Safe Public Transport a means to Empower Women

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Background

- Limited travel choices increase the dependency of women on Public transport - 34% women in Delhi commute to work using buses as compared to 25% men. (Shah.S, 2017).

- 27 % working women and 13 % non-working women in Delhi see mobility and safety concerns as a major constraint to participating in the workforce. International Labor Organization (ILO), 2011

- Almost 45 % of molestation cases take place in public buses. Survey by Delhi Police, 2014.

- Travel patterns of women different to those of men
  - Trip chaining
  - Usually travel with dependents
  - Travel more during off peak hours
  - More concerned about cultural and societal norms

Safety in Public Transport

| Journey to the stop | Waiting at the Stop | Boarding and Alighting the Vehicle | Inside the Vehicle |

1. **Behavioral Issues**
2. **Planning Issues**
3. **Infrastructure issues**
4. **Other issues**

- Research conducted to understand safety perceptions of women in all 4 legs of the PT journey

- To Identify most unsafe part of women's transport journey.

- Assess impact of safe public transport on women's economic and social opportunities

Variables Studied

Around 27 parameters examined

- ***Journey to and from Destination To Stop-*** Distance to Stop, street lights, Lively Areas (people, shops, markets, residential area, etc.), clear Footpaths, Public conveniences (public toilets, drinking water, etc.), availability of IPT modes, visibility of Police in neighbourhood

- ***Waiting at the Stop-*** adequate lighting, Location, Design of stop, CCTV Cameras, Information, police visibility...

- ***Boarding and Alighting the Vehicle-*** Step Height, overcrowding entry exit gates, Buses do not stop at designated stops., information display on bus

- ***Experience inside the Vehicle:*** Rash Driving, Overcrowding, CCTV cameras, Emergency panic buttons, Women's Helpline no , Reserved seats for women, Visibility of Security Personnel/ Marshals in vehicles.
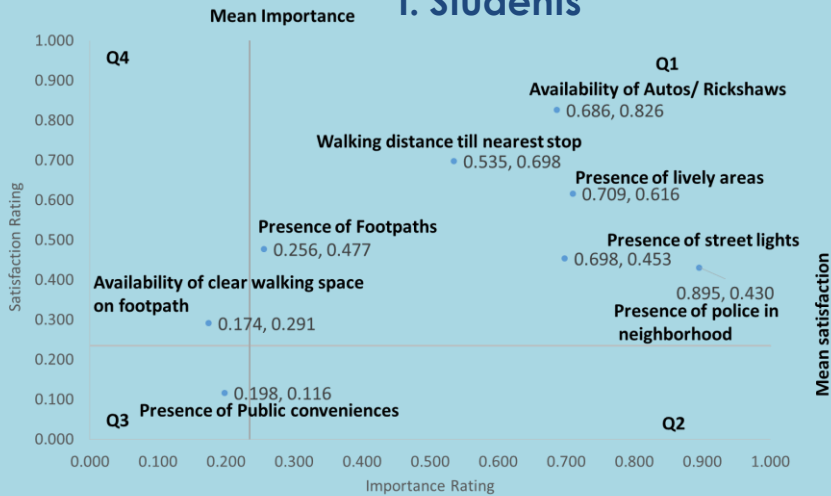
Study area and Surveys

- Study conducted in New Delhi covering areas of south and west Delhi

- User perception survey conducted for 247 females
    1. Students (86no- captured in educational campus),
    2. Working women (78 captured at work locations) and
    3. Non working women(83 captured in residences)

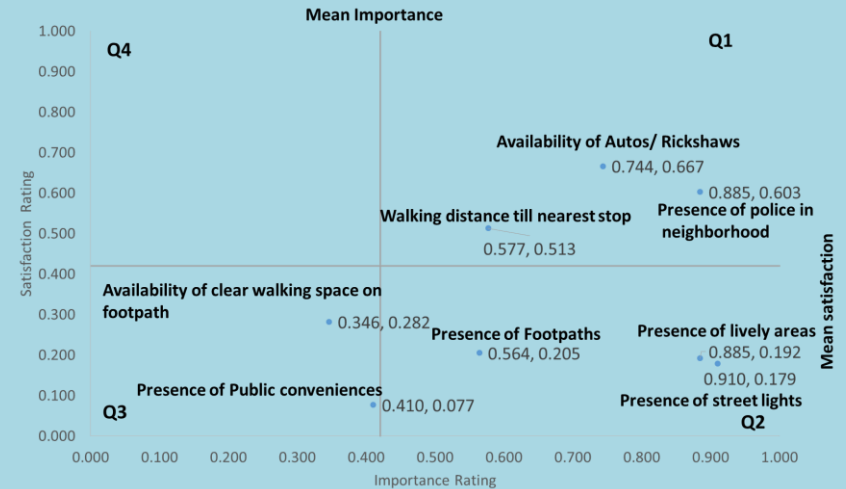- FGD also conducted for working women from low income groups.

Credit- Ankita Kapoor, 2018 M Plan Thesis, CEPT University

Results- Important satisfaction analysis

I. Journey to /from Stops to Destination

I. Students

Mean Importance

Q4   Q1

Availability of Autos/ Rickshaws
0.686, 0.826

Walking distance till nearest stop
0.535, 0.698

Presence of lively areas
0.709, 0.616

Presence of Footpaths
0.256, 0.477

Presence of street lights
0.698, 0.453

Availability of clear walking space on footpath
0.174, 0.291

0.895, 0.430
Presence of police in neighborhood

0.198, 0.116
Q3 Presence of Public conveniences   Q2

Satisfaction Rating (y-axis) / Importance Rating (x-axis) / Mean satisfaction

II. Working Women

Mean Importance

Q4   Q1

Availability of Autos/ Rickshaws
0.744, 0.667

0.885, 0.603
Presence of police in neighborhood

Walking distance till nearest stop
0.577, 0.513

Availability of clear walking space on footpath
0.346, 0.282

Presence of Footpaths
0.564, 0.205

Presence of lively areas
0.885, 0.192

0.910, 0.179

Presence of Public conveniences
0.410, 0.077

Presence of street lights

Q3   Q2

Satisfaction Rating (y-axis) / Importance Rating (x-axis) / Mean satisfaction

III. Non- Working Women

Mean Importance

Q4   Q1

Availability of Autos/ Rickshaws
0.747, 0.855

Walking distance till nearest stop
0.518, 0.639

Presence of lively areas

Availability of clear walking space on footpath
0.217, 0.265

0.386, 0.301

Presence of street lights

Presence of Footpaths

0.855, 0.241

0.880, 0.229
Presence of police in neighborhood

Presence of Public conveniences
0.205, 0.072

Q3   Q2

Satisfaction (y-axis) / Importance (x-axis) / Mean satisfaction

1. Infrastructure Issues
Presence of footpaths, streetlights are important.

2. Urban Planning Issues
Presence of lively areas is important.

3. Other Issues
Presence of police in Neighborhood is important

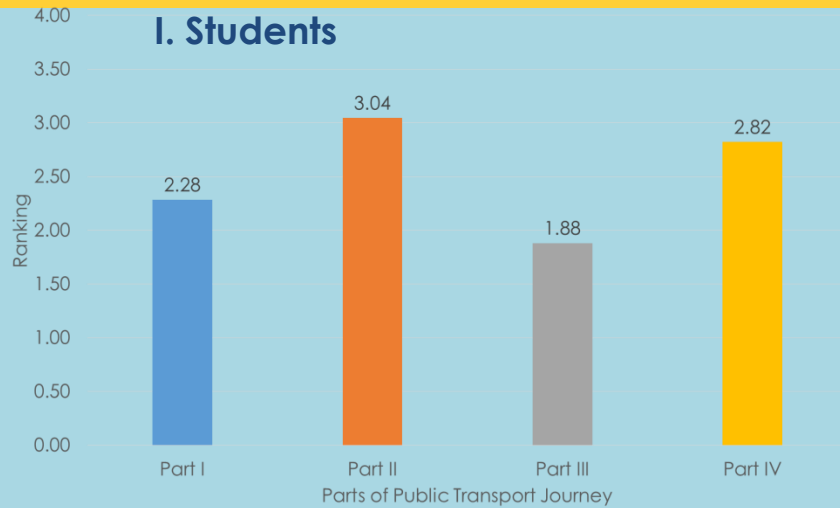*Credit- Ankita Kapoor, 2018 M Plan Thesis, CEPT University*

Overall Results

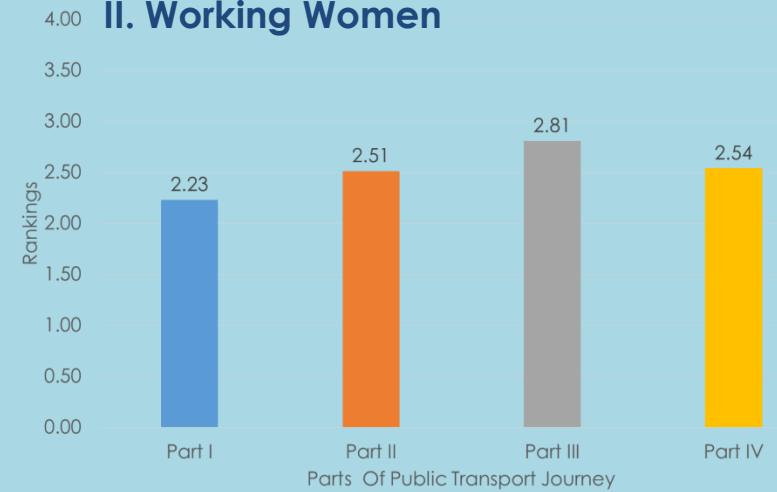**Factors which impact women's perception of safety significantly include:**

I.   Overcrowding at entry/ exit gates and inside the vehicle.

II.   Presence of CCTV cameras at the stops & inside the vehicle.

III.   Presence of street lights.

IV.   Presence of adequate lighting at the stops and inside the vehicle.

V.   Presence of walkable and clean footpaths.

VI.   Presence of lively areas (markets, shops, hawkers, people, etc.)

VII.   Presence of police/ security staff near the stops and inside the vehicle.

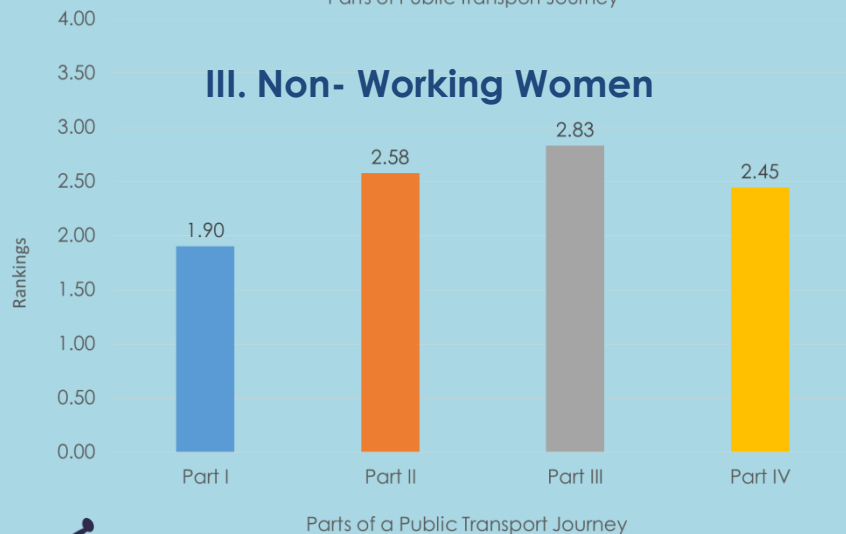# Difference in Perception of Safety within the groups

I. Students

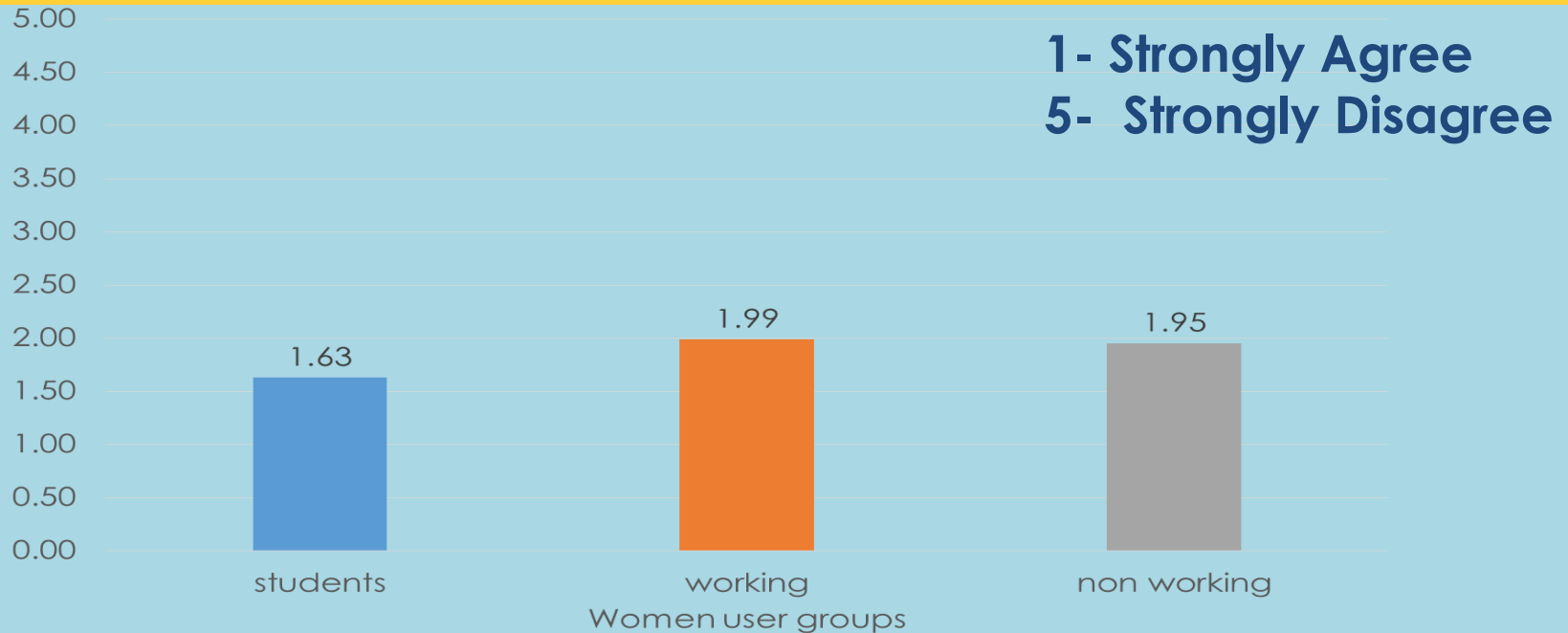(Ranking vs Parts of Public Transport Journey)
- Part I: 2.28
- Part II: 3.04
- Part III: 1.88
- Part IV: 2.82

II. Working Women

(Rankings vs Parts Of Public Transport Journey)
- Part I: 2.23
- Part II: 2.51
- Part III: 2.81
- Part IV: 2.54

III. Non- Working Women

(Rankings vs Parts of a Public Transport Journey)
- Part I: 1.90
- Part II: 2.58
- Part III: 2.83
- Part IV: 2.45

Results indicated

- waiting at the stops - most unsafe
- Journey to and from stop to destination- Safest..

Credit- Ankita Kapoor, 2018 M Plan Thesis, CEPT University

12th Urban Mobility India Conference & Expo 2019

Does lack of safety in Public transport restricts women's social and economic Mobility?

1- Strongly Agree
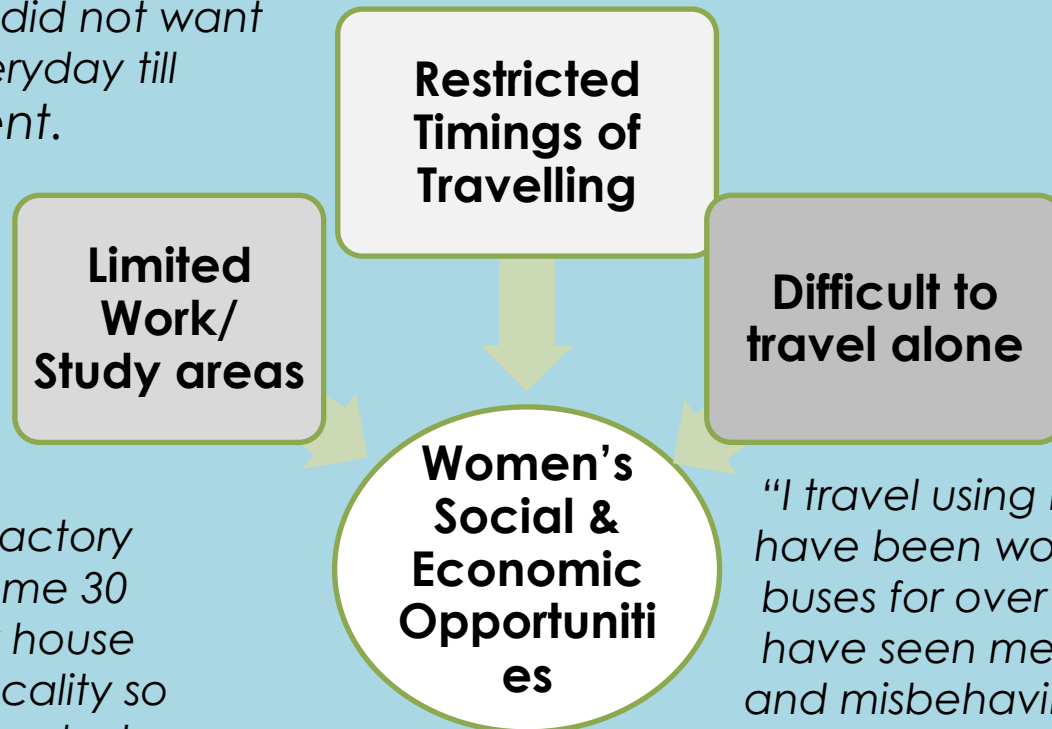**5- Strongly Disagree**

Results of ANOVA indicated

- **significant difference in mean values of students as compared to working/ non –working women.**
- **No significant difference in means working & non –working women.**

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Impact of Public transport on women's social and economic opportunities

I took admission in a college near to my house. My parents did not want me to travel alone everyday till North Campus. Student.

Restricted Timings of Travelling

Limited Work/ Study areas

Difficult to travel alone

Women's Social & Economic Opportunities

"I Live nearby to the factory where I work. It takes me 30 minutes to walk till my house everyday. I know the locality so I feel safe here. My parents do not allow me to travel far for work." working woman

"I travel using bus everyday. I have been working and using buses for over 15 years now. I have seen men commenting and misbehaving with women. Nobody says anything to them. It is difficult to travel alone. I prefer getting back home before it gets dark." – working women

Credit- Ankita Kapoor, 2018 M Plan Thesis, CEPT University

THANK YOU