













A study on gender equity in Greater Cairo's public transport system

Meshwary

A study about women's experience in Greater Cairo's public transportation system Cairo, May 2021



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Contents

Abbreviations Definitions Executive Summary	4 5 6
Bus Rapid Transit State of Cairo's Transport Women in Transport The Study	8 9 10 11
Key Findings A. Women's Travel Patterns	13 14
B. Women's experience in stops and vehicles Security Infrastructure	18 22
C. Women in the transport workplace	26
Solutions for Achieving Gender-Responsive Transport 1. Transport Vehicles & Service Planning 2. Station & Terminal Design 3. Corridor & Planning Design 4. Land Use Planning	28 29 31 32 33
5. Law Enforcement6. Communications Strategy7. Employment in Operations	35 36 37
Conclusion	38

Abbreviations

BRT Bus Rapid Transit

CTA Cairo Transport Authority

CAPMAS Central Agency for Public Mobilization and Statistics

GCMA Greater Cairo Metropolitan Area

ITDP Institute for Transportation and Development Policy

NCW National Council for Women

NUCA New Urban Communities Authority

ROAS Regional Office for Arab States

UN Habitat United Nations Human Settlements Programme

UN Women United Nations Entity for Gender Equality and the Empowerment of

Women

Definitions

Building Envelopes Physical barrier between a building and the outdoors. Usually refers to

roof, walls, doors, windows etc.

Carriageway Part of the road dedicated to vehicles

Eye on the Street Natural surveillance that is due to activity on the street

Footpath Pedestrian sidewalks

Footpath clear width The width of a footpath available for pedestrian movement, net of the

furniture and frontage zones

Furniture Zones Area of the sidewalk dedicated to street furniture such as benches and

planters

Last Mile Distance travelled from home to first mode of transport or from last

mode of transport to destination

Level Boarding Aligning the interior of the mode of transport with the station or stop

platform

Mobility Movement of people

Modal Split Percentage of travelers using different types of transportation

Paratransit Services Informal transportation services

Peak Hour The time of day at which traffic is at its highest

Pedestrian Zone The area of the sidewalk dedicated to pedestrians

Real-Time Bus Arrival Information made available to users about time at which buses will

Information arrive which is updated as buses move around the city

Gender Segregated Spaces Spaces that are separated by gender. It usually involves designating

space for women

Service Plan A report that seeks the most efficient way to deploy services such as

buses or other modes of transport. It includes multiple surveys to measure demand and current supply of transportation services

Transport Substitute A mode of transport used in the place of another mode

Uber / CareemCompanies that offer ridesharing, car-hailing and food delivery services

Universal Access Providing equal opportunity access for those with disabilities

Verbal Harassment Hostile or offensive form of communication unwelcome by the

recipient

Executive Summary

Until recently, transport planning operated under the assumption that women and men benefit from services equally. Reality, however, dictates a different experience for women and men. UN Habitat Egypt in partnership with the New Urban Communities Authority (NUCA), UN Women, and Institute for Transportation and Development Policy (ITDP), undertook this study which included a series of surveys and focus group discussions with commuters in the city to develop a better understanding of the challenges women face while using the transport system. The results can help inform the transportation planning process, ensuring the inclusion of data-driven gender concerns in the service plan and infrastructure designs.

The studies point to a number of challenges faced by women, including irregular service, overcrowding, and constant risk of sexual harassment. Over 80% of women surveyed face harassment at some stage of their journey, including the walk to the stops, the wait for the vehicle, the boarding process, and the ride itself. A lack of adequate services and the resultant overcrowding heightens the risk of harassment. Survey findings point to the diversity of trips taken by women, reflecting women's childcare and household responsibilities. Women with disabilities face unique challenges due to the lack of access in stops and vehicles, poor last mile connectivity, and overcrowding that makes it difficult to board vehicles.

Focus group and survey participants stressed the importance of safe spaces throughout the journey, with 90% of women surveyed in favour of dedicated sections for women on road-based public transport vehicles, mirroring women's carriages in Cairo's metro system. Participants called for expanded public transport fleets to address overcrowding and improve reliability. Complaint redressal systems are needed to ensure that perpetrators are brought to justice. Safe, universally accessible sidewalks with adequate lighting and shopfronts that offer an "eye on the street" effect are needed to improve security during the walk to public transport stops and stations.

Addressing the challenges faced by women will require joint efforts by multiple agencies that plan, design and manage the transport system. It must ensure that physical designs and operations are responsive to women's needs, including those with disabilities. It is also important to initiate campaigns to prevent harassment, inform women about available resources and set standards for women's employment. Ongoing enforcement and complaint redressal should involve the police in partnership with front line staff. Through collective action, stakeholders in the transport system can ensure that transport services offer a secure environment that better allows for women's mobility and access.

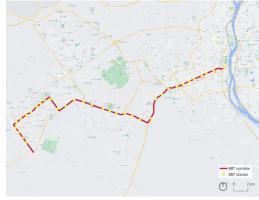


Bus Rapid Transit System

This study was conducted to understand the needs of women in transportation to help inform the design of a new bus rapid transit System in Cairo and Giza governorates. UN-Habitat, in partnership with NUCA, has introduced the concept of BRT to operate in Greater Cairo. The BRT system is characterized by several design features, including dedicated lanes, median busway alignment, platform-level boarding, off-board fare collection, and intersection treatments. It is a high-quality bus-based transit system which is considered a fast, comfortable, and cost-effective public transport mode. The Western BRT Corridor connects between the New Communities of 6th of October City, central Giza, and Cairo. The BRT corridor starts from the Industrial road (in 6th of October City) passing through Industrial Road, Al Mehwar Al Markazi, 26th of July, Al Wahat Road, Fayoum Desert Road, Remaya and King Faisal Street, connects to Faisal Metro Station ending by the Giza Square terminal. The system is expected to carry 126,000 passengers per day, through its express and regular services, and will decrease trip time by 15 minutes/trip- although these are conservative estimates. The length of the corridor is approximately 42

kilometers with 34 stations (including depot and terminals).

The BRT project has the potential to improve accessibility in Greater Cairo by extending the reach of the metro, bus, and paratransit systems. The overall objective of this project is to reduce congestion and improve accessibility for a large section of the population living in the Cairo Metropolitan Area, with a special focus on the mobility needs of women and vulnerable groups such as persons with disabilities, children, and the elderly. The project is expected to have a unique impact and create a transformational change in the Greater Cairo Region's access and transport modality for not only women but also other vulnerable members of the society.



BRT route from 6th of October to Giza



State of Cairo's Transport

Cairo has a large public transport network consisting of a metro system, a municipal bus system operated by the Cairo Transport Authority (CTA), and an extensive network of minibus and microbus routes. The Cairo Metro network, operated by the National Authority for Tunnels, spans 78 km with three lines. The system caries around 4.1 million passengers per day and is reported to have the highest number of metro boardings per kilometre in the world.¹

The Greater Cairo bus network is made up of approximately 450 official numbered bus and minibus routes, along with numerous informal microbus services.² The largest operator, the Cairo Transport Authority (CTA), operates a fleet of over 3,000 buses and 950 minibuses.³ CTA's fleet consists of 12 m buses with a typical seating layout of 32 seats. The entire fleet has high floors, with two to three steps at entry. Minibus routes are run by private entities under route licenses issued by CTA. The minibuses typically have twenty-nine seats. Additional services are operated with a variety of smaller vehicles, including 14-seat microbuses, 12-seat El Tramco buses, 10- seat Volkswagen vans, and 7-seat Suzuki vans.

Due to shortages in the network of dedicated infrastructure, buses and paratransit services, the informal sector is filling this gap by providing 8.1 million trips per day. The Egyptian government has been working to increase the provision of public transport through various projects including expanding metro lines, planning a Bus Rapid Transit System (BRT), and tendering for a monorail system. A private operator, Mwasalat Misr, also recently transformed the transportation market with a fleet of well-maintained buses that connects Eastern Cairo with Central Cairo and operates in 6th of October city. Mwasalat Misr provides a bus service that has clearly defined physical stops and provides users with smart card options and real-time information on Google Maps. As part of the BRT project, a new Transport Regulatory Unit (TRU) has also been established to regulate public transport in new communities with the aim of integrating these lines with other modes of transport.

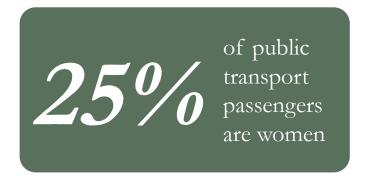


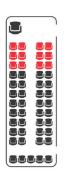
Women in Transport

Women rely on public transportation as their main mode of transport around the city. To ensure that the projects the government is undertaking are suitable for both women and men, the findings from this study should help inform the transformation process of Cairo's public transportation system. The difference in experiences of men and women is highlighted by numerous complaints by women about their daily commutes. Through focus group discussions, surveys, and head counts at terminals and in buses, UN Habitat in partnership with ITDP and UN Women set out to better understand those disparities and the perspective of the average Egyptian woman's commute.

Through these studies, UN Women found that 83 percent of total female respondents reported that they felt neither safe nor secure in the street.⁴ Thus, when making decisions about transport, women consider the level of safety and personal security on available modes. They may forego trips and seek less efficient or more costly alternatives when there is perceived threat. Considering the economic impact of various responses, including legal redress, modification of one's route, travel with a companion, and absenteeism at school, the overall cost of gender-based violence on public transport in Egypt was estimated to be EGP 241 million in 2015.⁵ The country experienced a loss of EGP 329 million due to harassment in public spaces. To ensure increased women's access to economic, health, and educational opportunities, availability of safe and reliable transport is crucial. In addition, addressing the needs of women also ensures that the needs of other vulnerable groups that depend on women, such as children and the elderly, are addressed.⁶

In Cairo, some steps have been taken to address the pervasive risk of sexual harassment in public space. Women-only cars in the metro were introduced in 1989, two years after the first metro line was commissioned.⁷ In 2013, the government dispatched policewomen onto the metro system to secure women's cars and protect riders against harassers.⁸ In November 2017, the English Mass Transit company, which is contracted by Cairo's Transport Authority (CTA), launched a female-only bus service.⁹ However, other CTA, minibus, and microbus services in the city do not offer separate sections for women.





The Study

This study was conducted to understand the needs of women in transportation to help inform the design of a new bus rapid transit System in Cairo and Giza governorates.

It is important to highlight and demonstrate the challenges women face on a daily basis in their commutes. The purpose of this report is to illustrate and expand on the findings to better inform other transportation projects in the Greater Cairo Region.

Data Collection Methodology

Public transport terminal survey

This survey captured women's travel patterns and preferences by collecting sex-disaggregated data on mode choice, trip origins and destinations, trip purposes, and safety and security concerns. The surveys were conducted during the morning and evening peak periods, from 07:00 - 09:00 and 15:00 - 18:00. 481 commuters were interviewed, including 221 men and 260 women.

Focus group discussions

The discussions aimed at capturing information on women's experiences while commuting in Cairo. Focus groups were held with 15 women from 6th of October City; 8 women from Nasr City, 8 teenage girls at Al Muqattam; and 18 women with disabilities along with caregivers of minors with disability.

Online travel pattern survey

An online survey regarding women's travel patterns and preferences using the Google Forms platform garnered 2,500 responses.

Operator assessments

The survey assessed the level of gender awareness among existing public transport operators and sought to understand perspectives on women's employment participation and approaches for responding to harassment during public transport journeys.

Frequency-occupancy survey

The frequency-occupancy survey recorded the number of men, women, and children on a sample of public transport vehicles at five locations across 6th of October City, Giza, Cairo, and New Cairo City.

Non-motorized transport (NMT) facility survey

The NMT facility survey examined the quality of the walking and cycling environment at six representative locations along the planned east and west BRT corridors.



Key Findings

Overview

A. Women's travel patterns

- 1. Women make more diverse trips in comparison to men
- 2. Women spend approximately two hours in their daily commute
- 3. High travel costs limit women's choices of transport alternatives
- 4. Women face more insecurity at night

B. Women's experience in stops and vehicles

Security

- 1. Women surveyed face harassment in different modes of transport
- 2. Physical and verbal harassment is common on the street as well as in transport vehicles
- 3. Operators are often complicit in harassment
- 4. Women sometimes pay more for improved safety
- **5.** Women-only cars are linked to improved safety

Infrastructure

- 1. Transport facilities are not accessible
- 2. Streets lack safe and comfortable facilities for walking

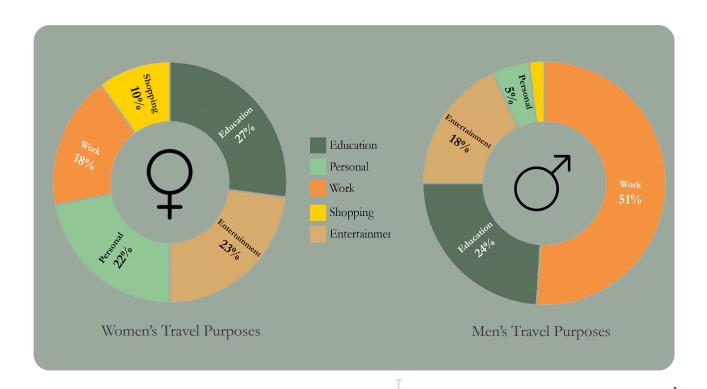
C. Women in the transport workplace

- 1. Women are rarely included in the transport workforce
- **2.** Operators attitudes prevent women from participating in the transport industry

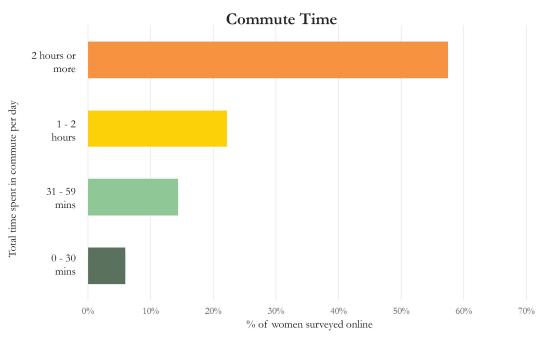
Women make more diverse trips in comparison to men

Survey findings point to the diversity of trips taken by women. While the majority of male trips were work-related, women had varied trip purposes. Women took more personal and shopping trips than their male counterparts, which may reflect an unequal distribution of household related duties such as taking children to school and visiting relatives. Men tend to visit more places outside the home. The public transport terminal survey revealed an average daily trip rate of 2.0 trips per person for men and 1.5 trips for women.

These graphs show the differences in travel purposes between women and men. They reflect the more varied nature of the trips that women take, as opposed to men who predominantly travel for work, followed by education.



A majority of women reported spending approximately two hours in their daily commute



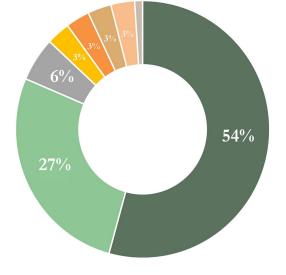
In the absence of a meaningful network of dedicated infrastructure, bus and paratransit services are subject to Cairo's crippling traffic, resulting in declining commercial speeds and less efficient fleet utilization. Bus speeds along corridors such as Al Mehwar Al Markazi in 6th of October City are extremely slow, often reaching below 15 km/h and in some areas even below 5 km/h. This suggests that, taking waiting time into account, it may be faster to walk than to take a bus during peak hour. This results in longer waiting times and longer trip durations for women. This time could otherwise be used to run errands, finish other chores or just spend time for themselves. When asked how much time they spend in transport on a daily basis, more than 65% reported spending more than one hour while 50% reported spending 2 hours or more commuting

When I arrive home, I am so tired that I cannot do anything anymore. I do not get tired from working, I am exhausted by the trip.

لما بوصل البيت بحس بالتعب لدرجة أني مبقدرش أعمل حاجة تانية. أنا مبتعبش من الشغل أنا بتعب من المشوار.

High travel costs limit Women's choices of transport alternatives

With regards to the transport cost burden, respondents to the public transport terminal survey reported an average expenditure of EGP 10 per day for women and EGP 12 for men (surveys conducted in 2018). In the online survey, the average expenditure was around EGP 18. The higher value from the online survey may reflect the demographic differences between the sample of people on ground and the sample of people from the online surveys. Regardless of the discrepancy, results still indicate a correlation between income and willingness to pay more for improved safety. Private cars, Ubers and Careems have been cited as the preferred method used to secure higher rates of safety. These modes are remarkably more expensive, it was noted that only 12% of women surveyed can afford to use substitutes regularly.



Taxi

Car

Metro

Uber / Careem

Bus

No Substitute

Microbus

Walk

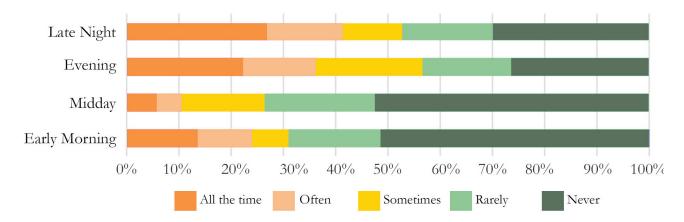
Alternate Mode Used

The reported average expenditure on transport per day for women is EGP 10 and EGP 12 for men. According to the Census and Economic Information Centre (CEIC), average Egyptian household income per month in 2018 was 4,904 EGP. Assuming that there are three members per household making paid commutes then they would be paying a total of 693 EGP/month which means that the average Egyptian pays around 20% of their average income on transportation. When they can afford to substitute public transport, women alternatives as shown in the chart on the left.

Women face more insecurity at night

Public transport terminal survey respondents cited higher levels of insecurity in the evening and at night. As a result, women's mobility is restricted to certain hours of the day, and women have earlier curfews during the winter when the sun sets earlier than in summer days. To improve personal safety, women reported calling on family members to accompany them after dark and expressed feeling safer when shop lights are on in the darker hours of the day. "The presence of shops gives us a sense of security." Women were asked how often they felt insecure at different times of the day, and the results are shown in the figure below.

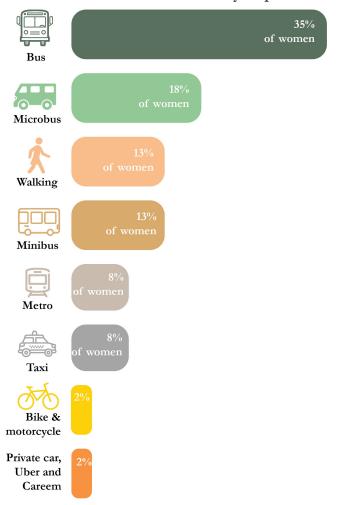
Feeling of Insecurity by Time of Day



Women surveyed face harassment in different modes of transport

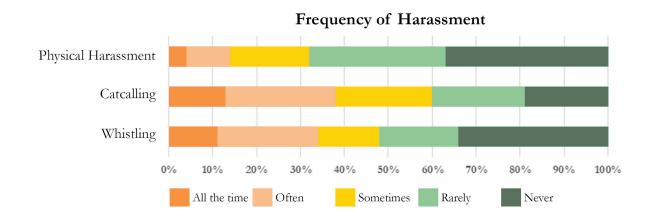
In the online survey of 2,500 women, 35% of the women who responded agreed that CTA is the least secure mode followed by micro-buses at 18%. In the focus group discussions, overcrowding and lack of segregated spaces were cited by women participants as the main reasons behind harassment and lack of security.

Fraction of online survey respondents reporting that the mode is least secure



Physical and verbal harassment is common on the street as well as in transport modes

In the public transport terminal survey of 481 commuters, over 60% of women surveyed reported facing physical harassment. Verbal harassment is also very high, with over 80% of women surveyed experiencing cat-calling, and over 60% experiencing whistling. In the focus group discussions, women expressed that "the drivers ask passengers to pile up more, without having any free space" and "some individuals take advantage of the crowd to harass you." Overcrowding has been contributing to harassment, lack of personal space and general discomfort. Women with children or women who have their hands full are also easier targets and tend to be more susceptible to harassment or petty theft.



Some individuals take advantage of the crowd to harrass you.

المنافع المنافع

Operators are often complicit in harassment

Women face harassment from a number of perpetrators, including both drivers and passengers. Drivers, especially tuk-tuk operators, were noted to harass commuters, often singling out women and hurling unacceptable language. Operators that do not harass women often turn a blind eye or downplay women's experiences and the risks they face in transport. Women also cited being harassed by fellow commuters who take advantage of crowding to deliberately push themselves closer to women. UN Women also conducted workshops in 2018 with tuk-tuk drivers in Mansheyet Nasser and Ezbet ElHagana as part of the Cairo Safe City free of Violence against Women and Girls Programme. This workshop was held to prevent and respond to sexual harassment and other forms of sexual violence against women in public spaces. Some operators responded positively but returned to their old habits a while after the workshop ended.

Usually the drivers ask the passengers to pile up more, without having any free place.

عادة ما يطلب السائقون من الركاب التراكم، دون أن يكون لديهم مكان خال.

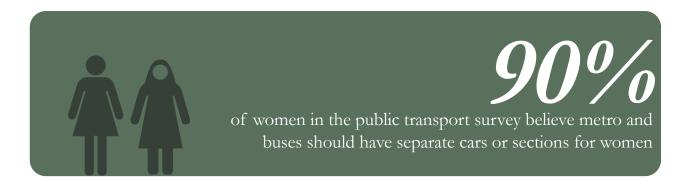
4

Women sometimes pay more for improved safety

Participants in the public transport terminal survey were asked if they ever use substitutes for public transport. Most women seldom or never use a substitute, perhaps pointing to the inaffordability of alternate modes. This is made apparent by the fact that only 12% of respondents could afford alternate means of transport. Of those, 54% resort to taxis, closely followed by Uber/Careem at 27%. Some women reported waiting for an empty bus or minibus to arrive. Enhanced safety was the predominant reason given for use of the substitute.

Women-only compartments are linked to improved safety

Both focus group participants and survey respondents were largely in support of dedicated sections for women in the metro. Both men and women cited improved security for women as the primary reason for this segregation. A handful of men indicated women's privacy the primary benefit. 90% of women surveyed believe metro should have separate cars for women and a dedicated section on CTA buses.



Transport facilities are not accessible

Safety is not only represented in being free of harassment. Most modes of transport are not designed to accommodate the elderly or persons with disabilities. Focus group participants stressed that level boarding is lacking and prevents many of those with disabilities or the elderly from taking public modes of transport and instead resort to more expensive alternatives such as taxis or Uber/Careem.

The [boarding] can be a problem for older people because the driver does not wait for the elderly to get up safely. With their first step, [the driver] starts moving immediately while the elderly person has not yet ascended.

[الصعود] ممكن يكون مشكلة لكبار السن لأن السواق مبيستناش كبار السن يطلعوا بأمان. مع أول خطوة ليهم بيبدأ [السواق] يتحرك على طول مع إن الشخص المسن مبيكنش ركب لسه.

Streets lack safe and comfortable facilities for walking

Focus group discussions revealed women's sense of security and safety increases in places where adequate lighting, existence of shops and high pedestrian activity are present. Inconsistent street design practices and building envelopes have resulted in a disjointed network. While some individual sections of footpath may be well designed—having pedestrian zones separated from furniture zones—these sections do not line up with one another and pedestrians are compelled to shift back and forth from one section to the next. Footpath heights also vary widely, forcing pedestrians to climb up and down several steps even within a single block.

The usable width of footpaths in the surveyed areas is often around 1 m—well below the clear width required to accommodate the volume of pedestrian traffic found in the city. This forces many pedestrians into the carriageway. Footpaths should have at least 2 m of clear width in all cases and 3 to 5 m on busier streets. This figure is an example of the pedestrian network in Al Hayy Al Thamin showing that most footpaths are not in fact sufficient.



الحى الثامن - Location: Al Hayy Al Thamin

less than 2m
greater than 2m



The presence of shops gives us a sense of security.

وجود المحلات بيحسسنا بالأمان.

Women are rarely included in the transport workforce



No female operators were identified through our interviews with operators. The operators interviewed indicated that no more than 2% of all employees are women, including office staff and maintenance personnel. None of the companies reported having women in senior management positions. Flexible time arrangements are limited, although some companies are accommodating to women who need to take occasional time off. None of the companies have sexual harassment policies.

Only

1 out of 50

employees in the transportation workforce is a woman.

2

Operators' attitudes prevent women from participating in the transport industry

Operator attitudes present a barrier to the participation of women in the workforce. For instance, a survey of male Uber drivers in Cairo and Alexandria found that 57 percent reported that they would be upset if a female family member were to start driving with the company. Further 25 percent of women Uber drivers reported believing that potential riders cancelled trips because of the driver's gender. Meanwhile, a fifth of women Uber drivers reported disapproval from family members due to their decision to drive.



It would be great if the driver were also a woman!

هيكون أحسن كتير لو السواق ست!

Solutions for Achieving Gender-Responsive Transport



1. Transport Vehicles & Service Planning

Moving towards separate sections for women in transport to discourage harassment until harassment levels fall significantly.



2. Station & Terminal Design

Stations should integrate multimodal transportation. They should also ensure accessibility, wayfinding, and good lighting to provide a safe environment for women.



3. Corridor Planning & Design

Streets should be designed for people, not for vehicles. This means providing spaces for pedestrians and cyclists and safe crossings for both.



4. Land-Use Planning

Planning areas to include both residential and commercial spaces can help ensure having eyes on the street to keep it safe for women at all times of the day.



5. Institutional Support

Partnering with law enforcement to ensure constant surveillance of transportation modes and stations can help bring harassers to justice.



6. Communication Strategy

Public awareness can be a strong and effective tool to educate women about their rights and how they can claim them.



7. Employment in Operations

Employing more women in the transportation sector can ensure a better gender balance in the workforce and can help women feel more secure in their commutes.

Transport vehicles should include a women's-only section

Focus group and survey respondents overwhelmingly called for designated areas for women in buses to reduce incidents of harassment. The front section of each bus can be reserved for women, persons with disabilities, and the elderly, with the rear section available for use by all passengers. The division between the women's and general sections of the vehicle should be determined based on the fraction of women riding the transportation mode during peak hours so as to optimize the use of internal space.

It is important to emphasize that all passengers can use the rear of the bus so that it does not become a "men-only" section. The provision of women's sections is an intermediate solution—in the long term, as harassment becomes increasingly rare, the system can shift to having mixed gender compartments.

Each bus should provide seating for pregnant women, seniors, people with disabilities, and adults with small children. The floor plan should include reserved space for wheelchairs, which can double as space for prams. Handles on seats and rods should offer a variety of standing positions. High quality transport systems such as the BRT buses require CCTV cameras to monitor anti-social activities and generate evidence that can be used when prosecuting these acts.

Public transport system fleet size should be large enough to serve expected passenger volumes. Minimum standards should be adopted for off-peak and late night operations to ensure that women who are carrying out childcare or household activities encounter frequent services. The service design should be responsive to passenger needs, and should be adjusted based on travel patterns. Another possibility is to adopt nighttime stop request systems, allowing women and the elderly to stop the vehicles closer to their homes.

An electronic fare system, integrating the metro system, city buses, and other modes, should be introduced to simplify transfers. Discount fares can be offered to persons with disabilities, seniors, and students.



10 10 1 1 1 1 1 1 1 1

Stations & terminals should be designed to encourage security for women

Stations and terminals should be designed with women's needs in mind, incorporating fundamental elements such as level boarding with a horizontal gap of less than 10 cm and other universal access features. Drivers should be trained to dock at stations. The station environment should provide seamless access between sidewalks on the side of the road and the station interior, with ramps to bridge level differences. Tactile paving should be installed in stations and terminals to help people with visual impairments navigate the buildings. Stations and terminals should be designed with sufficient capacity to accommodate current and future daily users and facilitate future expansion.

Terminal designs should offer close physical integration with other transport modes. The design of transfer terminals should minimize vertical and horizontal displacement between modes and offer adequate lighting and weather protection for transferring passengers. Terminals should include additional facilities, such as wheelchair-accessible public toilets; baby-changing facilities; water fountains; creches, playgrounds, or day-care centres; transit clinics; and food vending stalls. The co-location of amenities at terminals can improve convenience for female users, enabling them to complete multiple daily tasks on the way to the bus.

Stations should offer accessible passenger information, including system maps, schedule information, and fare charts. Real-time bus arrival information should be provided through visual displays as well as audio announcements.

To improve women's security, stations require good internal and external lighting, as well as an architectural design with a transparent façade to improve visibility. CCTVs should be provided to monitor station conditions and provide a record to capture evidence of antisocial behaviour. Emergency phone numbers should be displayed in prominent locations.



Corridor planning & design should provide safety for women on the street

Motorized modes of transport require complementary walking and cycling infrastructure to increase women's options for last-mile connectivity to the system. Dedicated pedestrian-scale street lighting is required for pedestrian walkways—not just in vehicle lanes.

Streets should be upgraded with continuous footpaths, safe at-grade crossings, and dedicated cycle facilities. Pedestrian facilities need to satisfy universal access standards, with a smooth surfacing material and access ramps. All intersections should be designed with safe crossings, accessible pedestrian refuge islands, and audio signals. Bollards should be installed on pedestrian and cycle facilities to prevent encroachments by parked vehicles. Organized street vending can help increase passive surveillance of public spaces and should be accommodated in street designs. Walkways should be shaded through continuous tree cover.



Mixed-use development provides a more secure walking environment for women

As a longer-term strategy, mixed-use development along public transportation corridors can help increase perceptions of security and reduce opportunities for crime and vandalism. Existing land use policies in the new communities call for a separation of uses, with distinct residential and commercial zones. To facilitate improved security for commuters, land use policies should encourage compact, mixed-use development along those corridors to maximize the concentration of residential, business, and leisure facilities within walking distance of public transport. A combination of residential and small-scale commercial uses near transportation stations and bus stops can help generate pedestrian traffic at all times of the day.

Urban building codes should encourage building designs with a large number of windows on the ground floor to create a more secure and inviting pedestrian environment. This invites activities on the ground floor that directly face and engage people walking on the street. Active ground floor uses could include shops, residences, schools and mosques that create a visual connection between the people inside the building and the people walking on the street. This creates a walking environment with many eyes on the street. During the focus group, women stressed the value of having shops and activity along the streets they use to access public transport.



Authorities must be involved to ensure women's safety

Consideration of women's needs in the planning process for any transportation mode will depend on actions by a number of agencies. Engaging law enforcement can ensure that harassment rates are controlled, and that perpetrators are brought to justice. A women's safety task force can help guide the implementation of a gender sensitive transportation system design by facilitating interagency dialogue and tracking progress toward the implementation of the gender action plan. The advisory board can include representatives from any of the following organizations: Ministry of Housing, TRU, NUCA, Giza Governorate, Police, National Council for Women, and civil society organizations.

A reporting system for harassment related complaints should be established. All public transport personnel should be trained in customer service so that they are sensitive to the needs of women and are aware of how to respond to such complaints. The city's public transport agency will need to develop standard operating procedures for bus drivers, station attendants, and other personnel on how to address and prevent instances of sexual harassment. The police will also play some role and should be engaged in the process of developing response mechanisms. The government can also partner with local NGOs to provide post-incident support to survivors. Increasing the number of women working in ground operations will help put female commuters at ease while using the system.

A strong communications strategy can alter attitudes toward women in transport

There is need for a communications strategy that educates both men and women on the safety and accessibility needs of women. This strategy should focus on targeting the correct audience to build awareness on the forms of harassment, encourage operators and fellow commuters to play an active role in women's safety, and include disseminating information on where to get help in the case of harassment. This campaign should also aim to change the culture surrounding women's personal space and safety in transportation and should encourage women to understand their transportation options and rights. As part of the communication strategy, workshops can be conducted for service providers and operators to better understand the important role they play in women's mobility, and how they can respect and ensure a safe space for women on their vehicles.



Providing women with more institutional roles in transport will increase women's perception of security

Increasing the number of women employed in transportation operations and management can help ensure that the system becomes more responsive to the needs of women. The system should aim to have women occupy 50 percent of jobs in areas such as ticketing, driving, mechanics, wardens, traffic control, security, and cleaning. Women should also occupy mid- and senior-level management positions and be involved in the construction and design of transportation infrastructure.

To ensure that the workplace is welcoming to women, transportation authorities and law enforcement forces should adopt and disseminate sexual harassment policies with clear procedures on how to respond, report, and document sexual harassment cases. Anti-discrimination policies in the workplace should be adopted, ensuring equal pay for equal work. Periodical awards can help the recognition of high-achieving women employees.

Transportation operators can provide training on women's safety and security to help drivers gain a better understanding of women's mobility challenges and safety concerns. The training should tackle various forms of harassment and procedures to follow when an incident is observed or reported. At least initially, trainings should be provided on an annual basis. All BRT system workers should be registered, and frontline staff should display their details while on the job. Incidents of misbehavior should be recorded in a database, and any person with a sexual harassment record should not be hired by any company involved in the transport operations.

To support women's participation in transport jobs over the longer term, the government can provide grants, fellowships, and scholarship programs to help encourage more women professionals to join the transportation sector.

Conclusion

Women and men have different needs and expectations from the transport system, particularly with regard to safety. An integrated and safe public transport system provides access to education, work, health care, culture, and other important activities that are crucial to women's participation in society. A successful public transport design can reduce waiting and travel times; improve the experience of transferring from one mode to another; and lower trip costs.

In Cairo, the planned BRT is expected to save at least 15 minutes per trip for its passengers. To meet its full potential, the planned BRT system connecting 6th of October City and central Giza will need to take into account the needs of women, children, the elderly, and people with disabilities. The Cairo BRT system presents the opportunity to consider data-driven gender concerns when designing service plans and infrastructure. To this end, BRT system can incorporate designated areas for women on each bus; seating for pregnant women, the elderly, people with disabilities, and adults with small children; cameras on BRT buses to monitor harassment and violence; and a complaint and redress system.

Other recommendations include providing a sufficient BRT fleet to meet passenger demand and introducing an integrated electronic fare system to simplify transfers. All drivers and staff need to complete trainings on safety and mobility challenges. This includes customer service, sexual harassment, and gender sensitization. Additionally, increasing the number of women working in public transport would help make female commuters feel at ease. The set of recommendations indicated in this report could also apply to other public transport modes to ensure safe transportation for not only women but all other transport users.

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