



INSIGHTS REPORT:

SUPPORTING **CYCLING** UPTAKE FOR CARE **JOURNEYS**

BYCS & Bernard van Leer Foundation — Insights Report

A report prepared by BYCS in Amsterdam, with support from the Bernard van Leer Foundation, in Partnership with Bicitekas, Chain Breaking Women, and Purpose (Bengaluru Moving).

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Of the 4 billion people living in urban areas today, nearly a third are children. A large portion of the adult population takes on a role as a primary caregiver for a child, at some point in their life. Care activities, such as escorting children to school, to the doctor, to see friends, or purchasing groceries and other items for the home, influence how, and why many adults move through the city. Care-related journeys make up a substantial portion of the total adult urban population, with several studies finding that this number can be as high as one third of all their trips.

This document explains why and how policymakers and practitioners can support cycling uptake for care journeys. It primarily focuses on mothers and other women who care for children, who conduct a significant and often disproportionate amount of caregiving labour, and trips.

These insights are based on three pilot programmes that took place in 2022 in Mexico City, implemented by Bicitekas, Istanbul, implemented by Chain Breaking Women, and Bengaluru, implemented by Purpose-Bengaluru Moving. These pilot programmes were developed in partnership with BYCS, and provided cycling access and education opportunities to 100 women caregivers. This report uses insights from an exploratory survey on cycling & caregiver journeys (BYCS, 2022), which gathered the experiences of 209 caregivers across 16 countries. This report also leverages academic and grey literature, and expert interviews carried out for the report "Cycling for Infants, Toddlers, and Caregivers (BYCS, 2020).

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Image cover: Bicitekas Image left: Jerrin James



IN BRIEF

Mobility options influence, and often define caring for children, alongside household upkeep such as groceries and other home-related tasks. Despite representing such a large portion of daily travel, these care journeys are not well considered in the transport literature, and even less so in transport policy agendas. Mobility of care, coined by Inés Sánchez de Madariaga (2009), provides a framework for recognising, measuring, making visible, valuing, and properly accounting for all the travel associated with those caring and household tasks needed undertaken by families. These trips are mainly carried out by primary caregivers who are most often women. Caregiver trips are often short in nature, but can take time as routes are often inadequately served by public transport planning. To fulfil all care and household demands, caregivers chain several destinations in one trip, making their travel patterns complex, tiring, and costly.

Cycling could be an empowering tool for such trips, with various individual, social, economic, and environmental benefits. To support uptake however, a safe and comfortable environment, with robust engagement programmes, and with accessories that facilitate caregiving journeys, such as seats or trailers, must be created. Cycling provides a healthy, sustainable, energy-efficient, affordable, and flexible way to move through the city. Cycling can offer moments of important interaction with a child, benefiting a child's socio-cognitive development.

Cycling has however traditionally been perceived as challenging for daily care journeys due to several important barriers for caregivers to start cycling or continue cycling when they are carrying goods or accompanying a child. Alongside key infrastructure improvements, several interventions to facilitate cycling, such as skills training or access to equipment, can support caregivers to move more freely and efficiently. This report highlights the issues surrounding cycling as a form of caregiver mobility, and proposes ways to integrate this lens in the promotion of cycling for caregivers, especially mothers, and their families.

KEY RECOMMENDATIONS:

- 1. Mainstream gender in new research to understand mobilities of care in a contextual manner
- 2. Engage with caregivers and women to grasp the context and the barriers to start cycling

3. Prioritise cycling mobilities of care in mobility plans, capacity building, and communications efforts

- 4. Develop programmes that increase caregiver cycling skills, self-efficacy, and increase aspirations
- 5. Provide access to specialised equipment that facilitate the loading of goods, and carrying of children, as well as inclusive services to access cycles, to ensure caregivers can comfortably cycle



GLOSSARY



Behavioural Approach: paying special attention to the social, psychological, and economic factors that affect what people think and do.¹

Care: the work carried out by people, mostly women, aimed at children, the elderly, people with some illness or disability and, in general, activities related to the operation of the home or community (even for the environment). Care work can be paid, but most of it is unpaid and has an important component associated with gender roles, where historically care activities have not been considered as work that produces; but precisely these tasks allow the maintenance of the labour force and have an invisible importance for the economy of society.

Caregiver: persons that provide social and/or health support to people (from children to older adults) who need some degree of ongoing assistance with everyday tasks on a regular or daily basis. Informal or unpaid caregivers (family members or friends) are the backbone of long-term care provided in people's homes, as well as for society.²

Care journeys: the daily travel required to complete care labor such as travel to the grocery store, or to escort children (see "Mobility of Care").

Economy of care: the paid and unpaid labour and services that support caregiving in all its forms.³

Gender mainstreaming: an inclusive strategy wherein a gender equality perspective is integrated in all levels of public policies, programmes, and projects, to improve their quality and ensure a more efficient allocation of resources.⁴

Household serving trips: individual trips related to the upkeep of the household, such as groceries, accessing essential services, or administrative errands, while mobility of care combines these trips to show the full impact of care-related travel.⁵

Mobility of care: the "mobility of care" framework, authored by Inés Sánchez de Madariaga, includes all travel resulting from home and caring responsibilities: escorting others; especially children to school, daycare, activities, etc; shopping for daily living, household maintenance, organisation, and administrative errands; trips for maintaining social and familial relationship; and visits to take care of sick or older relatives (different from personal recreation or leisure visits).⁶

Personal safety: the general recognition and avoidance of possible harmful situations or persons in your surroundings. The interaction of caregivers with the public space and personal safety must be considered as a variable that limits or adjusts their decisions as to when and where they can circulate or not.

Self efficacy: an individual's belief in his or her capacity to execute behaviours necessary to produce specific performance attainments. Self-efficacy reflects confidence in the ability to exert control over one's own motivation, behaviour, and social environment.⁷

Time poverty: the inequitable, gender-based allocation of unpaid domestic work, representing an extra burden for women who enter the workforce, often leaving them with little or no discretionary time. Time poverty has important repercussions for women's economic opportunities and health, and is a manifestation of the systemic oppression of women via gender inequality and restrictive gender norms.⁸

Trip chaining: a travel pattern that combines several destinations into one trip, such as a person taking their children to a daycare centre or school, going to do groceries, then heading to work, versus a more pendular trip, like a simple commute from home to work.⁹

Image: Bicitekas

¹ The World Bank, "Mind, Behavior, and Development Unit."

² Centers for Disease Control and Prevention, "For Caregivers, Family and Friends."

The Care Economy Knowledge Hub, "Stimulating growth and investment."

⁴ Council of Europe, "What is gender mainstreaming?"

⁵ Ravensbergen, Fournier and Ahmend, "Exploratory Analysis of Mobility of Care.", 1499–1509.

Sanchez de Madariaga, "Mobility of Care."

⁷ Carey, Forsyth, "Teaching Tip Sheet: Self-Efficacy."

⁸ Hyde, Greene, and Darmstadt, "Time poverty."

⁹ Dr. Commute, "Trip Chaining."





WHY MOBILITY OF CARE, AND WHY CYCLING.

Cycling has many potential health, economic, social, and relational benefits for people who care for children, yet they, and especially women caregivers, face numerous barriers to taking up cycling. Understanding the nuanced and culturally specific challenges that discourage caregivers from taking up cycling is critical in order to begin addressing their needs.

Cycling mobilities of care are profoundly connected to the experiences of women cycling. Women are more likely to conduct care trips due to an unequal division of household labour. Many household-serving trips require the transport of goods or passengers, which can be perceived as too difficult on a bicycle. This has led researchers to hypothesise that the gendered distribution of household labour can contribute to the gender gap in cycling. This critical gender gap that exists in cycling is among the highest inequalities in use across modes of transportation, and is true for the majority of cities around the world, except in contexts where infrastructure is of very high quality and a cycling culture is socially ingrained, such as the Netherlands or Denmark. Indeed, only one out of three cyclists are women in low-cycling contexts, whereas this gap disappears in high-cycling cities.

Care trips are associated with unpaid labour performed by people for children and other dependents, including labour related to the upkeep of a household.¹³ These trips are not well described in the transport literature across all modes, and even less considered by transport policy agendas.¹⁴ While gender is one of the most robust determinants of transport choice, gender mainstreaming is still not systematically included in transport and mobility planning and projects.¹⁵

Care trips make up a substantial part of all trips in the city. A recent study in Montreal indicates that **mobility of care comprises 28% of adults' daily mobility.** Further, women were found to complete more of this type of travel than men, especially women from lower-income households. Surveys of Madrid in 2014 found that 30–45 year olds made a similar percentage of trips, about 30%, for care-related activities as for work. However, women made 40% of their trips for care-related activities, while men only did for 9%. It is estimated that globally, over 70% of caregiving work is performed by women or girls.

When specifically seeking to understand women's cycling use and its relationship to household serving journeys, academic and policy research is even more scarce.

In 2020, BYCS published the report "Cycling Cities for Infants, Toddlers and Caregivers", which sought to understand the advantages and barriers of cycling for infants, toddlers, and caregivers. This report responded to the fact that to date, there has been limited research conducted regarding the potentially positive connections between cycling and early childhood development, leading to cities struggling to accommodate these groups' needs as they embrace cycling agendas.¹⁸

¹⁰ Ravensberger, Buliung, Sersli, "Vélomobilities of care in a low-cycling city", 336-347.

Goel et al., "Cycling behaviour in 17 countries across 6 continents", 58-81.

Ravensbergen, Bullying, Laliberté "Toward feminist geographies of cycling".

Wotha, "Urban Governance and Gender-aware Planning".

Carpio-Pinedo, De Gregorio Hurtado, Sánchez De Madariaga, "Gender Mainstreaming in Urban Planning", 221-240.

¹⁵ Ramboll Smart Mobility, "Gender and (Smart) Mobility".

Ravensbergen, Fournier and Ahmend, "Exploratory Analysis of Mobility of Care", 1499–1509.

¹⁷ UN Women, "Substantive Equality for Women", 22-61.

⁸ Bernard van Leer Foundation, BYCS, "Cycling Cities for Infants, Toddlers, and Caregivers".

The knowledge gap in this field has also only recently been highlighted by academic researchers. Some of these researchers have commented that the few studies on the topic have predominantly focused on the barriers and challenges of household-serving travel by bicycle rather than providing a detailed account of people's experiences completing this type of travel. Mobility of care is often invisible in travel survey data for bicycling, where unpaid household labour travel is not measured or its bicycling mode share is too small to support complex analysis. Gender-segregated data on travel behaviour, trips, needs, and concerns in mobility is also often not collected or not analysed systematically, creating an unconscious bias towards men in transport and mobility planning and design.

In a few select cities around the world, government and non-governmental organisations have begun tackling this issue by gathering necessary data to understand challenges, and are beginning to implement solutions.

In **Bogotá, Colombia,** the District Secretariat of Mobility, together with the District Secretariat of Women and with the support of the Transport Gender Lab of the Inter-American Development Bank (IDB), conducted an exploratory study in public schools in four localities of Bogotá, where the greatest demand for bicycle trips has been observed. The study identifies the motivations associated with trips made by bicycle in which children are transported as passengers by caregivers, allowing the generation of a strategy with a gender approach to improve road safety, travel quality, and intermodality with the Mass Public Transport System (SITM) for these groups.

The study found that care trips by bicycle are mainly carried out in homes of low socioeconomic strata, accompanying children of an average of 8 years old. The average travel time reported by respondents was 14 minutes, and the average travel distance was 1.7 kilometres. Among the main difficulties of the trip, as reported by the respondents, was the interaction with motorised vehicle drivers, and, for women, constant sexual harassment. In addition, the perception of safety affected women and men differently: women tended to avoid risky behaviours on the routes to a greater extent. Finally, the majority of respondents (62%) did not have additional equipment on their bicycles to transport their children, and, in some cases, rudimentary and handmade accessories were used to carry children, which does not guarantee safety in travel.²²

In **Lille, France,** Copenhagenize France sought to understand through a participatory study how the urban environment affects women's choices to cycle. Nearly 75% of mothers who have one or more children had a "care" trip (to or from school) in their daily chain, making it more complex than the typical home — work — home trip chain. Despite the constraints this may present for mothers, 39% of women with one or more children chose to cycle for long distances (>5km).²³

In **Fortaleza, Brazil,** the Mini Bicicletar Shared Bike System offers bicycles with retractable training wheels to enable usership from families with young children. In Bogotá's new bike share fleet, 150 bicycles will be equipped with seats to carry children, and 150 with baskets, which the city says will facilitate the care journeys that are mostly made by women.

In **Mexico City, Mexico,** several public entities have begun highlighting the importance of mobility of care. At the grassroots level, NGO Bicitekas has been providing safe cycling workshops "Moms pedalling without fear" for mothers, to navigate the city's often unsafe traffic conditions with goods or children. In 2022, more workshops, as well as bicycle redistribution, were supported by BYCS, alongside two other pilot programmes in **Bengaluru, India,** and **Istanbul, Turkey.**

Many challenges however remain. Some of these challenges can be tackled by creating protected, wide, and connected infrastructure that makes it much safer for parents to use a bike. But even if a city provides such infrastructure and services, perceptions of risk or of discomfort may still exist, and low awareness, skills, access, affordability, and an unsupportive social environment can get in the way of cycling uptake. This is where a behavioural approach, as well as initiatives to increase access to cycling, can make a difference. Deeper understanding of the experiences and perceptions that caregivers have about cycling, and the offering of programmes to respond to these experiences, can make uptake of cycling seem possible and beneficial for their daily lives, while contributing to healthier, sustainable, and more just urban environments.



Image: Chain Breaking Women

¹⁹ Ravensberger, Buliung, Sersli, "Vélomobilities of care in a low-cycling city", 336-347.

²⁰ Sersli, Gislason, Scott, Winters, "Riding alone and together".

²¹ Ramboll Smart Mobility, "Gender and (Smart) Mobility".

Pipicano et al., "Viajes de cuidado en Bicicleta".

²³ Copenhagenize EU, "Women and Cycling".

IV.

CAREGIVER MOBILITY & CYCLING: BENEFITS & BARRIERS



BENEFITS

Cycling has the potential to be a very empowering tool for the mobility of caregivers, due to their likeliness to trip-chain, when multiple stops are integrated in one outing. Cycling is well-suited for such mobility patterns by providing affordable, reliable, and efficient mobility, while also conferring health and social benefits for caregivers, their children, and their surrounding community.



1. Cycling allows caregivers to save time and energy while covering longer distances

Cycling provides many of the benefits that walking confers, however with greater energy efficiency. This allows users to cover greater distances, and carry heavier goods, in a shorter amount of time than if walking, which is a very important way of getting around with babies and toddlers.²⁴ This is particularly relevant due to the fact that women shoulder a disproportionate burden of care and domestic work, suffering from greater time poverty, rendering them less likely to work for income, participate in politics, or have time for rest and self-care.²⁵

2. Cycling offers a reliable, flexible, and predictable way to travel for caregivers

Caregivers from more vulnerable groups often rely on walking and public transport to make multiple stops at off-peak times, and often across long distances. As a result, their travel can be slow, unpredictable, stressful, and exhausting. This results in more time, energy, and money spent. Time poverty faced by caregivers is intensified by dependence on, and often unreliability of transport services, due to being stuck in congestion or running infrequently, or the slower walking speeds caregivers may have when travelling with young children. Women also face additional constraints to their mobility, such as safety and security, that can affect how they make their decisions around travel.

Cycling offers predictable distance-time, which is critical for timepoor caregivers, due to its ability to bypass traffic, as well as transit wait times, delays, or disruption. It also provides door to door transportation, and relative ease of parking compared to cars.

age: Marc Stosb

Bernard van Leer Foundation, Institute for Transportation and Development Policy, "Access and Babies, Toddlers, and Their Caregivers".

²⁵ UN Women, "Annual Report 2018-2019".

⁶ Bernard van Leer Foundation, BYCS, "Cycling Cities for Infants, Toddlers, and Caregivers".



3. Travelling by bicycle is cheaper than other modes of transportation

When trip chaining, caregivers may use different modes that can require paying for fares multiple times²⁷. This leads to a disproportionate burden of transport costs, which can lead to affordability decisions that cost time, such as deciding to walk instead of paying for public transportation. This is an important factor in the disproportionate burden of time poverty faced by caregivers, often women. In a pilot programme carried out by BYCS in Mexico City, gaining access to a bicycle allowed participants to save between 20-50 pesos per day in transport costs, amounting to about 40-70 euros saved per month. Additionally, in a survey carried out by BYCS, 71% of respondents associated riding a bicycle with "cheap", indicating an existing perceived understanding of the low cost of this mode.

4. Cycling provides physical & mental health benefits for caregivers

There exists strong evidence showing the benefits of active travel for both physical and mental health, such as increased physical activity, improvement in sense of freedom and independence, and self-esteem. Cycling for commutes and daily trips decreases sedentary behaviour, which is growing amongst children & adults alike.²⁸ Importantly, cycling also provides feelings of freedom and independence, positively contributing to mental health and quality of life. In the BYCS survey, 98% of respondents strongly agreed or agreed that cycling was good for both physical and mental health. In Mexico City, participants of a two month bike-leasing programme reported feeling happier and more grateful, with several participants reporting a loss of 3 to 5 kilograms shortly after starting to cycle.





5. Cycling can improve child-caregiver interactions and provide early learning opportunities for young children

Travelling with a child (0-7 years) seated on the front or back of a bicycle can support quality time together, positive interactions, and conversations that can help a young child develop vocabulary. It offers other opportunities for learning and the development of children's cognitive abilities through positive interactions,29 where an inquisitive gesture or sound is followed by a caregiver's comforting touch, reassuring voice, and clarifying explanation. It also supports becoming comfortable with the outdoors, and this exposure to outdoor environments is beneficial for motor skills and visual development.³⁰ The close physical proximity and unrestricted panoramic view that caregivers and young children share while cycling together, moving at a human speed, also increases their connection and shared experiences.

This is also true when a child gets older (8-18), and is riding alongside their caregivers on their own bike. Cycling through the city with a child offers moments and opportunities to engage in intimate backand-forth conversation and exploration with the child about what is seen, heard, what is new, promoting quality child-parent interaction. The journeys are an opportunity to ask questions, meet new people, understand the world outside the home, and observe phenomena such as the weather.

6. Cycling supports caregivers' feelings of social connection and community belonging

Caregivers, as well as their children, are more connected with their environment and community when cycling. Cycling is a public activity that facilitates contact with other street users, and can allow caregivers and their children to become recognisable faces in their neighbourhood as they go about their daily lives. Being a new parent can also be quite isolating. Cycling provides opportunities to get out of the home with the child, take advantage of key services, and meet and interact with others. In the BYCS survey, more than 25% of respondents used the word "freedom" when asked an open question about how cycling made them feel, underscoring the liberating and empowering qualities of cycling.

BARRIERS:

In order for cycling uptake to be realised for caregivers, certain barriers need to be identified and recognised. Due to current gendered division of household labour and care, women are most likely to be carrying out care trips. This means that existing barriers to cycling uptake by women are compounded by those faced for care trips, and are often interrelated, disproportionately affecting certain groups like low-income mothers, for example. These barriers may also vary depending on the age of the child a caregiver is travelling with, or the urban and social context in which they are navigating.

Image left: Purpose/Bengaluru Moving Image right: Secretaria Distrital de Movilidad Bogotz Image bottom: Biciteka:



For example, in the case of Bogotá, the implementation of the Bikeshare system considered the needs for care journeys and arranged for the fleet of bicycles, child seats, cargo bikes, assisted-pedalling e-bikes, and hand-pedal bikes to increase accessibility. Although it is known that a bicycle system is a catalyst for bicycle trips made by women, implementing the system with accessories associated with care trips also facilitates the quality of travel and experiences of caregivers who can make their trips by bicycle even when they do not have their own bicycle, or need greater flexibility in travel.

concern³². In a study conducted to users of Mexico City's bike share programme, personal safety, harassment, and sexual harassment was cited as a key barrier to cycling for women alongside perceptions of cycling as a male practice³³. Harassment, whether verbal or physical, from cat-calling to direct attacks, is a regular threat to women in all public spaces, including when walking or using public transport. In cultures where women are not encouraged to cycle in public, riding with a child can exacerbate risks of violence. Some studies have also found that attitude, subjective norm, and perceived behavioural control have significant positive impact on women's intention toward cycling, with religiosity playing a significant role in limiting cycling uptake.³⁴

1. Cycling skills and confidence are lower for care trips

Women often lack access to cycles when young and may not know how to cycle or have confidence when cycling. Even when they do feel confident to cycle independently, this can drastically change when cycling with a young child, when carrying goods or in mixed traffic conditions. Without proper guidance or experience, and without protected, safe spaces for cycling, cycling can feel incompatible with caregiver journeys due to perceived safety and discomfort. A study looking at women in cycling in Latin America, for example, highlighted that one of the factors that affect the low number of urban women cyclists in the region is the high percentage of adult women who do not know how to ride a bicycle, or who consider that their skills are not sufficiently developed to function adequately in an urban environment that they perceive as unsafe.³¹



2. Cycling can have a negative socio-economic perception in certain contexts, especially for women, and even more when riding with children

In some contexts, riding a bicycle is incompatible with caregivers' identities or social aspirations: it may be seen as a recreational activity for the rich or, conversely, as something done only by the poor who cannot afford alternative modes of transport. Socialised perception about the use of the bicycle as a male practice can also hinder the ability of women caregivers to start cycling, especially if feeling judged as "bad parents", for riding with their children in unsafe traffic conditions, or riding in a socio-cultural context where there is social stigma about women cycling.

3. Women caregivers fear for their personal safety due to harassment and gender violence

One of the main barriers to caregivers cycling with infants and toddlers is a concern about personal safety in public space. In interviews with women caregivers, this was nearly always the main



4. Access to proper equipment for care trips is often scarce and expensive

Access to cycles themselves is an important barrier that disproportionately affects women, and this affects women caregivers even further. According to a recent survey in India, 6 out of 10 female respondents said they knew how to ride, but only 1 had a cycle³⁵. When it comes to transporting toddlers and infants or goods, the cost and availability of additional equipment such as bicycle seats, bicycle bags, or baskets are an important barrier. Not only are these items often unaffordable, but also inaccessible, especially in cities with underdeveloped bicycle industries. Specialised cycles such as cargo bikes are often seen as luxury items or are hard to find in local bike stores. In the BYCS survey, a high majority of respondents responded favourably that measures to improve access to equipment, such as baby seats on bike-shares, shared cargo bikes, or subsidies for specialised equipment, would help them cycle more.

5. Lack of traffic safety due to inadequate cycling infrastructure and street design

One of the most important ways to ensure safety and encourage individuals to start cycling is through physically separated, wide cycle lanes. Many cities however lack protected bike lanes, and when they do have them, they are often not part of a connected network or too narrow for cycling side by side with a toddler, overtaking cyclists biking at slower speeds, and wider cargo bicycle and tricycle designs that allow for carrying children and goods. The urban infrastructure for cycling also often does not favour short trips or caregiver travel patterns. Lastly, poorly designed intersections, as well as inadequate bike parking, especially for specialised cycles useful for caregiver journeys, are also important infrastructural barriers to uptake³⁶.

- Bernard van Leer Foundation, BYCS, "Cycling Cities for Infants, Toddlers, and Caregivers".
- Inclusive Mobility for Cities: Addressing the barriers that limit women to cycle, Ciudades del Futuro.
- Reyad, M. Bike-Sharing and Public Acceptance in Bangladesh.
- 35 Bandagi, "She Cycles for Change".
- 36 Bernard van Leer Foundation, Institute for Transportation and Development Policy, "Access and Babies, Toddlers, and Their Caregivers".

BEHAVIOURAL **APPROACHES:** LESSONS FROM PILOT **PROGRAMMES**

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When beginning to address cycling and mobility of care, conducting research with a gender lens to improve data is a critical starting point. Infrastructural improvements, from protected, connected, wide bike lanes, to widespread parking, safer intersections, and more inclusive bike share systems that integrate baby seats and baskets, are also key to ensure uptake of cycling for caregivers and their families.

However, even if a city develops gender-sensitive research and provides such infrastructure and services, the remaining behaviour-based barriers must be addressed. This is where a behavioural approach, as well as initiatives to increase access to cycling can play a key role. In particular, and most pressingly, three core areas must be improved: skills and knowledge, access to the correct equipment, and encouraging a supportive community environment.

This section explores these three areas, through examples from neighbourhood level pilot initiatives carried out in 2022 in Mexico City, Istanbul, and Bengaluru. These initiatives were co-developed and implemented by local organisations Bicitekas, Chain Breaking Women, and Purpose (Bengaluru Moving). They offer insights into the development of programmes that respond to the three identified core areas of improvement, in order to begin addressing behavioural barriers. From these learnings, a toolkit to implement community based programmes in a contextual manner has also been developed in parallel to this report.



BICICATARINAS WINGS OF FREEDOM PROGRAM

Mexico City, Mexico

In Mexico City, the NGO Bicitekas developed a dual bike-lending and cycle-training programme for lowincome mothers and caregivers in Gustavo A. Madero, Azcapotzalco, Tláhuac and Xochimilco municipalities.

After mechanically adjusting 50 reclaimed JUMP Bikes and transforming them into "Bicicatarinas", they were lent to participants for a period of two months. These participants were reached through a media and communications campaign. Participants also received workshops teaching them basic cycle mechanics and road safety principles, focusing on cycling with goods and children.

Two cycling workshops were given to develop confidence in their cycling, with the first taking place

in safe and controlled spaces, and the second going out to ride as a group in the city. Participants were connected together via a Whatsapp group that enabled them to share photos and videos of small daily achievements cycling around town, and providing encouragement. It was also a place to share daily use of the bicycle in their daily journeys, most of them shopping and work. From the first week they reported improvements in their health, feeling more energetic and happy. Group rides were also held, for example on the Day of the Dead, promoting a sense of community around cycling. The programme enabled transport cost savings of 50-70 pesos/person/day, and a majority of participants also indicated weight loss between 3-5 kilograms in just two months.





KEY INSIGHTS:

Building community support and mutual encouragement sustains and increases cycle usage and motivation

Low confidence while riding with children and heavy loads deters cycling for care journeys

Participants connected cycling with feelings of independence and health, alongside economic and time saving arguments

Caregivers lack access to adequate equipment to transport children and goods, deterring them from cycling

CASE STUDY 1.



CASE STUDY 2.





CHAIN BREAKING MAMAS PROGRAM Istanbul, Turkey

In Istanbul, the NGO Chain Breaking Women developed a two month gamification programme for mothers to start cycling with their children in the Kartal Municipality.

Both field training and online training were provided, from riding bicycles, making repairs, transporting goods, using maps, application types, and designing cultural tours by bicycle. The programme gamified activities as "missions", spread across 7 weekdays for individual missions, and 7 weekend days where the group came together and received training about safe cycling, and rode together to cultural sites around the

city. After completing the missions, mothers and their children each received a bicycle, lights, a helmet and a basket to carry goods safely.

Participants all indicated in interviews that following the programme they felt empowered, believed in themselves more than before, and enjoyed the time they spent with their children while cycling. Each of them cycled a total of 60 km throughout the programme. Participants also indicated that they now wanted to encourage and support their friends to start to cycle as well.

KEY INSIGHTS:

Programmes that offer cycling support to both children and their caregivers increase participant motivation, and offer quality family time spent together

Gamification helps overcome mental barriers of self-efficacy, cultural norms, and aspirations, and encourages subtle, playful learning and behavioural change

Programmes that build community among caregivers cycling also lead them to becoming positive influences in their social networks, becoming local "cycling ambassadors"







CYCLE SCHOOLS FOR CAREGIVERS PROGRAM

In Bengaluru, the social agency Purpose developed cycling education programmes and engaged with caregivers to understand their experiences and aspirations to cycle.

Three cycle school sessions were held, alongside an informal focus group discussion. By working with local bike shops, resident associations, and engaging institutional stakeholders, a broader awareness and understanding of the need to provide cycling education, especially for caregivers, was strengthened. Two illustrative art pieces were also developed from the discussions during the programme, and provided a creative way to engage with other residents,

resonating the subject of cycling and care. A group ride for beginners and families was also organised in a centrally located public park to bring further awareness and visibility to a more inclusive view of cycling.

Programme participants expressed the need for safe spaces where they can overcome their barriers to adopt cycling. Participants were able to access a cycle shop between sessions for practice sessions and receive information about cycling practices. Unanimously, all participants expressed the need for a series of beginner rides tailored especially for them that will help them learn about road safety, cycling skills, and maintenance.

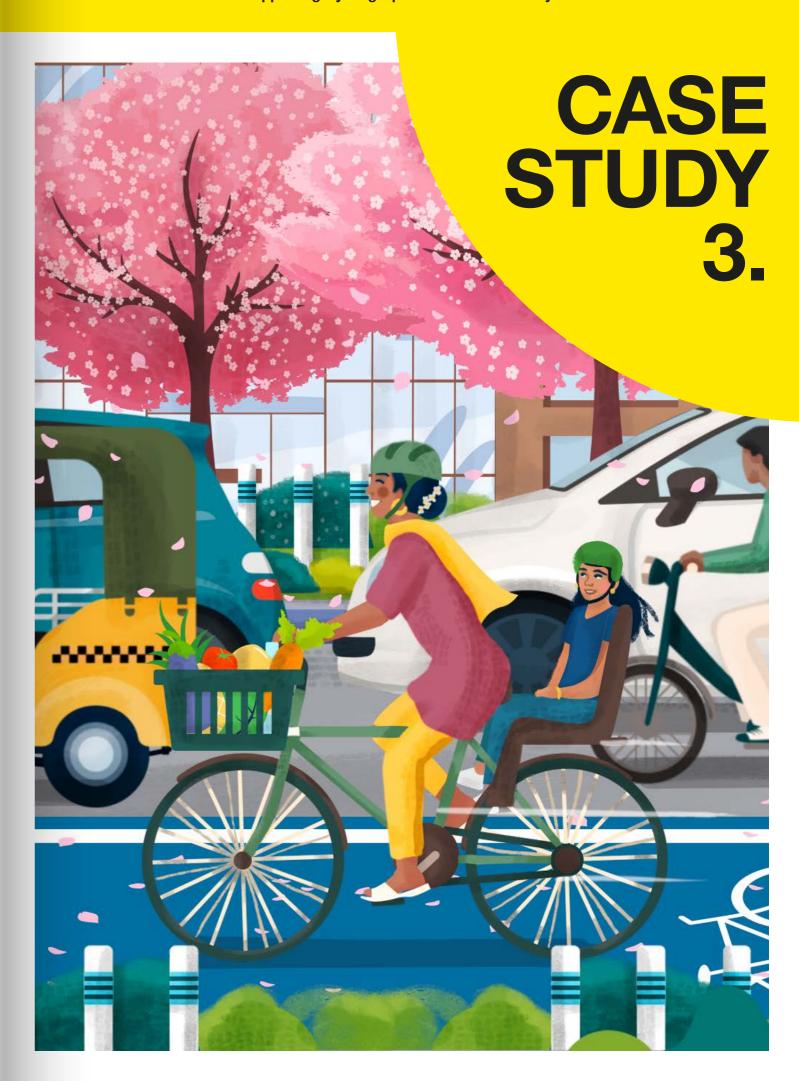
KEY INSIGHTS:

Programmes that offer beginner cycle skills can reveal a large untapped demand for family cycling

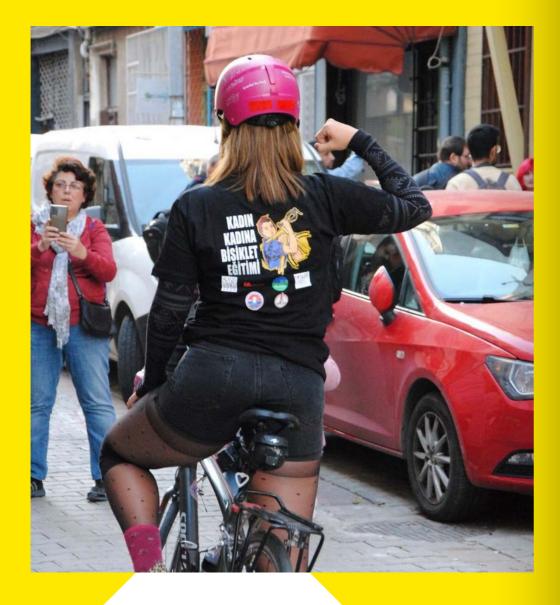
Increasing the visibility of families cycling in public space is key to shifting perceptions of cycling for care journeys

Behavioural programmes that involve neighbourhood-level stakeholders and organisations can quickly broaden understanding and awareness of care and active mobility locally





VI.



RECOMMENDATIONS

MAINSTREAM GENDER INTO NEW RESEARCH TO UNDERSTAND MOBILITY OF CARE IN A CONTEXTUAL MANNER

- Identify gender biases and omissions in mobility surveys, including household surveys, and data collection, such as not counting care trips or hiding them under other headings such as leisure, visits, or personal trips.
- Conduct new research and data gathering efforts with a gender lens to understand key areas where cycling mobilities of care are already occurring or have potential to occur.
- Disaggregate 'shopping for leisure' and 'shopping for care' in transport surveys.
- Encourage more research to better understand the gap in caregiving across other axes of identity, beyond gender.





ENGAGE WITH CAREGIVERS AND FAMILIES TO UNDERSTAND THEIR NEEDS AND BARRIERS TO START CYCLING

- Identify touch points to better reach caregivers in their daily lives, such as parks, nurseries, schools, markets, and residential areas. Dispatch engagement teams there, including pop-up information and engagement tents on weekends and during festivities or public events.
- Utilise behavioural science to engage with caregivers and their families, and co-design programmes that respond to their behavioural needs to start cycling in creative ways.
- Promote collaboration across stakeholders around caregiver mobility and gender mainstreaming for mobility.
- Forge meaningful partnerships with civil society organisations, from neighbourhood associations, to local bike shops and advocacy groups, for community engagement and programme implementation.
- Implement an intersectional and equity-oriented approach, focusing on caregiver groups that face the most barriers to start cycling.



2





PRIORITISE CYCLING MOBILITY OF CARE IN MOBILITY PLANS, CAPACITY BUILDING, AND COMMUNICATIONS EFFORTS

- Organise capacity building sessions on mobility of care and gender mainstreaming across departments, as well as for key family-oriented services such as nurseries, and schools and healthcare centres.
- Install iconographic, awareness-raising information at bus, public transit, and bike share stations around cycling and mobility of care.
- Integrate imagery of families cycling, and in particular caregivers carrying children and goods on cycles, on promotional materials related to cycling.
- Develop and provide maps for, and with caregivers, of safe bicycle routes to ride with children.
- Promote cycling as a desirable and socially acceptable behaviour for families, focusing on health, environmental sustainability, and cost savings.
- Provide opportunities for people to connect with other cyclists and learn about cycling-related activities and resources through bike rides, bike festivals, and other public events.

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DEVELOP PROGRAMMES THAT INCREASE CAREGIVER CYCLING SKILLS, AND SELF-EFFICACY AND ASPIRATIONS

- Create and offer cycling classes for adults that include learning about how to cycle safely with goods, heavier loads, as well as with children. Add learning components related to carrying goods and children to existing cycling classes for adults if a programme is already in place.
- Offer child-care services during cycling classes for adults, and/or simultaneous cycling classes for children.
- Promote and support organised group bicycle rides amongst groups of families, such as bicycle buses to school, and school trips to cultural activities.
- Promote open street initiatives that facilitate cycling adoption for families in a traffic-free environment.
- Ensure monitoring systems are in place to measure the benefits, capture good practices, and collect better data.

PROVIDE ACCESS TO SPECIALISED EQUIPMENT THAT FACILITATE THE LOADING OF GOODS, AND CARRYING OF CHILDREN, AS WELL AS INCLUSIVE SERVICES TO ACCESS CYCLES, TO ENSURE CAREGIVERS CAN COMFORTABLY CYCLE

- Provide subsidies or vouchers so caregivers can purchase bicycle equipment related to carrying children and goods, such as baskets, bike seats, as well as specialised cycles such as cargo-bikes or tricycles.
- Ensure that bike share systems are developed or retrofitted with a certain portion of the fleet that includes baskets, and baby seats.
- Offer "community bicycle libraries", especially including cargo-bikes or comfortable bicycles to carry goods and children, at key neighbourhood public service locations, such as local municipal buildings, schools, daycare centres, or public libraries.
- Provide mobile bicycle repair facilities staffed by women at key caregiver sites such as schools, nurseries, and parks.





VII. FURTHER READING

VIII. BIBLIO-GRAPHY

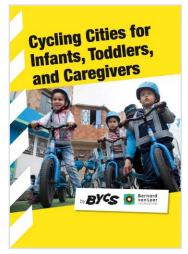


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The Mobility of Care:
Introducing Gender-Aware
Concepts in Transportation Planning, UN Habitat



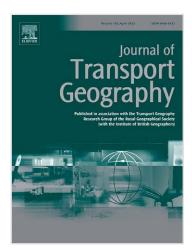
Access for All: Access and Babies, Toddlers, and Their Caregivers, ITDP, Bernard van Leer Foundation



Cycling Cities for Infants, Toddlers, and Caregivers, BYCS



Vélomobilities of care in a low-cycling city, Transport Research: Special Issue: Transport, Gender, Culture



"Riding alone and together: Is mobility of care at odds with mothers' bicycling?," Journal of Transport Geography



<u>Viajes de Cuidado en</u> <u>Bicicleta en Cuatro Local-</u> idades de Bogotá, BID Bandagi, Alia. "She Cycles for Change. Improving women's mobility in response to Covid-19." Institute for Transportation and Development Policy. Accessed April 7, 2023. https://www.itdp.in/she-cycles-for-change/.

Bernard van Leer Foundation, BYCS. "Cycling Cities for Infants, Toddlers, and Caregivers." May 5, 2021. https://bycs.org/wp-content/uploads/2020/11/Cycling-Cities-for-Infants-Toddlers-aregivers.pdf.

Bernard van Leer Foundation, Institute for Transportation and Development Policy. "Access and Babies, Toddlers, and Their Caregivers." January 27, 2022. https://www.itdp.org/wp-content/uploads/2022/01/Access-for-All-Babies-and-Toddlers_EXECUTIVE-SUMMARY_Eng_2022.pdf.

BYCS. "Active Transport and Health: Evidence from Academia." Accessed April 7, 2023. https://bycs.org/active-transport-health-evidence-from-academia/.

Carey, Michael P., Andrew D. Forsyth. "Teaching Tip Sheet: Self-Efficacy." American Psychological Association. 2009. https://www.apa.org/pi/aids/resources/education/self-efficacy.

Carpio-Pinedo, Jose, Sonia De Gregorio Hurtado, Inés Sánchez De Madariaga. "Gender Mainstreaming in Urban Planning: The Potential of Geographic Information Systems and Open Data Sources." Planning Theory and Practice 20, no. 2 (April 2019): 221-240. https://www.tandfonline.com/doi/abs/10.1080/14649357.2019.1598567.

Center on the Developing Child Harvard University. "Serve and Return." Accessed April 7, 2023. https://developingchild.harvard.edu/science/key-concepts/serve-and-return/.

Centers for Disease Control and Prevention. "For Caregivers, Family and Friends." June 28, 2022. https://www.cdc.gov/aging/caregiving/index.htm.

Copenhagenize EU. "Women and Cycling: Lille Study Case (France)." February 9, 2021. https://copenhagenize.eu/news-archive/2021/2/8/women-amp-cycling-lille-study-case-france.

Council of Europe. "What is gender mainstreaming?". Accessed April 7, 2023. https://www.coe.int/en/web/genderequality/what-is-gender-mainstreaming.

Dr. Commute. "Trip Chaining. A new way of Commuting." September, 2021. https://drcommute.com/trip-chaining-a-new-way-of-commuting/.

Hyde, Elizabeth, Margaret E. Greene, Gary L. Darmstadt. "Time poverty: Obstacle to women's human rights, health and sustainable development." J Glob Health 10, no. 2 (December 2020). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7688061/.

Goel, Rahul, Anna Goodman, Rachel Aldred, Ryota Nakamura, Tatah Lambed, Leandro M. T. Garcia, Belen Zapata-Diomedi, et al. "Cycling behaviour in 17 countries across 6 continents: levels of cycling, who cycles, for what purpose, and how far?" Transport Reviews 42, no. 1 (May 2021): 58-81.

Inter-American Development Bank. "Mujeres y ciclismo urbano: Promoviendo políticas inclusivas de movilidad en América Latina." November, 2017. https://publications.iadb.org/es/mujeres-y-ciclismo-urbano-promoviendo-politicas-inclusivas-de-movilidad-en-america-latina.

Kaufman, Sarah M., Christopher F. Polack, and Gloria A. Campbell. "The pink Tax on Transportation. Women's challenges in Mobility." November, 2018. https://wagner.nyu.edu/files/faculty/publications/Pink%20Tax%20Survey%20Results_finaldraft4.pdf.

Pipicano, Wilmer, Andrés J. Peña, Christian Pipicano, María A. Fernández Isabela Porras, Nestor Arias, and Leonel Miranda. "Viajes de cuidado en bicicleta en cuatro localidades de Bogotá." Inter-American Development Bank. Accessed April 7. https://publications.iadb.org/publications/spanish/viewer/Viajes-de-cuidado-en-bicicleta-en-cuatro-localidades-de-Bogota.pdf.

Ramboll Smart Mobility. "Gender and (Smart) Mobility. Green Paper 2021." March, 2021. https://ramboll.com/-/media/files/rgr/documents/markets/transport/g/gender-and-mobility_report.pdf.

Ravensbergen, Léa, Juliette Fournier, and Ahmend El-Geneidy. "Exploratory Analysis of Mobility of Care in Montreal, Canada." Transportation Research Record 2677, no. 1 (January 2023): 1499–1509. https://doi.org/10.1177/03611981221105070.

Ravensberger, Léa, Ron Buliung, Stephanie Sersli. "Vélomobilities of care in a low-cycling city." Transportation Research: Part A 134, (April 2020): 336-347. https://www.sciencedirect.com/science/article/pii/S0965856419309048#b0040.

Ravensbergen, Lé, Buliung, Ron, Laliberté, Nicole. Toward feminist geographies of cycling. Geography Compass. 2019; 13:e12461. https://doi.org/10.1111/gec3.12461

Reyad, M., Chhay, L., Suy, R., Hammad, A., Uddin, M. and Paul, R. Bike-Sharing and Public Acceptance in Bangladesh: An Empirical View of Religiosity as an Obstacle for Women's Intention toward Bike-Sharing. Open Journal of Social Sciences, 7, 458-477.(2019) doi: 10.4236/jss.2019.73038.

Sanchez de Madariaga, Ines. "Mobility of Care." UN-Habitat. Accessed April 7. https://unhabitat.org/mobility-of-care-ines-sanchez-de-madariaga.

Schoen, Sarah A., Vincentia Ferrari, and Andrea Valdez. "It's Not Just about Bicycle Riding: Sensory-Motor, Social and Emotional Benefits for Children with and without Developmental Disabilities." Children 9, no. 8 (August 2022). https://doi.org/10.3390/children9081224.

Sersli, Stephanie, Maya Gislason, Nicholas Scott, and Meghan Winters. "Riding alone and together: Is mobility of care at odds with mothers' bicycling?," Journal of Transport Geography 83, no. C (February 2020). https://www.sciencedirect.com/science/article/abs/pii/S0966692319307938

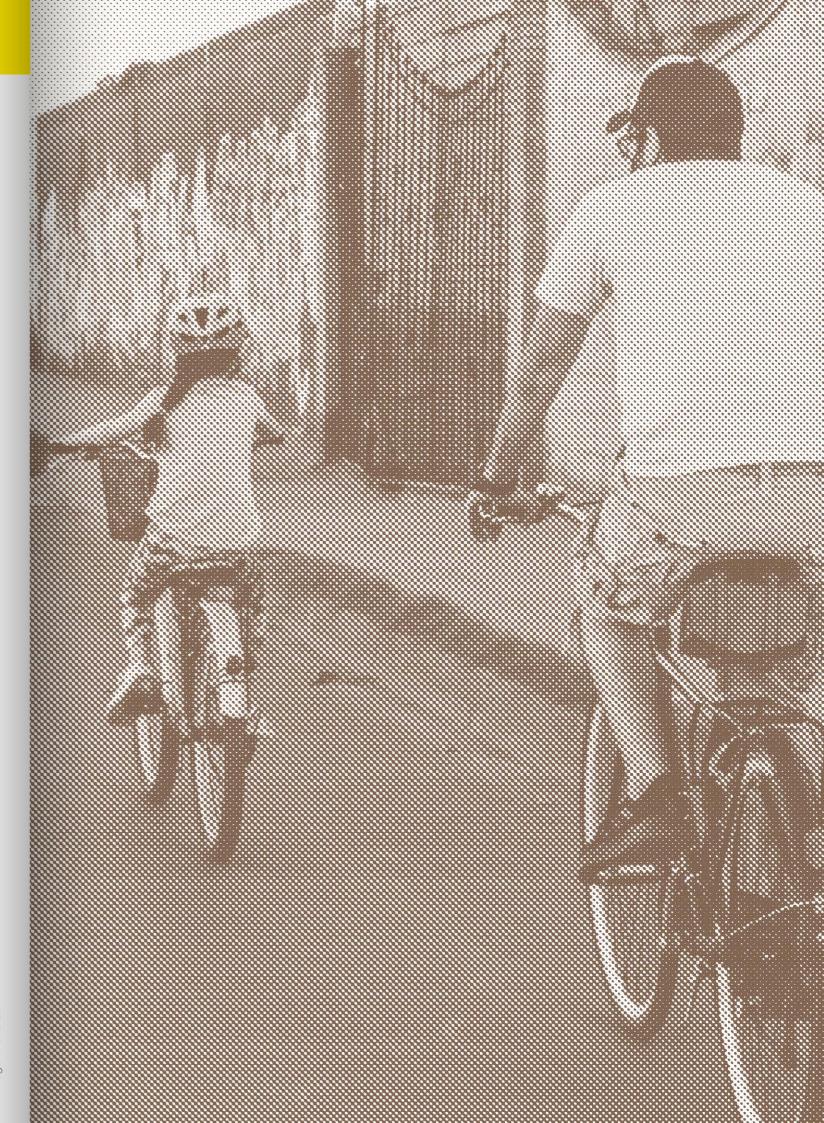
The Care Economy Knowledge Hub. "Stimulating growth and investment in market-based solutions". Accessed April 7. https://www.the-care-economy-knowledge-hub.org/.

The World Bank. "Mind, Behavior, and Development Unit: Applying Behavioral Science to End Poverty and Enhance Equity." Accessed April 7. https://documents1.worldbank.org/curated/en/744191532458732002/pdf/128784-eMBeD-Brochure-DIGITAL.pdf.

UN Women. "Substantive Equality for Women: The challenge for public policy." In Progress of the World's Women, 22-61. 2015. https://progress.unwomen.org/en/2015/pdf/ch1.pdf.

UN Women. "Annual Report 2018-2019." 2019. https://www.unwomen.org/en/digital-library/publications/2019/06/annual-report-2018-2019.

Wotha, Brigitte. Urban Governance and Gender-aware Planning. Oxfordshire: Routledge, 2013. https://www.taylorfrancis.com/chapters/edit/10.4324/9781315581835-9/urban-governance-gender-aware-planning-brigitte-wotha.



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BYCS is an Amsterdam-based global NGO guided by the belief that bicycles transform cities and cities transform the world. We envision an urban future in which half of city trips are by bicycle by the end of the decade. To help achieve this we nurture, strengthen, and scale community-led cycling initiatives globally, striving towards this bold vision that we call 50×30.

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