PLANNING FOR GENDER EQUALITY IN URBAN MOBILITY

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Transport Connectivity is neither planned nor designed to be gender perspective in most cases.

Women experience unequalled time and resource constraints as a result of systemic differences in access to resources, household responsibilities, travel preferences and social norms surrounding mobility of women.

Transport sector needs more women in transport-based jobs in order to design transport systems that fully consider women’s needs when travelling.
Aim & Objectives

“To understand factors impacting women’s mobility in urban areas.”

1. Appreciate importance of gender equality in urban transport.

2. Study various approaches and policies regarding women’s mobility.

3. Assessing personal characteristics and attitudinal response for both genders and identify issues affecting their mobility.

4. To identify alternative strategies for enabling equitable mobility environment for women.

5. Recommend suggestive guidelines for enhancing women’s mobility.
Methodology

To understand factors impacting women’s mobility in Urban Areas

Understanding Importance of Gender Equality

Women in Workforce in India compared to men

Studying Policies in India and Abroad focussed on women’s mobility

Reviewing Case studies entailing different approaches to women’s mobility

Identifying different socio-economic groups of women in Urban India

User and Activity Survey

Literature Review

• Personal Characteristics (age, income, education, occupation, marital status, etc)

• Household Characteristics (household size, household obligations, dependants)

• Travel characteristics

Observe factors affecting travel pattern of women from different socio-economic backgrounds in various countries

Study various strategies adapted in various countries

Analyse Travel Patterns with respect to personal and household characteristics

Problems and Issues to be addressed

Develop alternative strategies to enable equitable mobility

Recommend guidelines to enhance women’s mobility

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Observe factors affecting travel pattern of women from different socio-economic backgrounds in various countries

Study various strategies adapted in various countries
Overall studies show that even though women make more trips than men on an average

Men make much more work trips and women make more non work trips.

Men travel a larger distance than women, but women spend more time on travel than men. And hence have lesser mobility speed than men.

Women with children in the labor force, look for jobs on average in a commute shed within a radius 20% lower than corresponding men.

This smaller commute shed translates to as much as 900,000 or fewer jobs.

The men’s ages fit a normal bell curve, but in the case of women, the curve was more of a u shape, with those ages 26 through 35 and age 55 or greater more likely to use transit.

Women were found to be less time starved and had smaller families.
Data Collection

**DELHI PROFILE**

- **Population** - 16 million
- **Density** - 1,484.0 sqkm
- **Density** - 11,312/km²
- **Sex ratio** - 868 /1000
- **Employment** - 28.3% Male (2001) 4.4 % Female

**Samples Collected : 112**

**SURVEY LOCATIONS**

![Map showing survey locations in Delhi](image-url)
Socio-economic Characteristics of Women in Delhi

- 68% of the women surveyed were graduates or above.
- 25% of the women surveyed were homemakers, retired or unemployed and 21% were students.
- 43% of women live in a 3-4 member household.
- 64% of the women surveyed were married and 10.5% of married women live with their parents in-law.
- 62% women have no household help.
Mobility Patterns of Women in Delhi

Average Trip Length - 10km
Average Trip Time - 24mins
Average Travel Cost - Rs 22

- 30% of the women possess Driving License
- Out of which only 24% have access to vehicles
- 13% women make trips accompanied by dependants
- More than 70% women spend more than 10% of their monthly income on travel
Mobility Patterns of Women in Delhi

- Average Trip Length of women: 10km

- Low mobility (0 to 5km)
  - 53%

- Moderate mobility (5km to 15km)
  - 33%

- High mobility (15 km and above)
  - 14%

- Trip Rates decrease as mobility increases
- Lowest Rates of mobility are shown in household sizes from 3-6
- Mobility increases with income
Impact of Socio-Economic Factors on Women’s Mobility

ATL of women of different age groups by Educational Qualification

ATL of women of different age groups by Occupation

ATL of women of different age groups by Marital Status

The statistically significant relationships were found between

- Mode Choice by Occupation
- Mode Choice by Personal Income
- Travel Distance by Personal Income
- Travel Time by Purpose
- Travel Distance by Household Income.
Gender Disaggregated Mobility Patterns in Delhi

- Average Trip Length of women is 37.5% lesser than that of men
- Men’s Travel Cost per trip is 35% lesser than women
- Personal modes like 2-wheelers and cars are more prominent in men
- Walk trips are much less common in men than women
Gender Disaggregated Mobility Patterns in Delhi

**Relationship Between Mode Choice & Purpose**
- **Work**
  - Men: 25%, Women: 23%
  - Men: 40%, Women: 25%
- **Education**
  - Men: 42%, Women: 25%
  - Men: 33%, Women: 25%
- **Business**
  - Men: 26%, Women: 20%
  - Men: 40%, Women: 20%
- **Non-work**
  - Men: 23%
  - Men: 35%, Women: 31%

**Relationship Between Mode Choice & Income**
- **Above 75,000**
  - Men: 84%
- **50,000 – 75,000**
  - Men: 52%, Women: 48%
  - Men: 40%, Women: 20%
- **25,000 – 50,000**
  - Men: 58%, Women: 42%
  - Men: 24%, Women: 21%
- **10,000 – 25,000**
  - Men: 30%, Women: 21%
  - Men: 30%, Women: 21%
- **Less than 10,000**
  - Men: 60%, Women: 20%
  - Men: 34%, Women: 30%
Findings

- The difference in access of vehicles despite vehicle ownership in the household leads to women preferring public transit or hired modes.
- Women are comfortable travelling in metros where they have a separate compartment which makes their travel comfortable and safe.
- Women are more inclined to use hired modes which provide them door to door services.
- Saving waiting time for public transit gives more time to devote to household responsibilities and childcare duties, even it comes at a higher cost.
- Promoting higher education among women helps increase their mobility.
- Women willing to travel longer distances for work has a higher income and thus metro becomes their choice of travel mode.
- Unmarried women have few to none household responsibilities giving them the opportunity to travel more.
- Married women living in joint families have other family members to help them with household responsibilities which allows them more mobility.
1. Provision Of Supplementary 10-15 Seater Buses On Existing Bus Routes

- Fixed route Based
- Routes with frequency over 10mins identified
- Provision of subsidized travel card for economically weaker sections, students, senior citizens
- Further subsidy for all during off-peak hours
- Wheelchair and pram friendly design
- Funding: Nirbhaya Fund

Present Metro Lines:
- Violet Line
- Pink Line
- Magenta Line

Present Bus Routes: 49
PTAL ranges from Good to Excellent

Population(2021) 19,75,000
Recommendations – 2 & 3

2. Complimentary Last Mile Services For Ladies

- Local Area Based
- Fixed route
- RWA monitored
- Fare rates to be lower than auto/ola/uber
- Vehicles like Tata Magic
- Parking provided at nearby bus depot

3. App operated demand based service for working women

- App-based
- Subscription based
- All route related information to be found from portal
- Focussed on improving mobility of working women
- Government aided/owned
- Fare rates to be lower than auto/ola/uber
THANK YOU