

Women & Transportations: Challenges and Opportunities in Urban areas-

An Overview of various global Case studies.

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Abstract

The visible impact of urban transportation is in access to employment. However, transportation also affects access to other services such as shopping and social service facilities. Women are already presented with immense challenges in accessing public Transportations and public space. Women's Safety in Public Transport is one of the key challenges across the globe. The authorities are taking various measures to make Public Transport safe and comfortable for women. It is very important to understand the travel needs of men and women are very different. In developing countries, lots of women forced to remain at home owing to lack of safe transportation option. Women are more likely to travel shorter distances and to stop more frequently than men during their journey. In this Paper attend to highlight the issues concerning urban planning due to gender exclusion. To emphasis on the major issues of safety, security and mobility of women and delineate the scope for equitable participation in urban life through gender inclusivity.

Key words- Urban Mobility, Women, Gender inclusive planning, Safety measures.

I. INTRODUCTION

Over 2012-20, around 865 million women are expected to enter the workforce (Strategy and PwC 2012). According to the McKinsey Global Institute, if women were to play an equal role in labour markets, as much as USD 28 trillion could be added to the global economy by 2025. Yet, in urban India, women's labour force participation is only at 15.5 per cent (MoSPI 2014) and in fact, India's female labour force dropped by 19.2 million individuals between 2004-5 and 2011-12 (Andres, et al. 2017).

The performance of urban transport services places different burdens on women and men, with the costs of poor public transport often being borne by women. For example, women may turn down better employment opportunities further away from home in favour of lower-paid local opportunities when the public transport system is unreliable or unaffordable (ADB 2013). Safe, comfortable, convenient and affordable transport can play an important role in not only helping meet women's practical needs such as access to schools and markets, but also in contributing to their strategic empowerment by facilitating access to social and economic opportunities.

Women and girls are close to 50 per cent of our urban population. They comprise only 19 per cent of "other workers" and yet 84 per cent of their trips are by public, intermediate public and non-motorized modes of transport (Census 2011).

While 73 per cent of trips by "other workers" in urban areas are by sustainable modes of transport, women and girls' share is only 14 per cent. In the coming decade, cities will need to make a concerted effort to improve women and girls' experience of sustainable modes of transport to achieve a target of 40 per cent of all trips. The policy brief fills this gap by providing a framework to integrate technical and social, quantitative and qualitative approaches for enabling this transition.



Figure 1: Women constitute only 4% of cyclists who commute to their workplace in urban area.

II. NEED OF THE STUDY

Urban planning covers a wide spectrum of concerns including employment, housing, open space, transport and environment etc.

Gender concerns all aspects of Planning.

Case of better employment opportunities for women in the urban areas than rural. But, the Urban labor market is based on gender lines. Thus, the pro-urban planning policies provide scope for improvement of the same.

It is stated by many planners and sociologists that **women experience city life differently** from men. Unlike other built environment occupations, the planning profession has traditionally been gender blind. The general idea that, - Whatever is good for men is automatically good for women is inappropriate as gender neutrality is misleading.

Gender-sensitive urban planning is needed.

Gender inequality holds back the growth of individuals, the development of nations and the evolution of societies.

III. WOMEN ACROSS THE WORLD ACCOUNT FOR

- 60% of the working force.
- Comprise only 30% of the official labour force
- 60 % of the 130 million children in the age group of 6-11 years who do not go to school are girls. 67% of the world's 875 million illiterate adults are women.
- 70% of the 1.2 billion people living in poverty

IV. STATUS OF WOMEN IN INDIA

- 940 females per 1000 males in 2011.
- Female literacy: 47.8%.
- Non-agricultural wage employment is only 17%.
- 13.9% in the urban sector and 29.9% in the rural sector
- Occupy only 9% of Parliamentary seats.
- Less than 3% women managers and admin.

V. PLANNING PERTAINING TO THE VARIOUS ASPECTS OF

- Gender-sensitive urban governance
- Access to municipal services
- Women's rights to land and property

- Livelihoods and employment
- **Safety and security**
- Policies and legal or regulatory reforms.

VI. WOMEN IN INDIA : A HISTORICAL OVERVIEW

- Vedic Age – Women enjoyed an equal status The position of women gradually weakened.
- Post-Vedic: Seclusion of women for reasons of security and respectability. Women had no
- property rights and were reduced to landless labourers. Female infanticide, and other practices which became commonplace during Mughal period, persisted later on.
- The Colonial period had the effect of generating self awareness, and made the presence of women felt in the freedom struggle.
- They campaigned for equal rights for women in franchise and education.
- Thousands of women came forward and participated in the freedom struggle at the call of Mahatma Gandhi who spurred the movement for women emancipation.
- Twentieth century saw the emergence of Mahila Samitis and other organisations for the upliftment of women. They educated the society about the ill effects of the purdah system, child marriage, and ill-treatment of widows.
- As a consequence of their efforts, and women's indirect participation in the world war, the —The Indian Reforms Act of 1921 enfranchised a small section of the Indian Population for the first time and women were also included. — (Devi 1982).

VII. GENDER DIMENSIONS OF URBAN TRANSPORT.

A. Trip Pattern and Purpose

Women's travel is characterized trip chaining i.e. combining multiple destinations within one trip. Women make shorter and more trips, which often require them to change, divert, and break their journeys to pick up children, run errands, shop or take on other family obligations (Allen, Vanderschuren and Town 2016). This often makes it costlier for women to get around, since they may have to pay numerous single fare tickets during such a chained trip.

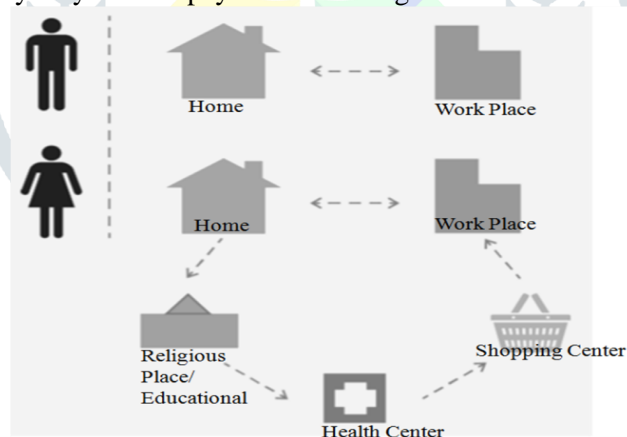


Figure 2: Trip Chaining as a Gendered Mode of Travel.

B. Modal Shares, Trip Distances and Time Poverty

A gendered comparison of Census data (2011) for five cities on 'Travel to place of work for other workers' revealed that on average, 37 per cent women walked to work compared to 27 per cent of men. In Bangalore, 43 per cent of women walked to work compared to 24 per cent of men, whereas in Chennai, twice the number of women (34 per cent) walked to work than men (16 per cent). Similarly, in Ranchi, 59 per cent women walked to work (ITDP 2015), whereas in Hazaribag, 76 per cent women walked to their educational institute or workplace (Jagori 2016). In Sanjay Camp in Delhi, 52 per cent of women as compared to 26 per cent of men walked to work.

According to the National Sample Survey Office (NSSO), more than 60 per cent of rural and urban households use the bus as their main mode of public transportation, followed by auto-rickshaw, taxi, railways and cycle rickshaw (NSSO 2016). While women's bus transport modal shares vary from 25 per cent in Mumbai to 37 per cent in Bhopal (DIMTS 2012), women are more dependent on public transport than men are, especially when they are from lower-income groups. In Mumbai, women made 45 per cent more trips by bus than by train, which increased to 67 per cent for households with incomes less than Rs 5000 per month (World Bank 2011).

In Delhi, 34 per cent of women commuted to work by bus compared to 25 per cent of men, whereas the corresponding figures for Chennai were 34 per cent (women) and 22 per cent (men) (Census 2011). Unfortunately, the off-peak and peripheral public transport routes on which many women depend for their travel to the market or social facilities, have much less priority than the radial commuter corridors going straight to the city centre (Viswanath 2013). In Bhopal, the informal system carries more passengers (20 per cent) than the formal public transport system (DIMTS 2012). Due to the unregulated nature of this sector, affordable but poor quality of vehicles, unverified drivers and conductors, unpredictable schedules and a lack of accountability characterize it.

Women tend to take more and shorter trips at varied times, during peak and afternoon off-peak hours. In Bangalore, the average distance traveled by women for work (1.7km) was about half of that for men (3.3km), whereas in Mumbai, women traveled 3/4th the distance of men (4km) (Census 2011). In Delhi's Sanjay Camp, 75 per cent of women worked within a 5km radius whereas 75 per cent of men worked within a 12km radius. Lower income women used slower and inexpensive modes of transport to manage transport costs, which exacerbates their time poverty (Anand and Tiwari 2006).

C. Sexual Harassment

Sexual harassment is unwanted sexual behaviour that includes physical harassment such as touching and groping, verbal harassment including commenting and whistling, and visual harassment such as staring and leering. With growing urbanization, the phenomenon of sexual violence in cities has become a serious issue. Sexual harassment has an effect on women's mobility, accessibility and confidence. Lack of safety and security in public spaces and public transport affects women's human rights and their ability to participate equally in the city.

There have been several studies conducted in India over the past few years that have explored the nature and extent of sexual violence that women and girls face in Indian cities, specifically in public spaces including public transport. A study conducted in Delhi in 2010, reported that over 90 per cent of women had faced some form of sexual harassment in the past year (Jagori 2010). The same study showed that 51 per cent of women faced harassment inside public transport, and another 42 per cent while waiting for public transport.

Similar studies in Mumbai, Kerala, Guwahati and Bengaluru showed high levels of sexual harassment and everyday violence. In a study of two cities in Kerala by Sakhi in 2010, Kozhikode reported that 71 per cent of women respondents faced harassment while waiting for public transport while 69 per cent faced it while using public transport. Similarly, in Trivandrum, over 80 per cent faced sexual harassment while either waiting for or riding public transport (Sakhi 2011). In Mumbai, a survey done by Akshara in 2013 also showed that 46 per cent of women reported facing sexual harassment inside buses and 17 per cent inside trains (Akshara Centre 2015).

In a study done by Safe Safar with UCL, London in Lucknow, 88 per cent of the respondents said that they had faced sexual comments while in public transport (Safe Safar, Safetipin and UCL 2014). A Bengaluru Metropolitan Transport Corporation (BMTC) survey among female commuters in 2013 found that two out of three commuters faced regular harassment (Deccan Herald 2013). The 2014 Thomson Reuters Foundation survey on unsafe transport in capital cities around the world found Delhi to have the fourth most unsafe public transport among the cities surveyed after Bogota, Lima and Mexico. (Thomson Reuters Foundation 2014) A 2008 National Association of Software and Services Companies (NASSCOM) study showed that female employees in the IT sector across India depended heavily upon the transport provided by the company as it was considered safer than public transport.

There is a need to create urban transport indicators and benchmarks and define a process to create, implement, monitor and evaluate gender responsive comprehensive/green mobility plans. The National Urban Transport Policy should adopt the sustainable development goal 11.2, which aims to “By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons” (UNSDSN n.d.).

VIII. GREEN URBAN MOBILITY SCHEME

On 16th March 2017, the government of India took another step toward to make India clean and green by “Green Urban Mobility Scheme” in 103 cities for transportation to promote the use of hybrid/electric vehicles and non-fossil fuels among others for public transport. The scheme was inaugurated by Minister of Urban Development Shri Venkaiah Naidu. Government is formulating the scheme to make the cities green and more eco- friendly. Green Urban Mobility Scheme (GUMS) expects to invest around INR 70,000 crores over 2018–2023 on sustainable transport. The national government has initiated missions and schemes to invest in urban transport and infrastructure; and created indicators and service level benchmarks to establish a city’s baseline and goal for improvement.

A. Objective

To promote the use of green public transports and cheer up growth of urban transport along low carbon path for reduction in pollution

Indicative Components of Green Urban Mobility Scheme

1. Sustainable Urban Mobility

- Infrastructure enabling bus systems (excluding buses)
- Safe Pedestrian pathways, cycling track, public bike sharing Integrating modes with physical & soft infrastructure e.g cashless payment systems & ITS
- Strategies for Urban Freight management

2. Sustainable Vehicles and Fuels

- Shift to electric/hybrid vehicles for public transport
- Shift to Non-fossil fuel for public transport projects.

3. Any other project demonstrating reduction in GHG emissions

B. Proposed Reform

- Setting up of and operationalizing UMTA.
- Preparation of Comprehensive Mobility Plans and integration of the same with Master Plan of the city/town and Adoption of Travel Demand Management measures (Parking policy, congestion pricing etc.) Implementation of Transit Oriented development.
- Adoption and implementation of an Encroachment policy aimed at ensuring availability of full right of way and policy for Urban Street Vendors.

C. Coverage & Funding

Table 1: Coverage & Funding Requirements

103	Coverage cities with Population > 500,000(2011) + State Capital
70,000	Estimated Project costs
2018-19 to 2022-23	Initial Projects Implementation during 7 year

Ministry of urban development Schemes- Proposed urban green mobility schemes

There is no any provision for women safety measures.

IX. VARIOUS GLOBAL CASE STUDIES

Case 1: Women Friendly Cities, Seoul Metropolitan Govt. 2009

The existing policies in Korea had little consideration of a woman's perspective and experiences pertaining to roads, transportation, and cultural aspects.

Led to inception of **Women-friendly City Project**.



Aim to improve the city spaces by reflecting women's perspectives in all city policies thereby improving their day to day urban life.

- Resolving the factors that cause inconvenience, discomfort and uneasiness in their daily lives.
- Enhancing women's rights and helping women achieve their potential

Process involved participation of female citizens from policy making to implementation. 244 experts and professors were consulted during policy making. 200 women (workers and housewives) were involved in on-site monitoring. Policy consultations and on-site monitoring by 3250 people in 25 autonomous districts.

A. Women-Friendly Parking Lots

56,000 parking lots that give first priority to female drivers (7.9% of around 7,00,000 slots in 13,00 parking lots. And installation of CCTVs and emergency bells in underground parking lots along with improving lighting.

B. Women-Friendly Roads

Improving quality of roads, Installing more CCTVs and increasing lighting to 30 lux, Creating rest spots separate from pedestrians.

C. Women-Friendly Parks

Well lit pedestrian roads, toilets and parking lots.



Figure 3: Women Friendly Parking lot, road & Parks.

D. Women-Friendly Built Environment

CPTED adopted in housing and redevelopment projects Crime prevention systems, such as windowed (transparent) elevators, in consideration for safety. Building childcare facilities along with female bathroom facilities. Subway ticket gates modified for stroller use.

Table 2: Practices for Gender mainstreaming (By Local Govt.)

Women and Family Policy Affairs	Ways to help career-interrupted women regain employment. Provision of affordable yet high quality daycare facilities.
Green Seoul Bureau	Building parks with women-friendly amenities. How to create parks that are safe for a woman to walk by herself ?
City Transportation	Are there parking lots where women can safely and easily park their cars? Are there measures to help women use public transit and para transit services safely at night ?
Seoul Metro	Are subway facilities stroller friendly ? Reliability and safety
Protection	Create Crime – free living spaces and environs.

Case 2- Greater Dhaka Sustainable Urban Transport Project in Bangladesh

This project aims to improve the public transport system of Dhaka North City Corporation and Gazipur City Corporation. The gender analysis resulted in a project design that addresses women's limited access to safe and reliable transport by supporting a bus rapid transport (BRT) line in an area where a large proportion of passengers will be female garment sector workers commuting from their homes to the factory. A gender action plan has been prepared, which includes the following features:

- 20% reserved seats for women
- 15% vending area for women vendors
- 70% garment workers eligible for subsidized passes
- 20% women in BRT construction and maintenance
- 30% participation of women in improvement of

local markets and feeder roads for non-motorized transport.

Case 3- ECIBICI- Bike share system, Mexico city

ECOBICI, Mexico city's public bicycle sharing system, is the largest one in Latin America. According to the Ministry of Environment, Department of Cycling Culture and Infrastructure, ECOBICI's management authority, women were only 20 per cent of its users in 2010 (when the program was initiated), which increased to 40 per cent by 2017. Moreover, the number of women users in ECOBICI is three times higher than the number of women cyclists in the city.



Figure 4: Bicycle sharing System mexico city.

ECOBICI's features - more than 450 stations located at a distance of around 300m in Mexico City's central business district with a high level of public activity and connectivity to other modes of transport such as the Metrobus (bus rapid transit system) and the subway, low cost and accessibility to the payment system - make it a safe, flexible and convenient mode for short trips.

RECOMMENDATIONS

1. Act for a local safety policy, planning, and practices which integrate a gender approach, and which support women's safety
2. Create Safe and Comfortable Walking Environments for Women and Girls.

3. Set Goals and Create a Mobility Plan Underpinning Women and Girls Concerns.
4. Cities and Municipalities- Allocate municipal funds to gender equality, community development and poverty reduction programs.
5. Preparation of Comprehensive Mobility Plans and Integration of the same with Master plan of the city/town.
6. Preparation of Comprehensive Mobility Plans and Integration of the same with Master plan of the city/town.
7. Adoption and implementation of Transit Oriented Development.

CONCLUSION

Gender Inclusivity in planning cannot be achieved only through the participation and efforts of women but is possible only through the active involvement of all – men, women's groups, the municipalities and the governments, international networks and UN agencies.

Emphasizing on the major issues of safety and security of women result in creation of positive public spaces which promote and strengthen the level of interactions between people.

Gender Inclusiveness promotes greater participation of all groups and segments of the societies along with improved ease of access to public spaces.

It is the smaller aspects such as lighting, good transport facilities and urban design techniques that have a significant role in shaping the society as a whole.

The role of NGO's and other organizations involved at the grassroots levels is critical to understanding the issues that might not be considered at the top level management.

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