

# DIALOGUES FOR GENDER-INCLUSIVE MOBILITY IN CAPE TOWN

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## ABSTRACT

In both developed and developing countries, the mobility and freedom of movement of women is significantly affected by the design and layout of the public spaces they utilise and travel through. It is within these spaces that a large amount of, often unreported and unaddressed, sexual harassment occurs. The engineers responsible for developing these public spaces are often unable to adequately include a gender perspective in their designs.

As a result, the goal of the "Tell Me How You See It" tool is to provide a workbook and checklist to developers and decision-makers to include gender perspectives in the design of mobility-based infrastructure. A social organisation, called Safetipin, works tirelessly to make public areas safer and more welcoming for women by collaborating with a variety of urban stakeholders, including governments (Safetipin, 2023).

A customised auditing tool for mobile phone applications, built on the Safetipin platform, allowed for the collection of data across distinct international survey locations (London, Karachi and Cape Town) using a standardised survey method and questionnaire. This paper summarises the findings of the data collected using this 'Tell Me How You See It' tool for the City of Cape Town and translates the findings into actions for addressing women's mobility needs.

## 1. INTRODUCTION

The design and layout of public spaces (including transport systems), both locally and internationally, pose a significant challenge to women's freedom of movement and mobility. A lack of understanding of these gender-specific challenges has led to environments where frequent incidents of harassment occur. In order to address this issue, a bespoke auditing tool was developed using the Safetipin platform, which aimed to collect data related to personal safety, including user perceptions and infrastructure characteristics. This tool formed part of the 'Tell Me How You See It' project, "a workbook and checklist to support those designing mobilities infrastructure to include a gender perspective" (Cosgrave, 2021). This paper presents the findings from data collected using this tool in the City of Cape Town, and translates these findings into actionable steps for addressing the mobility needs of women.

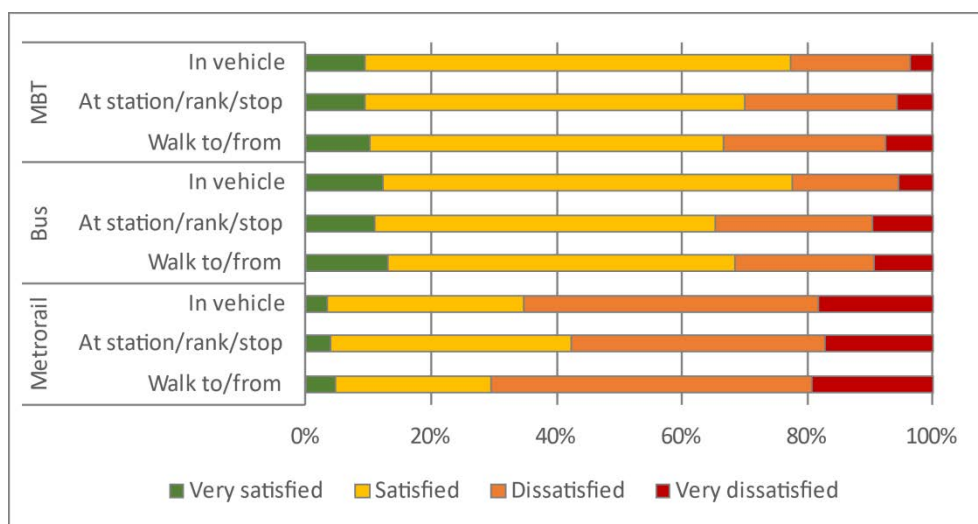
## 2. LITERATURE REVIEW

Transportation is a fundamental component of society, as it is the main facilitator of access to economic opportunities, education, healthcare, groceries, and other important activities

such as social engagement (Jennings *et al.*, 2022). Traditionally, the transport sector has been assumed to be gender-neutral. Consequently, the design of public spaces and transport systems have not sufficiently considered the differences in men's and women's mobility needs, which has often led to low levels of personal safety for female and gender non-conforming population groups in these spaces (Vanderschuren *et al.*, 2019; Cosgrave, 2022; Mabuso, 2019). For example, many public transport modes are designed for peak commuting times, which do not consider the fact that many women tend to travel at other times of the day, including off-peak times, to run errands or accompany those in their care to education or healthcare facilities (Jennings *et al.*, 2022; Mabuso, 2019).

In South Africa, the White Paper on National Transport Policy recognises the importance of transport in growing the economy and meeting the basic needs of the population and aims to improve the safety, security, reliability, quality, and speed of transport in the country (DoT, 2022). Harassment (verbal, visual, and physical/sexual) experienced in, and around, public transport systems is a key issue preventing this vision of safe, secure, quality transport from being realised, and disproportionately affects women in South Africa and around the world (Allen & Vanderschuren, 2016; Vanderschuren *et al.*, 2019; Gekoski *et al.*, 2015).

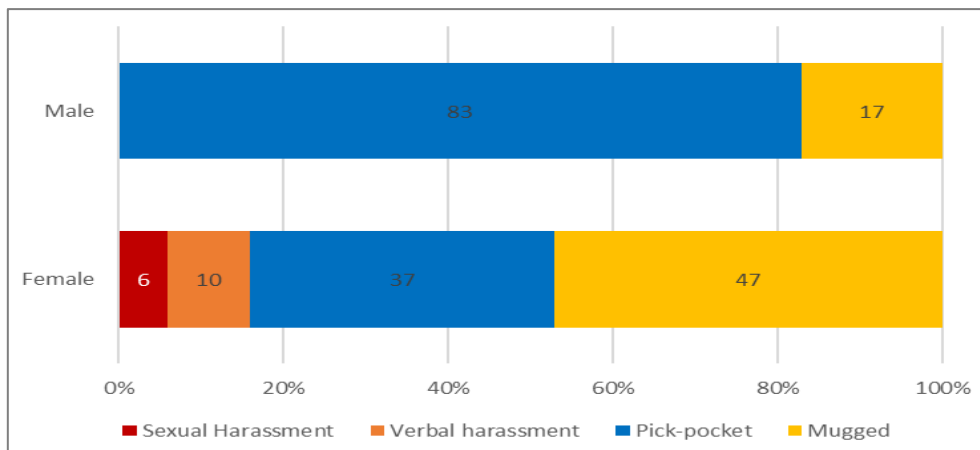
Harassment is a common occurrence on public transport vehicles, while walking to and from public transport, as well as while waiting at public transport stations/ranks/stops. As approximately 31% of South Africans use public transport as their main mode, this issue affects a significant proportion of the country's population (STATSSA, 2020a). While not specific to women, Figure 1 shows the dissatisfaction of household heads with safety concerns relating to public transport. On average, more than a third expressed dissatisfaction with safety across all modes for walking to/from public transport, waiting at the station/rank/stop, and travelling in the public transport vehicle. Of greater concern are the high levels of dissatisfaction with personal safety for trains, with 71% of household heads expressing safety concerns when walking to/from the train station.



**Figure 1: Security concerns/mode according to household heads (STATSSA, 2020a)**

Approximately 42% of the population walk all the way as their main mode of transport (STATSSA, 2020a). Women in Sub-Saharan Africa (and South Africa) often have less access to financial resources, due to socio-cultural factors and, therefore, have a higher dependence on walking as a mode of transport. Women experience greater safety and

security risks while walking than men and are more vulnerable to harassment, especially when walking in sparsely populated areas or on streets where there is inadequate street lighting. These risks also apply to trips undertaken to and from public transport infrastructure nodes – in fact, these journeys are often perceived as being especially dangerous parts of the public transport trip (STATSSA, 2020a; Porter *et al.*, 2020; Vanderschuren *et al.*, 2019; Allen & Vanderschuren, 2016). As Figure 2 shows, 10% of women interviewed at Simonstown Train Station experienced verbal harassment in transit and 6% experienced sexual harassment, compared to 0% for males (Vanderschuren *et al.*, 2019).



**Figure 2: Types of harassment for females ( $n = 79$ ) and males ( $n = 24$ ) (Vanderschuren *et al.*, 2019)**

In terms of women’s safety in public spaces, the design of said spaces can significantly influence perceived and actual safety in the area (Loukaitou-Sideris, 2005). For example, good visibility and good lighting around transit stops, stations, and waiting areas can reduce crime and the fear of crime, as people are able to observe their surroundings clearly, deterring criminals. (Yavuz & Welch, 2010; Gekoski *et al.*, 2015).

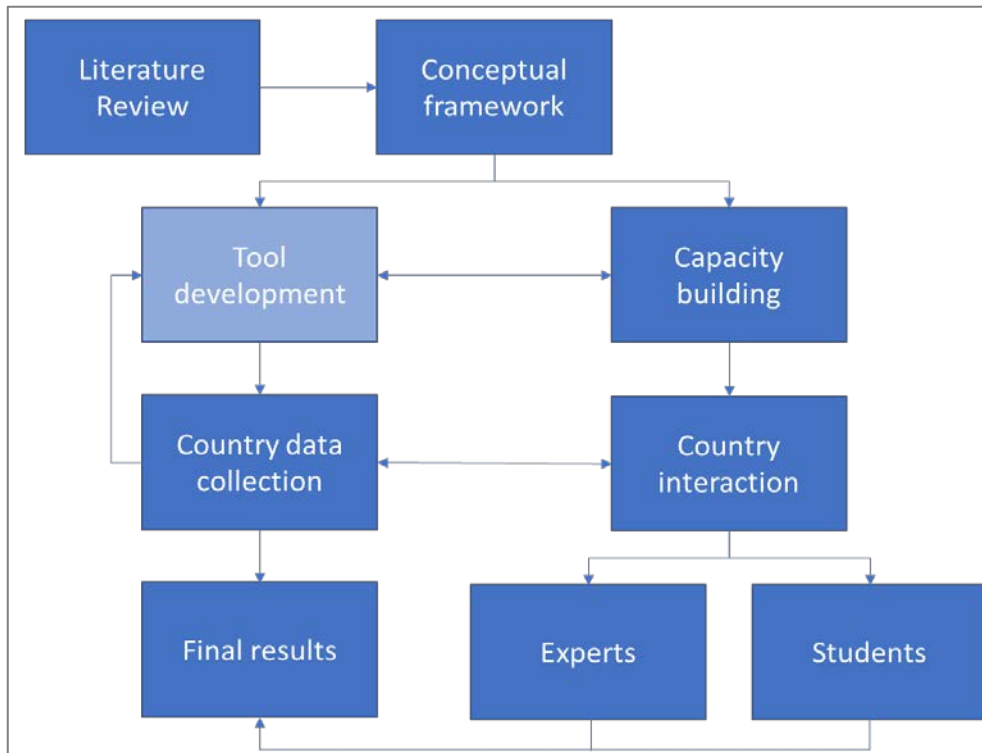
Research has shown that many women perceive improved lighting to be an effective measure of creating spaces where they feel safer (Gardner *et al.*, 2017; Gekoski *et al.*, 2015; Koskela & Pain, 2000; Loukaitou-Sideris, 2017).

Another important component of increasing the safety of the transport system for women is the presence of formal surveillance e.g., physical security officers. Several studies have shown that the presence of uniformed security personnel in public spaces improves public safety and that women feel safer when security is present (as opposed to CCTV) (Loukaitou-Sideris & Fink, 2008; Yavuz & Welch, 2010; Beecroft, 2019). Overcrowding is an additional problem faced by women using transit, as crowded vehicles facilitate sexual harassment, such as groping and other physical actions (Gekoski *et al.*, 2015; Yavuz & Welch, 2010; Loukaitou-Sideris *et al.*, 2009; Quinones, 2020).

While only a few examples of interventions to combat sexual harassment in public transit have been covered in this review, there are many effective ways to reduce incidents of harassment and increase the safety of vulnerable groups such as women. To identify which interventions are needed, it is necessary to first understand the needs and concerns of the transit users.

### 3. METHODOLOGY

The Centre for Transport Studies at the University of Cape Town participated in an international study for the development and application of the 'Tell Me How You See It' tool using the Safetipin platform. In this study, a user questionnaire and infrastructure audit form embedded in the Safetipin mobile platform were administered, as the tool aims to collect data related to personal security, including user perceptions and infrastructure characteristics. Regarding perceptions, face-to-face interviews were conducted using the mobile Safetipin platform. The infrastructure audits were conducted by civil engineers using the mobile application. The work was conducted between August 2020 and December 2021.



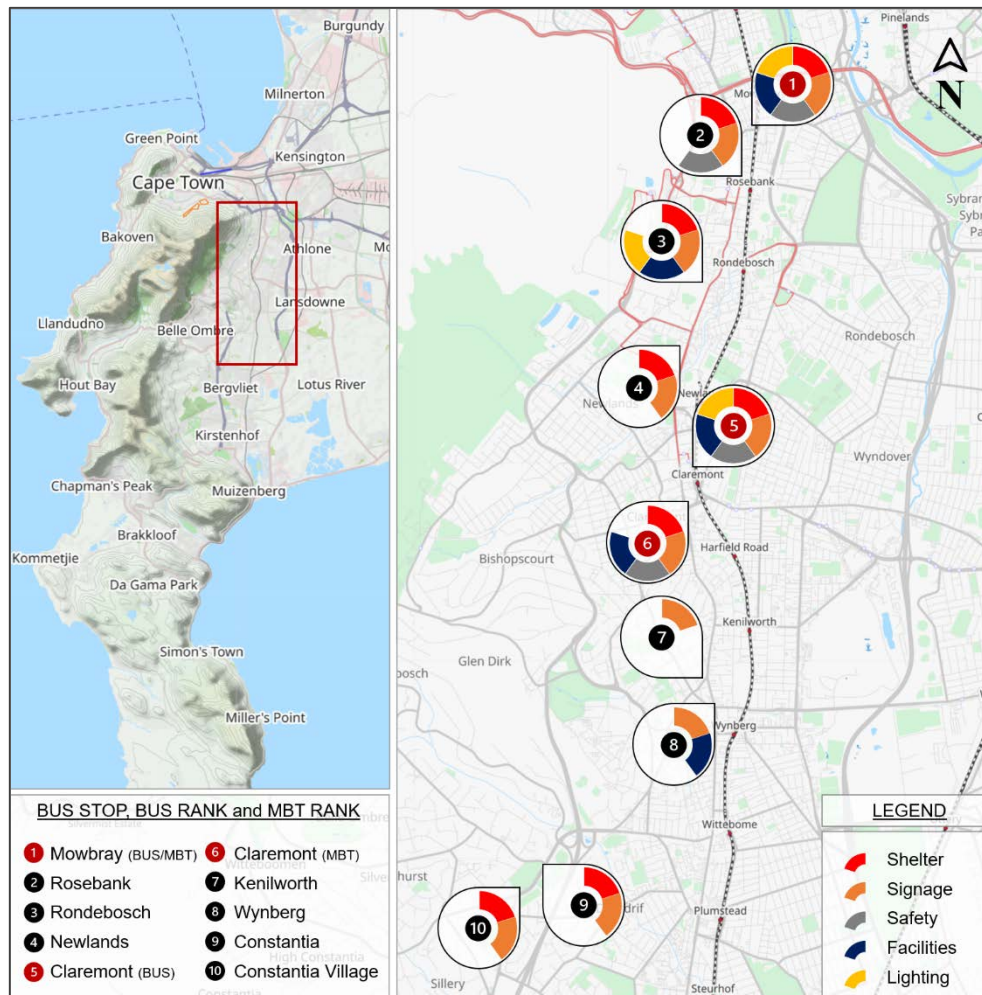
**Figure 3: Conceptual framework**

Academics and students from the United Kingdom, Pakistan and South Africa participated in the study, supported by an independent topic specialist living in Belgium. The respondents targeted were female domestic workers.

The work started with a literature review, identifying the status quo around sexual harassment globally and the identification of personal and infrastructure-related characteristics that influence personal safety. This work led to the development of a conceptual framework (Figure 3).

Based on the conceptual framework, the Safetipin organisation developed the data collection tool. Safetipin is a non-profit organisation in India that aims to build a world where everyone can move around without fear, especially women and other excluded groups. Tool development is one of their specialities. Pilot data was collected to test the 'Tell Me How You See It' tool. After some iterations, the tool was ready for the actual data collection.

Besides the development of the tool and data collection in the three participating countries, the project also aimed to generate research capacity amongst participating country experts and students. Various online meetings and workshops were held to optimise knowledge exchange. Due to the Covid-19 pandemic, face-to-face meetings between project participants were not possible.



**Figure 4: Map of infrastructure audit locations, developed using OpenStreetMap**

In the case of South Africa, Cape Town was used as a case study. User perception data was collected between August and October 2021, at ten public transport interchanges. The Covid-19 pandemic hampered the data collection of this study as travel was limited during the early part of the study. This required extending the data collection area to include a complex in Maitland where many domestic workers reside, while also reducing the data confidence interval from 95% to 70%, requiring a minimum of 109 respondents.

The user perception data was complemented by an infrastructure supply audit at the ten public interchange locations. Figure 4 indicates the study area relative to the greater Cape Town area, complimented by the individual locations for the public transport interchange audits one through ten.

The Southern Suburbs are located southeast of Table Mountain and border the Table Bay industrial area to its north, the coastal suburbs of False Bay and the Cape Peninsula in the south and are characterized by the M3 and M5 freeways running north-south. The Southern Suburbs are identified as being the more affluent of the Cape Town Metropolis



areas and include some of the city's most expensive residential neighbourhoods. This area was chosen for the case study as it forms part of the destination (AM travel) and origin (PM travel) of domestic workers.

Mowbray (1) and Claremont (5,6) are formal bus and minibus taxi (MBT) stations, with the remaining locations (2-4, 7-10) being classified as bus/taxi stops. Mowbray (1) is located in a commercial area, with Rondebosch (3), Newlands (4), Claremont (5,6) and Kenilworth (7) being classified as mixed-use areas. Stops Rosebank (2), Wynberg (8) and Constantia (9,10) are in residential-only areas.

The following section presents the findings of this study related to the Cape Town case study.

#### 4. DOMESTIC WORKERS IN CAPE TOWN

##### 4.1 Demographics

In Cape Town all the domestic workers interviewed were female. Although there are male domestic workers in Cape Town, they are only 22% of the target population (STATSSA, 2020b). Hence, the respondents do represent over 75% of this group.

Zimbabwe was the location where the highest number of respondents originated (28%), followed by the Eastern Cape province (25%) and the City of Cape Town (16%), both located in South Africa. A significant number of respondents originated from Malawi, the Congo, Kwa-Zulu Natal province (South Africa), Ghana, and Cameroon (see Figure 5).

Most respondents (60%) have been living in Cape Town for more than five years, while 29% have been living in the city for two to five years, and 11% for less than two years. Over 60% of respondents' main type of domestic work is cleaning, followed by childcare (31%), cooking (5%), and other types of work (2%). Most domestics work five days or more (72%) and do so for one family (74%).

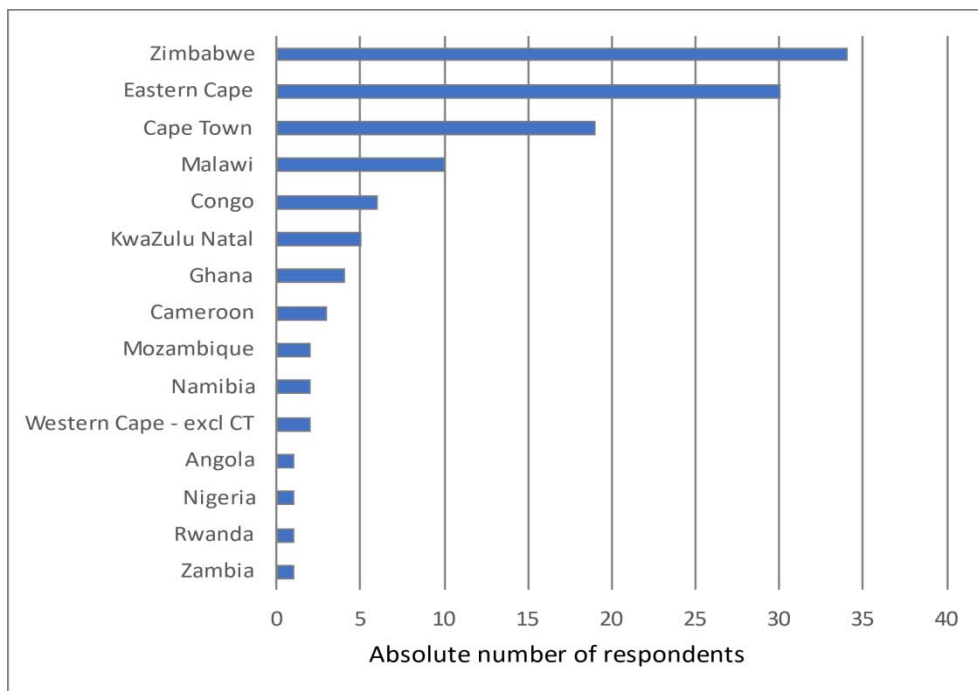
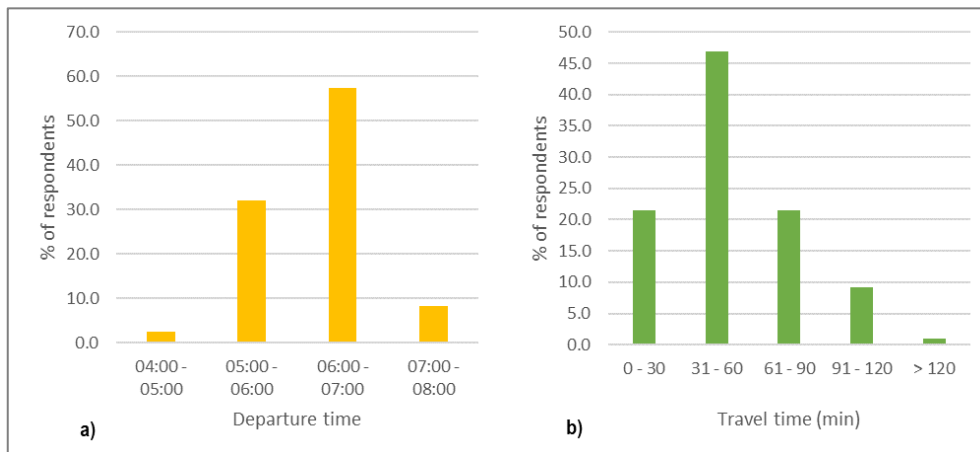


Figure 5: Respondents' location of origin (n = 121)

## 4.2 Travel Characteristics

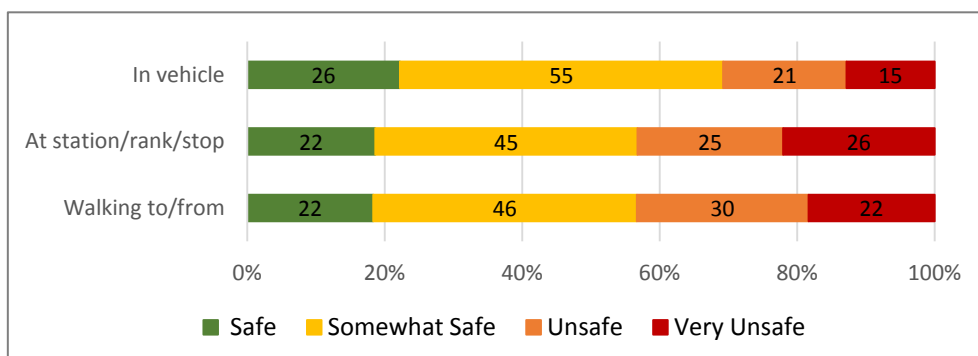
Figure 6a shows the distribution of the respondents' departure time for work in the morning. The majority – nearly 60% – leave between 06:00 and 07:00, while 32% leave between 05:00 and 06:00. The remaining respondents leave between 04:00 and 05:00 or 07:00 and 08:00. Figure 6b shows the distribution of the respondents' total travel time to work in the morning. The majority of respondents use minibus taxis (38%) as their mode of transport, while buses are the second most utilised mode (34%). Approximately 47% have a total travel time of between 31 and 60 minutes, while an equal number (21%) have a total travel time of 30 minutes or less, or a travel time between 61 and 90 minutes. Only 10% of respondents take over 90 minutes to travel to their place of work. Additionally, 36% of respondents indicated that they travel alone, while 41% sometimes travel alone and 23% always travel with others.



**Figure 6: Distribution of respondents' a) departure time ( $n = 122$ ) and b) travel time ( $n = 98$ )**

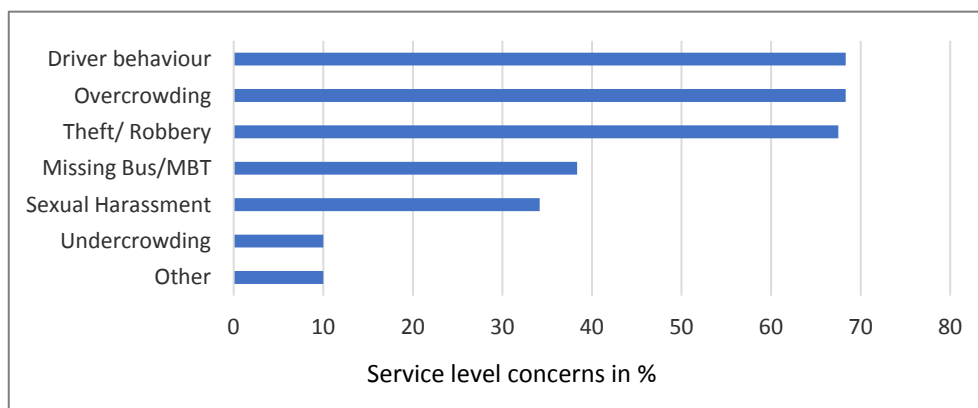
## 4.3 Service Level Perception

The perceptions of safety for travelling domestic workers are shown in Figure 7, with the level of safety rated from safe (best) to very unsafe (worst). The personal safety perception for walking to/from the (in)formal public transport stop, as well as the perception at the stop, is almost identical. Travelling in the (in)formal public transport mode had the highest perception of 26% for safe and 55% for somewhat safe. A total of 30% of female domestic workers feel unsafe while walking to/from the stop, while 25% feel unsafe at the stop. Furthermore, another 22% and 26%, respectively, feel very unsafe at these locations. Within the vehicle, female domestic workers feel slightly safer, as only 21% feel unsafe, while 15% feel very unsafe.



**Figure 7: Safety perceptions of domestic workers (%)**

Domestic workers have various service-level concerns (see Figure 8). A total of 68% of the respondents are most concerned about driver behaviour. In a country where road safety carnage is one of the highest in the world, this is not surprising. For more information on road fatalities in South Africa see, for example, Vanderschuren and Roux, 2019.



**Figure 8: Service level perceptions of domestic workers (n=121)**

Respondents voice four different personal safety concerns. A total of 68% of respondents are concerned when travelling in the peak (overcrowding). Theft and robbery while travelling is also a major concern for 67% of respondents. Earlier work regarding personal safety in Cape Town revealed that female public transport users leave their valuables at home when travelling (Vanderschuren *et al.*, 2019). Respondents also list sexual harassment (34%) and under-crowding (10%) as personal safety concerns. Sexual harassment and under-crowding are both mentioned in the literature (Allen & Vanderschuren, 2016; Vanderschuren *et al.*, 2019; Gekoski *et al.*, 2015). The latter confirms the safety in numbers principle.

A further, noteworthy, concern for domestic workers in Cape Town is missing the bus. Overall, 38% of respondents mention this as a worry. Given the low-income levels of domestic workers, and potential retrenchments when arriving late at work, this is not surprising.

#### 4.4 Infrastructure Audit

For the infrastructure audit, infrastructure is grouped under five main criteria, namely Shelter, Signage, Safety, Facilities and Lighting. Table 1 provides an overview of the infrastructure audit for each bus stop (see numbering in Figure 4) for the listed criteria.

**Table 1: Infrastructure audit results of bus stops**

Criteria	1	2	3	4	5	6	7	8	9	10
Shelter	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓
Signage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Safety*	✓	✓	✗	✗	✓	✓	✗	✗	✗	✗
Facilities	✓	✗	✓	✗	✓	✓	✗	✓	✗	✗
Lighting	✓	✗	✓	✗	✓	✗	✗	✗	✗	✗

\*Personal safety; also note that the colour coding in this table coincides with the colour coding in Figure 4.



At the time of the site survey, Mowbray (1) was observed to be somewhat quiet, with stops 2-10 being somewhat busy. The condition of the walking path around the stops was indicated as good, except for Kenilworth (7) and Wynberg (8), where broken and obstructed walking paths were observed.

Shelter is provided to users at eight of the ten bus stops, with the Kenilworth (7) and Wynberg (8) stops not providing shelter. Where shelter is provided, it consisted of covered roofing and seating spaces.

Signage consists of stop and route numbers, as well as road markings. All stops investigated in this study have sufficient signage. Good signage, especially stop-numbering, reduce potential anxiety among public transport users. The signage formed the primary characteristic in identifying the infrastructure.

As indicated in Section 4.1, personal safety is a major concern, with up to 68% of respondents listing one or more service-level concerns in this category. In Mowbray (1) and Claremont (5,6) private security personnel was present at the bus stations and taxi ranks, complimented by CCTV cameras to combat personal safety concerns. Rosebank (2) had security personnel only, with stops Rondebosch (3), Newlands (4), Kenilworth (7), Wynberg (8) and Constantia (9,10) having no security measures in place at all.

Facilities such as access to public toilets, kiosks, drinking water and street furniture, were available at Mowbray (1) and Claremont (5,6) stops. Street furniture only was observed at Rosebank (2) and Newlands (4). Stops at Rondebosch (3) and Wynberg (8) provided access to public toilets. Universal access, using tactile paving and low-gradient ramps, was only present at Claremont (5,6).

Lighting at and around the stops, sourcing from streetlights, walkway lights, shop fronts and houses, was only considered adequate for three of the ten stops. Mowbray (1), Rondebosch (3) and Claremont (5) had sufficient levels of lighting, with the remaining stops having insufficient levels of illumination.

## **5. CONCLUSIONS AND RECOMMENDATIONS**

The majority of female domestic workers that participated in this study are foreign (53.7%), while 30.6% are from other parts of South Africa and 15.7% were born in Cape Town. A total of 60% of respondents have been in Cape Town for at least five years, and work as cleaners (>60%). Most domestics (nearly 60%) leave their home on the way to work between 06:00 and 07:00 and travel between 31-60 minutes to get to their destination (47%).

Domestic workers are anxious about road and personal safety when travelling. Road safety is the biggest concern on the minds of respondents, with 68% mentioning driver behaviour as a concern and another 39% other road safety issues.

Four personal safety concerns were listed by the female domestic workers involved in this study. Overcrowding is considered the most important issue (68%), as criminals can hide between the masses. Common occurrences of theft/robbery (67%), but also sexual harassment (34%), are mentioned. Domestic workers mention under-crowding as well, specifically while travelling in the off-peak (10%). The latter is also mentioned in the literature (Jennings *et al.*, 2022; Mabusu, 2019). Travelling in sparsely occupied public

transport creates anxiety, as travellers realise that nobody will aid them during criminal events in these circumstances.

Domestic workers in Cape Town are concerned about missing their mode of public transport (38%) and not getting to work timeously. Anecdotal information has confirmed in the past that coming late regularly can be a reason to change staff for households in the metropolitan. Given a total of 28% of the sample works less than 5 days a week, earning low domestic worker salaries, this exacerbates their employment security and adds pressure on their economic survival.

The audit of infrastructure at ten public transport interchanges in Cape Town reveals that personal safety is not adequately guaranteed. Six stations have no security features (personnel and/or CCTV) at all. Furthermore, half of the stations have no facilities, such as toilets, while universal design features were only present at the two Claremont stops.

The lack of adequate lighting at seven of the ten stations investigated is considered a major issue, as this has been identified as an important intervention to combat personal safety risks for travellers in the literature (STATSSA, 2020a; Porter *et al.*, 2020; Vanderschuren *et al.*, 2019; Allen & Vanderschuren, 2016).

The results of this study warrant the identification of various interventions that could be considered by the City of Cape Town to combat negative travel experiences:

- Road safety concerns voiced by the respondents can be addressed via the safe systems approach. The education of drivers, enforcement of traffic rules and the development of infrastructure that assists in enforcing the rules of the road is paramount.
- There is a wealth of interventions that can be implemented to improve personal safety while using the public transport system. Measures include improved legislation, prosecution, management and reporting structures, campaigns and education, as well as policing. Even changing the vehicle design, such as eliminating tinted windows and providing individual seats combats crime, including sexual harassment.
- The lack of public transport system information and integration creates anxiety among travellers. The municipality is encouraged to identify ways to improve information provision, possibly through a modal-integrated (online) platform. Furthermore, the integration of public transport modes, as promised for many years, should be implemented. This will put travellers at ease and reduce the threat to their economic livelihoods.
- Municipalities are responsible for infrastructure provision. Personal safety concerns can be addressed by functioning emergency systems (CCTV, intercoms and panic buttons), well-lit environments with clear sightlines, and the creation of safe spaces. This should be complemented by the presence of security personnel. The City of Cape Town is encouraged to develop personal safety standards. Travellers have the opportunity to hold the City of Cape Town accountable when these standards are not met.

Although this study was conducted in Cape Town, other (South) African municipalities can benefit from these findings and recommendations. Municipalities are encouraged to collect data about their most vulnerable transport users. By identifying and analysing their greatest risks, specific infrastructure and infrastructure-management interventions can be implemented.

Due to the Covid-19 pandemic, and the study timeframes, the collection of user data for this project was challenging. The research team had to reduce the confidence interval of this study from 95%, which would require a sample of 382 respondents in Cape Town, to 70%, requiring 109 domestic workers to complete the survey. It is recommended to complement the existing data to increase confidence in the findings of this study.

## **6. ACKNOWLEDGMENTS**

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