5:05pm to Taltola via Motijheel, Mugda and Bashabo. There is also another route between Abdullahpur and Gulistan (leaves Abdullahpur at 7:40am); which is not active now. Each active route is served by double-decker bus with a capacity of 80 passengers at a time.

Table 1: Existing route and time schedule of the 'women-only' bus service in Dhaka City

Route	Starting Time
Mirpur Circle 10 - Assadgate - Sciencelab - Azimpur - Gulistan	7:40* am and 8:10 am
Khilgaon Taltala - Basabo - Mugda - Motijheel - Gulistan	7:30 am and 8:15 am and 5:05** pm
Narayanganj BSCIC - Pagla - Jatrabari - Gulistan	7:30 am

Note: * Not operating for bad condition of the bus.

** Opposite direction of the route (Gulistan to Khilgaon).

Source: Observation and Discussion with BRTC Officials, Drivers, and Passengers in September 2009.

BRTC had a plan to expand the 'women-only' bus services from January 2009 raising the number of buses to 30. However, due to lack of buses, many routes can not be covered and due to financial constraints, the expansion of services becomes difficult.

Users Opinion about the Service

Among 120 respondents, about 75 of them regularly ride this service. Demographic profile of the respondents reveals that the majority (62%) of the passengers of 'women-only' bus belong to age group 22-30 years old. Most of them are working or college student (38% and 32% respectively) while housewife is only 16%. Majority of the respondents belong to household income groups of Tk 8,000-11,000 per month. Average trip per week for the majority (50%) of the respondents are about 10 trips. About 65% of the passengers make 2 trips each day either in 'women-only bus' service or other public transport mode. About half (47%) of the women passengers prefer the bus whilst one-quarter (24%) prefer the rickshaw as a mode for their trips. About 59% of the passengers' maximum trip time is 1-2 hours.

From the FGD it was found that most of the women are not aware/informed about the 'women-only' bus service, its timing and stoppages. However, few of them mentioned that they heard about the service but never got the chance to use it as the service is infrequent and available only in certain route of the city only in certain time. The buses run only to and from *Motijheel*; consequently, the women from other areas of the city can not use the service. Housewives and school students cannot avail this service as it is not operating in other times when they need.

From the observation the following problems of the 'women-only' bus service were identified:

- seat conditioning is not good;
- air circulation is poor;
- no seat reserved for ill or elderly passengers;
- bus is often overloaded;
- water falls from the roof while it is raining; and
- technical or mechanical problems in few bus (sometimes stop on the busy road).



(a) the bus



(b) overcrowded



(c) poor seat condition

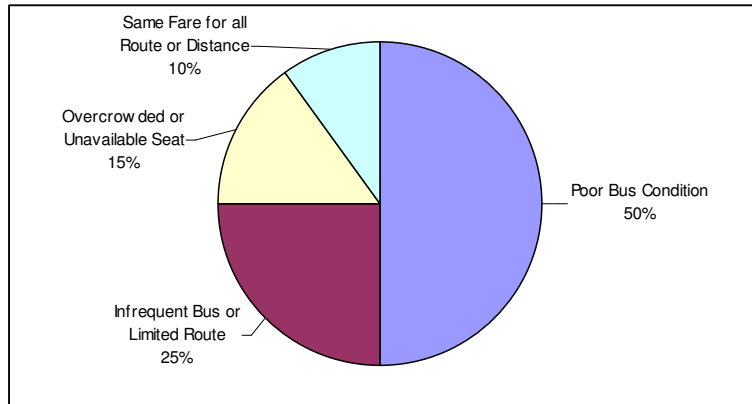


(d) inside the bus

Fig. 2: 'Women-only' buses in Dhaka City.

During the questionnaire survey, almost 95% of the passengers reported that the number of buses operating is not sufficient. However, surprisingly the rest (5%) mentioned sufficient, which might be worth to investigate further why they think such. During interview almost half (48%) of the passengers mentioned 'moderate or fair' about the bus condition whilst 'good' and 'bad' was reported by 7% and 45% respectively.

About 71% of the users of 'women-only bus' service reported several problems about the service whilst the rest (29%) do not feel any problem of it (rather it is more comfortable and safe than any other public transport). Surprisingly, few of the respondents mentioned that the 'women-only bus' is not better than other bus services. Among them, the majority (25%) mentioned the bus condition is very bad and inside the bus there is not available sufficient space. Figure 2 shows the major problems of the special bus service mentioned by the users.



Source: Interview of 'women-only bus' passengers, September 2009.

Fig. 3: Problems of the 'women-only' bus service.

Figure 3 indicates that half of the users mentioned poor condition of bus as the major problem of the service. Why the majority reported poor bus condition as the problem, the attributes are in Table 2. Whatever, this should be noted that the bus condition of 'women only' service is almost same as the other public transport buses plying in the city.

Table 2: Attributes or causes for poor bus condition of the 'women-only' bus service.

Problems	Frequency	Percentage
Poor condition of the seat	30	25
Difficulties of movement inside the bus	12	10
Water falls inside bus when it rains	30	25
Problems of window	24	20
No fan or ventilation problem	18	15
Engine or mechanical problem (i.e. tire puncture)	6	5
TOTAL	120	100

Source: Interview of 'women-only bus' passengers, September 2009.

This should be noted that despite having the problems of 'women-only' bus service, it is better than other public transport. Because, almost every women had experience of facing problems like physical harassment or misbehave of conductor/driver, problem of boarding or alighting the bus, etc. whilst travelling on other bus or public transport.

Table 3: Problems usually women face while travelling by public bus in Dhaka City

Problems	Percentage	Cumulative Percentage
Physical harassment, groping	41	41
Misbehave of the conductor/ driver	16	57
Problems of getting in and off the bus	10	67
Overcrowded and no seat available	26	93
Long waiting time	7	100

Source: Interview of 'women-only' bus passengers, September 2009.

Table 3 shows the majority (57%) is worried about harassment and misbehave while travelling by bus. So, if these are solved public transport would be friendlier to them, which the 'women-only bus' is doing exactly. This implies that when the women passengers feel safe and free from physical harassment, only then they could think about comfort of the seat or interior design, waiting time, etc. Despite facing various problems, the reasons why women use other buses are: shortage of 'women-only' bus service, fixed route, and fixed service time.

Table 4: Overall satisfaction level of the 'women-only' bus service

Types of Service Level	Percentage of the Respondents			Percentage (%)
	Satisfied	Fair / Moderate	Dissatisfied	
Seat condition	41	35	24	100
Time maintenance (on time)	88	8	4	100
Necessary information	82	11	7	100
Headway (bus frequency)	25	41	34	100
Number of stoppages & stop-time	36	42	22	100
Air circulation	18	53	29	100
Movement in the bus	24	41	35	100
Fare rate (ticket price)	58	24	18	100
Ticketing facilities	36	38	26	100
Behavior of the staff	32	58	10	100
Waiting facilities *	27	41	32	100

Source: Interview of 'women-only' bus passengers, September 2009.

The overall service level of the 'women-only' bus is not in satisfactory level. Table 4 reveals the percentage of the passengers' opinion on different aspects. Considering the all aspects, about 33% are dissatisfied whilst 60% mentioned fair about the special bus service, which indicates that they are not satisfied. About time maintenance and necessary information the majority is satisfied because they are the frequent user of this 'women-only' bus service. So, they know very well about the route and timing. However,

this information differs from the information derived from the FGD. Moreover, it was also found that most of the time the buses arrive at stops on time, which is preferred by many passengers. Surprisingly, even though from observation no waiting facility for passengers was found, few of the passengers are satisfied about it. Usually they wait beside the shops or buildings and thinking that these are the facilities available for waiting.

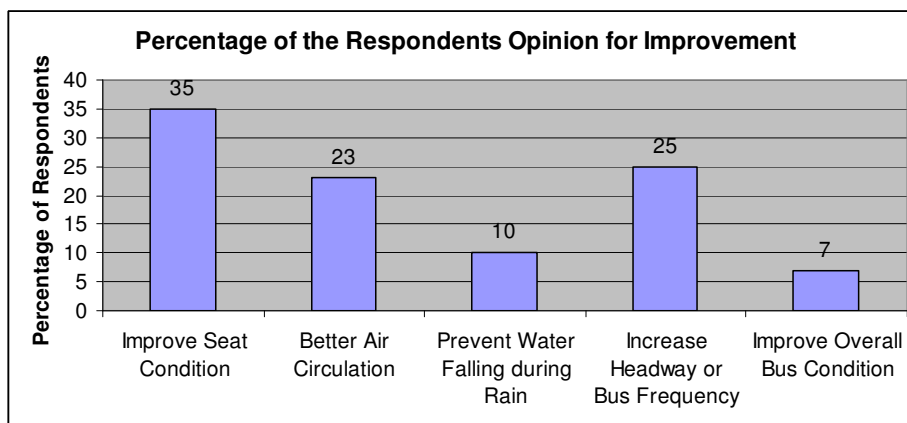
Whatever is the satisfaction level, for securing themselves while travelling almost all women prefer the 'women-only' bus service very much and in terms of security this is quite comfortable for them. The women who ride this service, more than half of them (60%) mentioned to increase the number of bus headway or frequency (Table 5). From the FGD, it was recommended that this ('women-only' bus) type of service should be provided in other major routes of Dhaka City.

Table 5: Things needed for better services

Activities	Percentage
Increase number of bus, more frequent, less waiting time	60
Interior bus design for comfort	15
Increase seat capacity	10
Reduce fare rate	5
Awareness generate for men and change attitude of conductors for general public transport	10

Source: Interview of 'women-only' bus passengers, September 2009.

Both in questionnaire interview and FGD it was reported that the existing 'women-only' bus service should be improved. To do such, the majority mentioned to improve the seat, more frequent headway, and improved air circulation of the bus (Figure 4). However, none of them mentioned about cleaner, low-floor, etc about the bus. Their prime concern is without harassment travel; very minimal requirement indeed for transportation.



Source: Interview of 'women-only bus' passengers, September 2009.

Fig. 4: Actions needed for comfort.

Reason for Failures in the Previous Initiatives

'Women-only' bus service in Dhaka City had been introduced and withdrawn several times in the past. Unable to making profit was reported the main reason for withdrawal. From discussion with the key informants, it was found that the project could not make profit due to limited number of passengers. Having the miserable travel problems for the women of the city, there is a tremendous demand for 'women-only' bus services from different women organizations. So it is surprising why there were not enough passengers for such special service. This could be further investigated why was such or validate the claim. The route of the 'women-only' bus service covers only the university area and the major commercial areas in down town. Because of the route and time of the service, it is useful only for the female college-students and employees but not for the housewives, school going children or women who works in the informal sectors (i.e. traders in the open markets, domestic servants, etc). From the FGD it was found that almost half of the women never used the 'women-only' bus service because of timing problem.

Although there is enough demand for the special bus service for women, however, the BRTC authority mentioned that it was a non-profit (loss) project. There are several reasons behind this. BRTC has reported that women do not travel in these buses and they make losses; because 'culturally the majority of the women in Bangladesh do not travel alone, they usually have a male escort'. However, there is no authentic source or reference to support such claim. So, further research on this issue should be done before accepting such a claim as a lot of women are travelling alone now-a-days and the rate is on increase. The officials of BRTC also mentioned that the leaseholders often used the bus (which is being leased only for operating in the fixed route for 'women-only' bus service) for other purpose or other long distance trip and report that they could not make profit out of this project. The most importantly, there was no publicity about such service in the media. So, the majority of the city dwellers, particularly the women, did not even know that there is 'women-only' bus plying in the city. Lastly, the private sector was not willing to provide 'women-only' bus service, because it might increase the logistical (or management) cost of the bus company.

Current Initiatives of Transport Service for the Women

Even though BRTC have no preferred passengers, they still consider the male as their major passenger because compared with them women passengers are fewer (Zohir, 2003). Therefore, BRTC is also reluctant to expand the 'women-only' bus service. Rather, they are proposing to address the women's issue of transport by introducing regulations on seating arrangement of bus, providing bus stoppages at the points critical to women commuters, and sensitizing the bus drivers/conductors to the needs of women passengers such as, queuing for boarding, advance purchase of tickets, providing longer stop time for boarding and alighting of women, etc (Zohir, 2003).

Now-a-days, Bangladesh Road Transport Authority (BRTA) is taking initiatives for providing better bus services to the women. For doing this, the Route Permit Section of BRTA is giving route permit of bus with a precondition for reserving at least 9 seats (6 for mini-bus) only for the women.

<p>মহিলা, শিশু ও প্রতিবন্ধীদের জন্য ড্রাইভারের পিছনে ৬টি সিট সংরক্ষণ করুন।</p>	<p>Meaning: "Please reserve 6 seats behind the driver for women, children and disabled"</p>
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Source: BRTA, 2009.

Fig. 5: Written indication on bus for the seats reserved for women.

The Chairman of BRTC has already discussed the problems of lack of passengers of the 'women-only' bus with the women activists (i.e. *Mahila Parishad* and *Ain-O-Shalish-Kendro*) and the representatives from the girls' colleges. This might help the service to get more passengers. The Chairman said "if this special bus service gets success, the private sector will be encouraged to initiate such bus services for women and children" (*Prothom-alo*, 2008).

Discussion and Recommendations

Transport and mobility have an important role to play not only in helping to meet women's practical needs but also in contributing to the strategic empowerment of women through promoting access to employment and socio-political upliftment (Venter, et al. 2007). Along with men, now-a-days, women are also participating in all sorts of socio-economic activities in Dhaka City. Women usually perform triple roles such as in 'production' (as worker), 'reproduction' (responsible for child care and managing the households), and 'community management' as responsible for maintaining community and social networks (Moser, 1993; Venter, et al. 2007). As a result, they often take shorter, more frequent and more dispersed trips during the day (Peters, 1999). The changing role of women in household, education, and production indicate the increase of their need for transport facilities. Women face different types of physical harassment and problems while travelling in public transport of Dhaka City. The nature and extent of the mobility constraints faced by women depend on factors such as cultural attitudes, household structure, and household size (Venter, et al. 2007). Usually, women cannot defend themselves from physical touching and grosser misbehavior in the public transport. They feel uneasy and insecure in most of the public transport facilities of Dhaka City. The combination of unsafe, unaffordable and inaccessible transport system has almost certainly put heavy constraints on female commuters, particularly for the poor families. However, as they look for a secure ways to travel than on overcrowded public buses, usually they have to pay more for transport than the males do (Zohir, 2003).

With the rapid increase of population and the inadequate public transport service of the city, it is likely that the problems of public transport in the near future will also increase. Because of socio-economic changes, travel demand of women is increasing and expected to increase more in the coming years. However, due to poor public transport service, it is

obvious that women would face much more problems than that of today in public transport. Given the scenario, it is more likely that the women organizations or lobbying groups would provide more pressure to the government for providing 'women-only' bus service and expand the service in terms of network coverage and frequency. 'Women-only' bus is secured for women, especially free from physical harassment. The reason for using such type of special bus service by women is the physical harassment or groping problems in other public transport modes. However, as the service is now available only on few specific routes of Dhaka City on certain specified time, it is not able to cater the services to majority of the women. Moreover, there is a high demand for 'women-only bus' service in Dhaka City from different women organizations. So, the number of routes and the headway (frequency of bus) of this service could be increased to make it available for the majority. If possible, this type of service could be provided in all the major routes of the city. However, the detailed feasibility study should be done before doing so.

The 'women-only' bus service is welfare oriented in its true sense, because BRTC has to cross-subsidize to this service from its other profitable routes. The Chairman of BRTC expressed his opinion as: "We want to continue this service despite it is facing losses. BRTC's other projects are running well. So, if we incur loss in this service, the income from other projects may cover the loss"(Prothom-alo, 2008). The donor from home and abroad may extend their support towards BRTC to uphold and expand this special service. However, it has to be remembered that a subsidized scheme or project may not sustain in the long run. To be a financially viable system, it is obvious that the 'women-only bus' service needs more passengers. Publicity of the special bus service is very poor. Without a wide publicity campaign it is almost impossible to have more passengers for any special service. An extensive and wide media campaign may be needed so that the women are well informed about the route and time-schedule of the 'women-only' bus service. Radio, TV, and newspaper could be used for this publicity campaign. Moreover, the cellular phone companies could be useful for informing about the service to the women through sending text message. Information about the route and time-schedule should be available in all the bus-stoppages and also inside the bus.

The women passengers usually prefer to have a female conductor. If possible, it would be better to provide the female bus driver and female conductor for the 'women-only' bus service. 'Women and family bus' service could be another option where women could travel alone or with a male escort; but men alone without female accompany should not be allowed. Study of Zohir (2003) reveals that women suggested to have such 'women and family' bus to solve their public transport problems in Dhaka City. BRTC could initiate a pilot project of 'women and family' bus service in one route. However, this is questionable whether such type of service would be successful. For sustaining, 'women-only' bus service could be provided through the partnership of public and private (PPP) sectors. Along with BRTC, the private sector bus operators could be encouraged through incentives or regulations to provide such service. Even, due to political and social pressure the government could possibly enact the legal bindings for the private bus operators to provide such service.

Experience of the previous failures would lead to learning for the management about the drawbacks of the service. It is clear that strong and effective monitoring to the lease-

holders is needed to ensure whether they are operating the bus in the exact route or not. The learning from the previous initiatives will also lead to know the key issues, which are needed for the operation of 'women-only' bus service. However, this special bus service may not be able to solve the transport problems of women or improve the overall public transport situation of the city. To improve the overall situation what the city needs are: more public transport availability (increase of the number of bus routes and headways) for the passengers and positive change of the men's behaviour or attitude (gender sensitive behaviour). Proper attention to address the women's need should be given while planning for transportation or providing the public transport services. More care and initiatives should be taken by the authority and the private bus operators about the women's travel. Moreover, the drivers and conductors need to have gender-awareness training to change their attitude towards women. Their training on road rules or regulations will also provide some added benefits.

In the public buses, the passengers should be accommodated according to the seat provision. Carrying any extra passenger should be prohibited; and this will reduce overcrowding and thus may also reduce significantly the physical harassment of women. Queuing while boarding the bus will also help the women travellers. Provision of double door bus could be increased where the first door should be used only for women and the back door for the men. It will be of much help in reducing the harassment of women passengers. Advanced ticketing system could be introduced in the public transport; which may help to reduce unnecessary hassle of the women while purchasing the ticket from the conductors.

For the long-term perspective, the number of seats reserved for women in the public buses could be increased and the cooperation of the male is a must. For example, the study of Zohir (2003) recommended 25% seats in all public transport should be reserved only for the women. It is also important to ensure that the seats for women are not occupied by men. It would be vital to increase awareness among male passengers about their responsibilities toward female passengers and change their attitude toward women. Women are someone's sister, mother or wife; so, men's behavior with women should be descent. Above all, customer service of the drivers, conductors, and ticket sellers (at the counter) is very important to the passengers. Regardless of the gender of the passenger, it is a must to ensure the better customer care service to the passengers. This may help to solve certain general problems of women's travel in bus.

Conclusion

A safe and secure public transport for women should be ensured for their effective participation in society. In this regard, government has to play the key role for ensuring safe transport service facilities for the women. The 'women-only' bus service in Dhaka City is one of the government initiatives to meet the demand of women. However, considering the existing demand, role of the initiative in transportation of the city is very limited (or negligible). Though it was not a successful story in the previous initiatives, government has to launch new schemes for the better public transportation service for women. Recently, the 'women-only' bus service has been reported as profitable financially. Following the demand from the women-community, the network and frequency (headway) of the 'women-only' bus service in Dhaka City could be expanded. It might be better to improve the overall public transport system of the city addressing the problems and issues of women passengers.

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References

- Andaleeb, S. S.; Haq, M. and Ahmed, R. I. 2007. Reforming Innercity Bus Transportation in a Developing Country: A Passenger-Driven Model, *Journal of Public Transportation*, Vol. 10(1). Available at: <http://www.nctr.usf.edu/jpt/pdf/JPT%2010-1%20Andaleeb.pdf> Accessed on 8 March 2010.
- BRTC. 2009. Website of the Bangladesh Road Transport Corporation (BRTC); Available at: <http://www.brtc.gov.bd> Accessed on 14 February 2009.
- GoB. 2000. *Bangladesh Country Report*, National Habitat Committee, Ministry of Housing and Public Works, Government of Bangladesh (GoB).
- Haque, M. M. 2000. Road planning and engineering for promoting pedestrian safety in Bangladesh, *10th REAAA conference*, Tokyo, September 2000.
- Mahmud, S. M. S. and Haque, M. S. 2008. Deficiencies of Existing Road Network in Dhaka Metropolitan City, *Proceedings of 10th Summer Institute of Pacific Regional Science Conference Organization (PRSCO)*, Dhaka, Bangladesh.
- Moser, C. 1993. *Gender Planning and Development: Theory, Practice and Training*, London: Routledge.
- Olsson, L. and Thynell, M. 2004. *Bangladesh Road Transport Corporation (BRTC) Bus Project in Dhaka City*. Paper of SIDA evaluation 06/38, Department for Infrastructure and Economic Cooperation, SIDA, Stockholm. Available at: www.sida.se/shared/jsp/download.jsp?f=Utv06-38_SIDA31412en_web.pdf&a=26412 Accessed on 13 February 2009.
- Peters, D. 2001. *Gender and Transport in Less Developed Countries: A Background Paper in Preparation for CSD-9*, Paper Commissioned by UNED Forum, UK.
- Peters, D. 1999. *Gender Issues in Transportation: A Short Introduction*; Available at: http://www.cityshelter.org/13_mobil/25tend.htm Accessed on 8 December 2009.
- Prothom-alo. 2008. *The Daily Prothom Alo*, 25 July 2008, Dhaka, Bangladesh.
- Rahman, M. S. U. 2009. Fuel Consumption of Transport Sector: How the People of Dhaka City will be Moving in the Future?, *Act! Innovate! Deliver! Reducing energy demand sustainably*, Proceedings of the European council for an energy efficient economy (ecee) Summer Study 2009, France, pp. 1409-1415. Available at: http://www.ecee.org/conference_proceedings/ecee/2009/Panel_6/6.246/
- Rahman, M. S. U. 2008. Sustainable Transport in the Era of Global Warming: What Needed for Dhaka City?, Proceedings of the International Symposium and Workshop on *Sustainable Transport for Developing Countries (STDC)*, Bangladesh, pp.161-166.
- Rahman, M. S. U. 2007. Can BRT Solve the Transport Crisis in Dhaka City?, *Saving Energy- Just Do It!* Proceedings of the European council for an energy efficient economy (ecee) Summer Study 2007, France, pp. 1635-1646, Available at: http://www.ecee.org/conference_proceedings/ecee/2007/Panel_8/8.066
- Shefali, M. M. K. 2000. *Study on Gender Dimensions in Dhaka Urban Transport Program (DUTP)*, Nari Udyog Kendro, Dhaka. Available at: <http://siteresources.worldbank.org/INTGENDERTRANSPORT/Resources/bangurbantransport.pdf> Accessed on 22 July 2009.
- STP. 2005. *Urban Transport Policy: The Strategic Transport Plan (STP) for Dhaka*. Bangladesh Consultants Ltd (BCL) and Louis Berger Group Inc. Dhaka.
- Turner, J. and Fouracre, P. 1995. Women and Transport in Developing Countries, *Transport Reviews*, 15(1), pp. 77-96.

Venter, C.; Vokolkova, V. and Michallek, J. 2007. Gender, Residential Location, and Household Travel: Empirical Findings from Low-income Urban Settlements in Durban, South Africa, *Transport Reviews*, 27(6), pp. 653-677.

Zohir, S. C. 2003. *Integrating Gender into World Bank Financed Transport Programs - Case Study on Bangladesh: Dhaka Urban Transport Project (DUTP)*. Available at: <http://siteresources.worldbank.org/INTGENDERTRANSPORT/Resources/DhakaUrbanTransport.pdf> Accessed on 18 May 2009.

<http://www.pakpositive.com/2005/09/23/pakistans-first-womens-bus-service-introduced-in-lahore/> Accessed on 14 August 2009.

<http://www.gulftraffic.com/images/pdf/Busserviceexclusivelyforwomen08July08KT.pdf> Accessed on 17 April 2009.

http://www.springwise.com/transportation/womenonly_bus_service/ Accessed on 11 November 2009.

http://www.nytimes.com/2008/02/11/world/americas/11mexico.html?_r=1&oref=slogin Accessed on 23 January 2010.