

**Gender and Development: Women and Mobility**  
**Final Summary Report**



**Violence and Harassment Against Women in Public Transportation**

## **1. General introduction of women's use of transport**

Public transportation enables entry to the public sphere of society: religious institutions, education, markets and resources, health, economic and political activities, and markets, among other necessities. Accessibility to these activities is key to fostering economic development and social inclusion for a certain city and therefore, a well-functioning public transportation system plays an important role in women's economic empowerment (Belhaj et al., 2023). This means that government officials should consider the accessibility (physical proximity), the availability (closeness to where people live), and the safety of public transportation (Belhaj et al., 2023).

It is important to note that depending on the region, women constitute a lower or higher percentage of commuters in public transportation yet, their traveling is more indirect and multistep than men's trip patterns (Gonzalez et al., 2020). This is particularly relevant when considering that, in most countries, transport infrastructure is designed to cater for linear travel. Additionally, women have a heavier reliance on transport than men placing them at a more vulnerable state in terms of dependence (Gonzalez et al., 2020).

A key factor to consider when looking into gender equality is women's access to resources, one of them being public transportation. However, there are not just urban planning barriers but also sexual assault and safety concerns that may prevent the accessibility of these resources. This leads to the creation of 'gendered' access to public spaces since the occurrence of harassment plays an effect on women's transport choices (Chowdhury, 2022). Different studies analyzing sexual assault in urban public transportation have highlighted several important aspects of the occurrence of these events. Firstly, social factors and behavioral choices in terms of transportation by women (Chowdhury, 2022). The social context of the country and the city in itself can allow a deeper dive into the social institutions, culture, and history of the place and its influence on today's behavior.

Spatial theorists mention the idea of 'the culture of a place', introducing the concept that societal norms affect the behavior of individuals. In this particular case, Oscar Newman's defensible space theory (1972) is relevant in the sense that it asserts that spatial design has a direct effect on the environment in terms of the levels of crimes. Yet, understanding the mentality around different places can explain the levels of violence towards women. An example can be that if a society differentiates public and private spheres as feminine or masculine spaces, it forces women to adapt to more masculine behavior in 'masculine' spaces such as transport (Dunckel-Graglia, 2013). For example, when normalizing toxic masculine behavior, it might shift violence against women as a 'woman's problem' rather than a society. Hence making harassment normal.

## **2. Violence and sexual harassment against women and girls occurring in public transportation.**

Sexual assault, harassment, and violent behaviors in general target women (Ceccato et Paz, 2017). A study in Tokyo found that as many as ¼ of women have been victims of this aggression on public transportation while only 2% of the male respondents, making this a gendered issue (Shibata, 2020). While in Sao Paulo two-thirds of women reported being victims of sexual harassment while in transit compared to 18% among men (Ceccato et Paz, 2017). Violence and sexual harassment against women and girls in public transportation is an important

topic to study since not only do these acts have detrimental effects on the victims' health and welfare but it also brings to light rooted social determinants that cause inequalities. Needless to say, the fear of these occurrences also plays a role in the day-to-day lives of women in their decision-making in terms of transportation choices but also their necessities (Loukaitou-Sideris 2008).

Additionally, the absence of amenities such as waiting areas, proper lighting in transport areas, waiting times, and toilets places a vulnerability on female subjects (Parichiti and Jagori, 2012). Another study on female behavior in transportation methods by Nasrin mentioned that bad road conditions, uncomfortable amenities, high costs, unavailability of services, overcrowding on public transport, and the absence of safety are some of the major travel-related issues that need to be improved across all modes of transportation to tackle this issue more holistically.

When studying violence in public transportation, it is necessary to collect statistics and estimate the risk of being assaulted in terms of the number of attacks on passengers using indicators from mobility data such as duration of exposure, number of trips, and travel time. This can be demonstrated in a study conducted on the risk estimate of being assaulted in the Lille public transport network (Palmier, 2014). The paper links crime data, level of exposure, gender and aggression committed demonstrating men have a higher risk of being victims of violent aggression (robbery, battery, threats, and thefts). Yet, sexual assaults are almost always committed on women with a higher risk increasing at night after 9 pm (Palmier, 2014).

It is also important to consider the correlation between the density of transit environments and harassment. This means, that while an overcrowded bus might facilitate unwanted sexual assault, rape is more probable to happen at an empty bus stop. Lastly, researchers need to consider that sexual harassment incidents are widely unreported due to the factors being fear of reaction and disbelief, lack of knowledge of how to report the aggression, or even awareness that this episode can be denounced (Quinones, 2020). This brings a gap that is unseen in the actual number of incidents. Moreover, the reporting of these incidents is usually not very useful since authorities may not act or even revictimize the affected population.

### **3. Overview of different policies or actions taking place to reduce this issue.**

This is a complex issue as not only does harassment in transportation have a vast negative impact on women's health and welfare, but it also underlines the existing inequalities rooted in social determinants. Therefore, governments and policymakers have proposed several different countermeasures to address this concern. Policies should review evidence of constraints that women may face in terms of transportation: affordability (direct monetary cost and indirect nonmonetary cost), availability (coverage and frequency), and accessibility and acceptability (comfort) to have a true impact on women's mobility.

In Colombia, the government proposed making all seats preferential for women in the TransMilenio bus system with the idea that women would not suffer aggression while seated. The failure of this idea was the fact that the government failed to acknowledge harassment occurring throughout their whole commute, meaning during their waiting times. Additionally, in a survey conducted by Quinones in 2020, the author finds that respondents still suffered harassment even while seated, making this policy quite useless.

Other proposed, and in some cases implemented policies are the installation of proper lighting in the public transit networks as well as adding a surveillance system (cameras or police forces). All of these are relevant since it has been reported that most assaults occur during crowded conditions and in isolated environments, such as late-night travel (Loukaitou-Sideris 2008). This increase in surveillance was found to be one of the most effective measures (Shibata, 2020).

Lastly, one of the most common ways that governments have attempted to address this issue is by implementing women-only services. This measure can involve reserving partially or entirely, the transportation method for the duration of certain times (i.e. rush hours) or the entire duration of the service (Tilous, 2019). This has been opted all around the world, including Dubai, Jakarta, Lahore, Rio de Janeiro, and Tokyo among other cities (Dunckel-Graglia, 2013). This type of policy aims to target not only the aggression but also reduce the ‘feelings of fear’ women face while commuting. Yet, although this is a solution that seeks to bring safety for women, due to the cultural norms and societal expectations, there are controversies within this topic. One of them is that long-term equality between genders may be difficult to achieve since it is a segregation tactic that can likely depend on gender divides (Associated Press, 2009).

#### **4. In-depth overview of 'women-only' transportation systems**

##### **Mexico City, Mexico:**

One of the most populated cities in the American continent, the Metropolitan Area of Mexico City, shares the governance among 3 different states with the main services provided by Mexico City (Mejia-Doranters et Soto Villagran 2019). The Mexican Federal Institute for Gender Equality and Equal Opportunity for Women (INMUJERES) conducted a study that demonstrated that among all public spaces, the public transit networks are where women face the largest levels of violence. Therefore, in 2002, the Mexican government implemented a measure that mandated that the first two metro wagons and certain buses as female-only.

In the study by Dunckel-Graglia, the author examines the cultural roles and public opinion to evaluate women-only transit services. The paper looks at both the quantitative and qualitative information through an analysis of three years of ethnographic research, public survey opinions, and online comments on the issue to find that the violence faced in commutes leads women to opt for women-only transportation. The author also seeks to understand through the survey the cultural norms and their tie to gendered spaces. This is, for example, that public transportation is ‘masculine.’ Yet, more interestingly, the author observes that men strongly emphasize that violence in public transportation is normal. The author concludes that although women-only transportation can alleviate harassment and violence against women, the idea of a segregation tactic may never lead to a recognition of the deeply embedded gender inequalities, limiting the evidence that proves the effectiveness of women-only services.

##### **Cairo, Egypt:**

With 3 metro lines, serving 22.9 million people, the accessibility and availability of public transportation close to home appears to have a strong role in women’s role in Cairo (Belhaj et al. 2023). Yet, it has been demonstrated that women make fewer commuting trips than men with an

average of fewer than 2 trips a day, a standard result in predominantly Islamic countries, suggesting the influence of cultural factors on travel behavior and the mobility gap (Uteng, 2011). With an international movement to fight harassment against women, in the late 1980s, the Egyptian government induced women-only carriages as a measure to counteract aggression. This service was introduced in 1990 to protect women from sexual harassment by men in overcrowded transport (Cowell, 1990).

In the analysis of Tilous in 2019 on the controversies surrounding women-only metro wagons, the author states that creating non-mixed spaces in transportation not only benefits women's emancipation on many different levels but also capital. In her study, the author wants to show how women-only carriages respond very differently to power relations compared to social-gender relations. The author carries out the study through press articles from different sources and a series of interviews. This finds that even though it was not the intention, the security solutions were as well to represent the religious norms of the country yet, the incoherences with gender relations are not necessarily addressed.

### **São Paulo, Brazil:**

Serving 21.4 million inhabitants through 15 metro and train lines, the Sao Paulo transportation system introduced women-only wagons in 2013. As of now, the metro system runs overcapacity, exposing women to more vulnerable situations. This is demonstrated by the fact that two-thirds of women in a survey have suffered from some sort of sexual assault behavior, with half of those incidents being during their commuting trajectory (Ceccato et Paz, 2017).

In Tilous' study, the author focused on some underlying cultural beliefs that highlight the rooted issue. To specify, 65.1% of the people questioned claimed an agreement with the following statement: 'Women who wear revealing clothing should expect to be aggressed,' emphasizing the necessity to address the issue at a deeper level. Moreover, the author criticizes the government for taking a classist approach, as the women who suffer more from these acts of violence are the ones who are 'captives' of public transportation, meaning that these women with the necessity of a job don't have the time to denounce aggression to the police (Tilous, 2019). To conclude, segregation means of transport does not resolve the problem of harassment in collective transport.

### **Tokyo, Japan:**

Lastly, in this paper, it was important to include Tokyo as it not only gives a different perspective as it is a developed nation but also it is one of the first cities to adopt women-only carriages in 1909, only after New York which was in 1863 (Tilous 2019). Similar to the accounts in the other cities reviewed, studies suggest that one-fourth of women have experienced groping in trains and buses. Therefore, understanding the effect of violence and harassment in mass transit brings an explanatory lens to the conceptual frames of everyday urban transport facilities and the discourse of gender.

In the case of Japan, the high density of train travel and the high rates of sexual violence led women to take precautionary behavior. In a paper by Horii and co-authors, the researchers surveyed 155 young women in a variety of locations in Tokyo to further understand the social

norms behind the usage of women-only carriages. The results of the survey highlighted that the usage of the segregated form of mobility was a response to the anxiety generated by widespread groping in addition to a rejection of a certain type of masculinity (Horii et al. 2011). To further explain, the study found negative connotations with *oyagi* (middle-aged) men from respondents that were later backed by evidence from the Tokyo police's website demonstrating that 30 to 40-year-old men are more likely to commit these aggressions. Finally, this paper concludes that in addition to its original purpose of safety, women-only carriages function as a 'discursive practice to challenge the patriarchal order of Japanese society (Horri, 2011).'

To further analyze this countermeasure, a survey conducted by Shibata in 2020 on 400 college students (male and female), studied the effectiveness of women-only cars and the perception around harassment, more specifically groping. It found that while most women approved of women-only cars, they may not necessarily use them because of their limited capacity.

## 5. Conclusion and remarks:

Not only does public transportation play a key role in women's labor force participation but also in the accessibility to necessities in terms of health, education, political, and economic terms. Therefore, to fight against gender inequality and violence, policymakers need to consider accessibility, availability, and safety to strengthen public transport (Belhaj et al., 2023). This is to acknowledge and create policies against the concept of "Right to the City" meaning that the accessibility of urban spaces fails to include gendered consideration of integration (Lefebvre, 1996).

Female behavior in transportation methods can be vastly changed by bad road conditions, uncomfortable modes, high costs, unavailability of mode, overcrowding on public transport, and the absence of safety (Nasrin, 2021). These major travel-related issues needed to be considered and improved across all modes of transportation to tackle this issue more holistically. Therefore, in general, to provide equitable transport services that satisfy women's mobility needs concerning, firstly, affordability which does not impose financial sacrifices on households. Secondly, availability entails not only frequency, good timing, and route options but also effective design of stops. Lastly, acceptability which takes into consideration other factors such as quality, comfort, and safety.

Through the analysis of several different studies on women-only transport services in different regions and contexts, there is a general conclusion that even though the implementation of segregated countermeasures can alleviate women's fear and lessen the number of aggressions, this measure does not address the deep-rooted issues around gender inequalities in mobility. Yet, it is important to note that results vary depending on factors such as quality of infrastructure, and crowd patterns, among other factors (Useche, 2024). Furthermore, the authors of the studies address the underlying societal norms and behaviors that affected the perception of women-only transportation and their adoption of this measure. Moreover, research has shown that other preventative approaches are more effective, such as increasing police patrols and surveillance cameras as they lower the degree of fear of crime in general.

Lastly, it is important to note that an important improvement to this issue is the regular collection of gender-segregated travel-related data as the lack of this information limits the capacity of analysis (Uteng, 2011). On another note, updating comprehensive data can help better understand the inefficiencies and weaknesses of networks and allow policymakers to better diagnose problems and counteract mobility gaps. This goes hand-in-hand with the data collection of behavioral surveys that look into travel patterns, education, gender, income, socioeconomic parameters, and violence, crime, and harassment data (Uteng, 2011). This concept is not only an improvement in terms of gender equality but also in terms of vertical equity so that transport services are available and accessible to populations of different social needs, and genders.

## References

- Belhaj, F., Noumba Um, P., & Mehmood Alam, M. (2023, March 8). *Public transport is key to strengthening women's economic participation in MENA*. <https://blogs.worldbank.org/arabvoices/public-transport-key-strengthening-womens-economic-participation-mena>
- Burgess, A., & Horii, M. (2012). Constructing Sexual Risk: 'Chikan', Collapsing Male Authority and the Emergence of Women-Only Train Carriages in Japan. *Health Risk & Society - HEALTH RISK SOC*, 14. <https://doi.org/10.1080/13698575.2011.641523>
- Ceccato, V., & Paz, Y. (2017). Crime in São Paulo's metro system: Sexual crimes against women. *Crime Prevention and Community Safety*, 19(3), 211–226. <https://doi.org/10.1057/s41300-017-0027-2>
- Chowdhury, R. (2023). Sexual assault on public transport: Crowds, nation, and violence in the urban commons. *Social & Cultural Geography*, 24(7), 1087–1103. <https://doi.org/10.1080/14649365.2022.2052170>
- Coppola, P., & Silvestri, F. (2020). Assessing travelers' safety and security perception in railway stations. *Case Studies on Transport Policy*, 8(4), 1127–1136. <https://doi.org/10.1016/j.cstp.2020.05.006>
- Cowell, A. (n.d.). *Cairo Journal; For Women Only: A Train Car Safe From Men—The New York Times*. Retrieved March 8, 2024, from <https://www.nytimes.com/1990/01/15/world/cairo-journal-for-women-only-a-train-car-safe-from-men.html>
- Dunckel-Graglia, A. (2013). Women-Only Transportation: How “Pink” Public Transportation Changes Public Perception of Women's Mobility. *Journal of Public Transportation*, 16(2). <https://doi.org/10.5038/2375-0901.16.2.5>
- Loukaitou-Sideris, A., & Fink, C. (2008). *Addressing Women's Fear of Victimization in Transportation Settings A Survey of U.S. Transit Agencies*. <https://escholarship.org/uc/item/23t2q2gc>
- Mahadevia, D., Mishra, A., Hazarika, A., Joseph, Y., & Borah, T. (2016). *Safe Mobility for Women—Case of Guwahati*. <https://doi.org/10.13140/RG.2.1.3324.2643>
- Mejía-Dorantes, L., & Soto Villagrán, P. (2020). A review on the influence of barriers on gender equality to access the city: A synthesis approach of Mexico City and its Metropolitan Area. *Cities*, 96, 102439. <https://doi.org/10.1016/j.cities.2019.102439>
- Nasrin, S., & Bunker, J. (2021). Analyzing significant variables for choosing different modes by female travelers. *Transport Policy*, 114, 312–329. <https://doi.org/10.1016/j.tranpol.2021.10.017>
- Palmier, P. (2014, April 15). *The risk estimate of being assaulted in public transport in Lille urban area*.
- Peters, D. (2013). *Gender and Sustainable Urban Mobility. Official Thematic Study for the 2013 UN Habitat Global Report on Human Settlements*. <https://doi.org/10.13140/RG.2.1.4746.9287>
- Priya Uteng, T. (n.d.). *Gendered Bargains of Daily Mobility: Citing Cases from both Urban and Rural Settings*. Retrieved March 6, 2024, from [https://www.researchgate.net/publication/277743183\\_Gender\\_and\\_Mobility\\_in\\_the\\_Developing\\_World/link/5cc6e3174585156cd7b9f529/download?\\_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19](https://www.researchgate.net/publication/277743183_Gender_and_Mobility_in_the_Developing_World/link/5cc6e3174585156cd7b9f529/download?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19)
- Priya Uteng, T. (2012). *Gender and Mobility in the Developing World*.



Quinones, L. M. (2020). Sexual harassment in public transport in Bogotá. *Transportation Research Part A: Policy and Practice*, 139, 54–69. <https://doi.org/10.1016/j.tr.2020.06.018>

Useche, S. A., Colomer, N., Alonso, F., & Faus, M. (2024). Invasion of privacy or structural violence? Harassment against women in public transport environments: A systematic review. *PLOS ONE*, 19(2), e0296830. <https://doi.org/10.1371/journal.pone.0296830>