AN ANALYSIS OF WOMEN’S CONSTRAINTS IN PUBLIC TRANSPORT SYSTEM IN BANGLADESH: SURVEY ON LOCAL BUS AT DHAKA CITY

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Abstract- This study portrays continual constraints experiencing by women while traveling by bus within Dhaka city. Most of the time buses remain overcrowded because of deficiency and improper management which cause the adverse and unsafe environment for the traveler, especially for women. Women are facing verbal or nonverbal harassment, unwelcoming touches, sometimes direct contact with the sexual parts by co-passengers or conductor that is hindering personal and social growth. This research aims to investigate the actual reason, nature of harassment, effects on the victim and address the solution of women harassment on the public bus. To conduct this study, firstly an exploratory was done to find out actual facts and 18 specific hypotheses had been developed through structured questionnaire; data were collected from the target population and analyzed with the statistical tool (SPSS). Results of multiple regressions conclude that - lacking social justice and strong protest against woman harassment on the bus has a significant impact on identified factors. Findings of this paper will help to the Bangladesh Road Transport Corporation (BRTC), Government policymaker, other women’s organizations’ and NGO to formulate policy in the broader aspect that will ensure women friendly environment on the public bus.

Keywords- Local Bus, Mobility Constrains, Women’s Harassments, Reserved Seats, Bangladesh.

I. INTRODUCTION

Most densely populated mega city Dhaka covers more than 105 million people within an area of only 1463.60 square km, and half of the dwellers are women (Bangladesh National Portal: 2016). In Dhaka city, Bus is the highly used mode of transport regarding affordability, availability, and maximum coverage area. The demand for transportation has increased at an exponential rate. However, the demand is not met sufficiently with the currently provided transport infrastructure, services, and management. Statistics shows that Dhaka is one of the least motorized cities in the region with approximately 30 motorized vehicles per 1,000 residents (STP Part-4: 2005). As a result, the daily life traveling picture by bus can be illustrated by congestion and delay, high traffic jam, poor traffic management, etc. Among all of them, one of the most unbearable troubles is inadequate transport system for the resident and lack of suitable environment; particularly for women.

Under these circumstances, women are the victims of mental and physical harassment while traveling by bus. Sometimes they experience sexually abusive situations in the bus or while boarding and alighting from the bus. These incidents are hampering their daily life activities that have a long-term effect on their personal lives as well as on the society construction and contribution. Research have been done on scheduling, frequency, traveling cost, fare collection, reliability, safety, comfort issues of Dhaka bus service system. Customer satisfaction in public transit can be defined as the overall level of attainment of a customer’s expectations, measured as the percentage of the customer expectations, which have actually been fulfilled (Tyrinopoulos, Antoniou: 2008). M. Shafiq-Ur Rahman’s paper covered the points of public’s experience and satisfaction level of this current bus journey, and their overall expectations about bus services (Rahman: 2012). On the other hand, he also discussed on ‘women only’ bus service in another paper where he explored the existing route, frequency, and service quality of the ‘women-only’ bus and investigated why this service could not survive in the past or lessons learnt from the previous failures (Rahman: 2010). The transport services currently provided by the public and private buses are insecure, unreliable, congested and unsafe. (Shefali: 2000).

This study is a modest effort to focus on the terrible environment of bus, especially in regards of female commuters and their mobility constrains. With 18 hypothesis and open ended question, this paper endeavors to take concern about the causes and effects of physical and mental harassment issues, and tried to come up with strong resolution.

1.1. Constrains for Women Using Local Bus Facilities in Dhaka

From the perspective of Bangladeshi culture and social construction, women’s activities outside the residence are significant. The majority of women in Bangladesh have notable aspects in the social, educational, economical, political and cultural sectors. If we consider education sector, we can see that the number of students enrolling in Professional Education is recorded at 70,998 of which 25,856(36.42%) are women (People’s Republic of

Women naturally choose Rickshaw as it is available and affordable to middle-income women though it takes more time than the bus. However, Rickshaw has only access to the certain community or region and is not accessible for people with low-income. CNG and taxi cabs are a good option as a transportation mode, but they are too expensive for daily traveling. These are the reasons that Buses comprise a small proportion of vehicle numbers (11.2%) but carry about 77% of people (STP Part-1: 2005).

Women’s engagements in various sectors cause them to commute frequently. The real scenario of bus service is that women can hardly get into bus especially in the peak hours (office and school time). In the morning (7.30pm-9.30pm), people are in a rush to reach their destination intheir due time, and the same thing happens in the evening (4.30-7.30). After waiting in a long queue, passengers have to finish their trip by standing in a congested area. It is quite tough for women to compete with men to get into the bus or manage a seat for them. While standing, they have to deal with different intentional or unintentional unpleasant situation that generates mental anxiety and directs them to avoid bus as a traveling mode.

1.2. Justification of the Study
In Dhaka local bus service system, there are nine reserved seats for women, children, and physically challenged people in every bus. However, women can also sit in any other seats of the bus on a first come first serve basis. At the same time, men can sit in one of those nine reserved seats when there aren’t enough women in the bus to occupy those positions. Although it might seem that women are being privileged with the nine seats, the real scenario is apparently different. These nine seats often create disagreement starts showing the logic that the firstcomer in the bus can sit in the reserved nine seats. Usually, new comers in Dhaka city are reluctant to obey the rule for their lack of knowledge. Surprisingly, sometimes male passengers who are educated and resident of Dhaka city are unwilling to leave the reserved seats for girls.

Some people have a misconception that women are allowed to sit only in one of those nine reserved seats. Moreover, Men feel irritated and sometimes become angry if women sit in any other seats rather than those nine seats. Very often man sit on the reserved seats and provide logic that as there are no physically challenged people on the bus, they have the right to sit in their places.

All these incidents demonstrate that the ‘nine reserved seats’ system is not a permanent solution. To some extent, it is, in fact, trouble for women. Although the policy secures some seats for women, it does not necessarily ensure a friendly environment for women.

Though women have become usual with these daily occurrences, the root of the problems should be investigated. At the same time, proper attention to the circumstances should be given on gender perspective. This paper is an attempt to reflect these incidents, indicate the mismanagements and concentrate on developing a productive strategy to lessen the annoyances in the bus.

1.3. Nature of Harassments and Their Affects
We can classify the harassments into two different types: mental (verbal-nonverbal) harassment and physical harassment. Psychological harassment occurs when a standing woman is leered or stared by other male co-passengers. It is a common incident that makes women uncomfortable. Co-passengers also feel irritated when they are asked to give more space for passing or standing by women. Women also become victims of verbal attacks such as teasing, mockery or quarrelsome attitude by men. Physical assault consists of touching, pinching, squeezing, or touching the private organs of women.

Women face deliberate or accidental touch by male passengers or the conductor. In a crowded bus, standing women face the touches of co-passengers while moving in the bus, or when passengers pass them. Sometimes seating women also experience the same situation when male co-passengers sit beside them. While boarding or alighting from the bus, touches are unavoidable because the gates are always crowded. Standing women commuters can be a victim of deliberate or accidental touch when bus drivers give a sudden break. For the sudden halt, the co-passengers collide with each other.

When 4-5 female passengers stand together, they feel relaxed and comfortable. However, while collecting bus fare, conductors have to reach every corner of the bus that gives them an acquiescence to enter into the gathering of women in a congested area. This is also a major reason for unwanted touch. Moreover, while collecting tickets conductors sometimes touch women by hand or finger to grab their attention or to ask for tickets. When buses pick up passengers from different stoppages or middle of the road (without any stoppage), the bus drivers do not stop the bus properly. In that situation, while boarding the bus, conductors touch women’s back or their hand to help them or hold them from falling from the bus. This situation can be easily prevented by halting the bus accurately at the side of the road and give a chance to get the women into the bus. Finally, conductors or bus drivers are often unwilling to take womenon the bus as women need more space than men and take more time for boarding and alighting into the bus. For the intention of profit maximization, drivers and conductors prefer to take male passengers. As a result, women are the actual sufferer in this regard.
In the absence of adequate transportation and friendly environment, women’s workforce participation and productivity are adversely affected. Before choosing educational institution or job, women have to consider the route of their way to destination which creates an obstacle to their potential. Due to the policy shifts towards increasing women’s education, women’s opportunities at every level of education have grown significantly over the past few decades. However, many women’s education prospects have been restricted due to the deficiency in the existing transport system. For their cultural attitudes and natural inclination, most of the women cannot defend themselves from coarse misbehavior or physical touching in the public transport which leads them to confine their mobility. (Mannan, Ahmed: 2014)

Women adopt the following strategies to avoid harassment / violence: “avoid going outside at night” (reported by 62.4%), “not going outside alone” (reported by 60%), “avoid visiting specific areas” (mentioned by 47.4%).

II. OBJECTIVE OF THE STUDY

The objective of this research is to study about women’s opinion and observation on Dhaka bus service system. The main objective is to figure out the actual cause of unwanted incident with women and also determine the psychological effects of harassment upon women.

In this study, we will also try to investigate-
- Real condition and environment of Dhaka bus service system from the perspective of women.
- The rate and intensity of mental and physical harassment of women.
- The types of harassments in the bus and their reactions to the victim.
- Women’s demand for their safety, security and comfort.
- Some recommendation and their implication to improve the present condition to ensure women friendly environment.

III. METHODOLOGY

This research was conducted based on both primary data and secondary data. Paper-based questionnaire and online survey both were used to collect primary data. Total 18 major close ended features have been selected to the questionnaire by five-point Likert scale. There were also open-ended questions to get deeper information about women’s perspective on this topic.

For the survey, respondents were selected through convenient judgments, but the samples were chosen randomly. The target population was the actual victim of physical and mental harassment in the bus to address the major issues that cause harassment. Primarily data were collected from 68 hard copies of the questionnaire and 105 online surveys. Among them, we kept the sample size near about 150 personals of different ages and sectors. Some of the questionnaires were considered redundant because of insufficient information and vague authenticity. Secondary data included reviewing related documents, international journals, and articles, associated websites, etc.

After computing the consistency measurement, it can be seen that the value of Cronbach's Alpha is .703 which is accepted and reliable for the hypotheses’ (Nunnally, 1967). This value indicates that the collected data has 70.3% internal consistency between the collected data, and no item has been rejected while doing the analysis.

<table>
<thead>
<tr>
<th>Reliability Statistics</th>
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<tbody>
<tr>
<td>Cronbach's Alpha</td>
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<td>.703</td>
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IV. STUDY FINDINGS

4.1. Descriptive Analysis

<table>
<thead>
<tr>
<th>What is the rate of travel in bus?</th>
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<tbody>
<tr>
<td>Valid</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Everyday</td>
</tr>
<tr>
<td>3-4 Days</td>
</tr>
<tr>
<td>Weekly</td>
</tr>
<tr>
<td>4-5 days</td>
</tr>
<tr>
<td>Monthly</td>
</tr>
<tr>
<td>Other</td>
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</table>

Table 1: Rate of Traveling

<table>
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<tr>
<th>At what time usually you travel by bus?</th>
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<tbody>
<tr>
<td>Valid</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Everyday office time</td>
</tr>
<tr>
<td>No exact time</td>
</tr>
<tr>
<td>Personal time</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 2: The Time of Traveling by Bus

<table>
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<tr>
<th>At what rate harassment occur with you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>On average everyday</td>
</tr>
<tr>
<td>Sometimes</td>
</tr>
<tr>
<td>Suddenly</td>
</tr>
<tr>
<td>Comments</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Table 3: Rate of Harassment
In the descriptive survey, (see table 1) about 36% participants reported that they travel by bus almost every day. Near about 30% travel 3-4 days in a week while approximately 17% women move at a rate of 4-5 days in a month and 10% commuters have no fixed time or track for traveling in a bus. Participants were asked about their usual time of traveling by bus around Dhaka city. After analysis, (see Table 2) it can be seen that 27% respondents usually move in the office time which is typically 7.30 am to 9.30 am and 5.00 pm to 7.00 pm. Moreover, 43.5% women have no fixed time to travel and 29% participants travel in their own personal time. Furthermore, Survey participants were also asked about the rate of harassment occurs with them (see table3). 49% commuters state that they experienced harassment ‘Sometimes,’ where 36% experienced harassment ‘Suddenly’. On average every day, harassments were experienced by 3.33% women.

4.2. Result of Regression Analysis

In this study, multiple regressions have been used by dependent and independent variables using linear regression analysis. Researchers considered the hypothesis -For lacking of legislative justice and noteworthy protest, women are being harassed in buses as a dependent variable. Researchers have denoted dependent variable as ‘b’ and independent variables as ‘a’ which is also called predictors. Seventeen independent variables have been taken into consideration to conduct the analysis and that are-

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.837</td>
<td>.700</td>
<td>.661</td>
<td>.399</td>
</tr>
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The correlation coefficient, symbolized by R is a measure of the strength of the linear relationship between two variables. The result of regression analysis shows that the value of R is .837 that specifies a high positive correlation between the dependent variable and the independent variables. The value of R Square is the proportion of variability in the dependent variable that can be explained by the estimated multiple regression. Here, R Square = .700 which tell us about 70% variation in the dependent variable is explained by independent variables. While doing analysis, by adding each predictor to the model, the value of R-square increases.

The analysis of variance (ANOVA) represents whether the regression equation is explaining a statistically significant portion of the variability in the dependent variable from variability in the independent variables. In the table, the significance value is .000 which is less than 0.05 and indicates that there is significance relationship between dependent and independent variables.

V. RECOMMENDATIONS

Because of the socio-cultural principles and physical barriers, women need safe, affordable, frequent, and easy-accessible transportation system. It would be too idealistic to assume that the existing problems can be eradicated in a month or year. However, some simple but fruitful initiatives can decrease some issues and provide a better environment for the travelers. Considering the population growth and future demand, BRTC (Bangladesh Road Transport Corporation) and policy makers should take this situation into account to advance the road infrastructure, traffic management, vehicles' trip characteristics (capacity, modes, frequency, length of trips), the service quality, and performance monitoring system. These are the long-term process to solve this problem which is also related to expenditure. But meaningful changes in the system, strict law enforcement, and active protests against harassment can give a remedy to the situation in a short time.

The open-ended survey exhibits a lot of suggestions from the female travelers. On the basis of their views, the authors recommend that –

5.1. Reserved 9 Seats

- The first and foremost: reserved nine seats should be increased to meet the demand during peak hours. The survey reveals women’s opinion about reserved nine seats, (See appendix) and surprisingly, 42% women suggest that 50% of the total seats should be kept reserved for women. 24% women support that the reserved seats should be increased to 15, and 14% women think that the number should be 20.

About 14% Women in the survey believe that increasing the number of reserved seats is not a permanent solution. So the other proposals are –

5.2. Transport Infrastructure

- During peak hour, the number of transportation should increase to meet the demand.
- Working women or student should be provided pick and drop facilities from their workplace or institutions. Statistics shows that Physical and verbal harassment is a particular concern for all female employed commuters, applying to workers from all income groups and occupations, and 79.6 percent of female professional workers proposed the need for secure transport (Shefali: 2000). So, pick and drop
service system could be a good option to avoid harassment.

- There should be strict rules for the conductor’s behavior towards women while collecting ticket fair. As they are the primary authority in the bus, conductors have to maintain a pure standpoint in any argumentative situation regarding reserved nine seats for the female passengers.
- In the large two-door bus or double decor bus, doors can be separated with a designation of women-only and men-only door.
- In the bus, there should be a separate portion for the women (1st floor in the double decor bus) so that during peak our, only women can stand there. Ticket fair will be collected when women are getting in or going down from the bus.

5.3. Women Empowerment

- Women’s engagement is essential in consultations, project planning, and the decision-making process. Their participation in planning and decision-making processes is necessary so that they can convey their particular needs.
- To deal with the women section, a female conductor can be assigned to stop harassment by male conductors.

5.4. Moral Issues and Awareness

Most of the women believe that a women-friendly environment can be ensured if the male passengers change their deep-rooted values and mindset towards the women. This can be generated by raising moral values and giving family education from the childhood. Several steps can be initiated, and those are-

- Mutual respect and code of behavior should be included in the Gender Studies prospectus in the school education curriculum.
- There should be counseling and training programs for the drivers and conductors in every single or three months a year.
- Awareness campaigns should be raised to promote women safety and needs aiming at both bus authority and passengers. Media (newspaper, radio, television, and social media) can play a great role in endorsing this issue and can alert the authority and public.

5.5. Strict Law Enforcement

- It is a natural tendency of women that they are unable to protest while being harassed or after being offended. They are habituated with the religious boundary and social seclusion which don’t give them enough courage to remonstrate against any unfair occurrence. Additionally, the victims are accused instead of the offender most of the time. In this regard, imposing strict measures and implementation can be a solution to this condition.
- Existing policy and regulations are there to prevent harassment and giving punishment to the culprit, but women have to face financial and social obstacles in seeking justice as the legal process is lengthy and complicated. It is necessary to amend the existing laws and execute those regulations by supervision of BRTC authority, the ministry of Women Welfare, Dhaka Metropolitan Police and judicial authority of the country.

5.6. Women Only Bus Service

In the open ended discussion, many women suggested that, there should be ‘women only bus service’ for women in different route. Women only bus service had been introduced in different phase from 1980. But, this venture couldn’t exist because, female commuter was not aware of timing and route schedule of bus service system which lead the service as loss project. “From July 2008, BRTC has launched again the special bus service for women in Mirpur Gulistan route and Khilgaon Taltola-Gulistan route. Almost 95% of the passengers reported that the number of buses operating is not sufficient.” (Rahman: 2010). “Furthermore, the bus service system also assigned women conductor (in total there are 14 young women working as conductors in this company). But, Conductresses suffer from harassment from male conductors, from lack of restrooms and toilets and having to spend their recreation time in the busy street.” (Olsson, Thynell: 2006). All these issues are the reasons for unsuccessful women only bus service system. Considering today’s demand and circumstances, Government and authority should give concern and rethink about the improvement of this service.

VI. LIMITATIONS OF THE STUDY

This research has been conducted by considering 18 hypothesis and limited sample size with in a short extent of time. Also, the research has been done with only women living in Dhaka city which narrow down the focus group. More reliable and authentic research could be done by increasing the number of hypothesis and collecting more samples of the victim in bus service system. Further research should consist of female participants from the division level of the country to find out the condition of the bus service system of Bangladesh.

CONCLUSION

Providing women friendly environment in bus is not an aggregated requirement, but it is the demand of time of every female commuter. The service providers and policy makers have taken some initiatives for the betterment of this part. Both public and private sector can get help from the outcome of this paper to develop the whole transportation system keeping in mind of women needs. At the same time, women have to come out from the custom of the purdah, have to break the silence and speak up...
against any inequitable situation occurring with them or any other female commuters. Gradually, their firm standing in the right place and right time can encourage other girls to tackle any harsh situation.

ACKNOWLEDGEMENT

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REFERENCES


APPENDIX