



LUNDS UNIVERSITET

GENDERED BICYCLING EXPERIENCES AND THE ROLE OF INFRASTRUCTURE

A case study of Santiago, Chile

ABSTRACT

Most gendered research on cycling has been conducted in the Global North, leaving out the experiences of other countries. Chile, in the context of mobility, has been recognised in the region for its significant steps towards sustainability; however, it still lacks when it comes to cycling, and, according to previous studies, the gender gap in Santiago remains under 30 per cent. This thesis aimed to bring visibility to gendered experiences and challenges in cycling in Santiago, Chile. The results of this study highlight not only the individual backgrounds of cyclists, disaggregated by gender, but also their lived experiences and perspectives. Through an online survey and interviews, it is suggested that women and men experience and perceive the urban environment differently when cycling in Santiago, Chile. Their experiences are affected by perceptions of security, access and infrastructure.

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Table of Contents

1.	Introduction	2
1.2.	Background	3
1.3.	Aim and Research Question	6
2.	Literature Review	6
2.2.	Gender and Urban Mobility	7
2.3.	Diversity and Accessibility in Cycling	8
2.4.	Gender and Bicycle Behaviour	9
3.	Theoretical Framework: Feminist Geographies	11
4.	Methodology	12
4.2.	Feminist Perspective	13
4.3.	Positionality	13
4.4.	Data collection	13
4.5.	Data Analysis	14
4.6.	Delimitations	15
4.7.	Ethical considerations	15
5.	Results and Analysis of Survey	16
5.2.	Mobility Patterns	17
5.3.	Cycling Motivation and Social Influence	17
5.4.	Use of Infrastructure, Access and Preferences	18
5.5.	Challenges when cycling	18
6.	Interview Findings and Analysis	19
6.2.	Infrastructure	20
6.3.	Perceived Challenges when Cycling	21
6.4.	Gender differentiated challenges	22
6.5.	Conclusions	24
7.	Discussion	26

7.2.	Background can reflect cyclists' perceptions and experiences	26
7.3.	The role of infrastructure as a differentiating factor	29
7.4.	Public space as a contested environment	30
8.	Conclusion.....	31
9.	AI Statement.....	33
10.	References	34
11.	Appendix	38
11.2.	Survey.....	38
11.3.	Email for interviews:.....	43
11.4.	Interview Guide.....	44
11.5.	Result Figures.....	45

1. Introduction

In the last decade, research on cycling has increased, reflecting growing interest in sustainable mobility and the benefits of cycling in cities. However, most of this research has focused on countries belonging to the Global North and lacked a gender perspective component, something essential to understanding that uneven mobilities exist and that gender roles that have been dragged through history, and still in the 21st century, shape the ways women and men claim their public spaces (Day, 2011; Ravensbergen, Buliung and Laliberté, 2019) . Today, it is clear that there are only a handful of countries that have a smaller gender gap in cycling, some of them being in Scandinavia, as well as Germany and the Netherlands, with Amsterdam, which is a clear example that inclusive urban planning for bicycle mobility is possible (Akar, Fischer and Namgung, 2013; Eyer and Ferreira, 2015; Prati, 2018).

Research on urban issues has shown that women perceive urban spaces differently and consequently use them less than men (Day, 2011). However, most of this research on gender and mobility has focused on developed countries, mostly belonging to the global North, such as the US, Canada, and Australia and those in Europe, such as the UK and the Netherlands, leaving the feeling of ‘West and the rest’ (Ravensbergen, Buliung and Laliberté, 2019). Conducting further research on mobilities is necessary to raise awareness, which could

eventually translate into a more inclusive transport and urban policy worldwide, even in places we never hear about in our daily conversations.

Chile, a remote country in South America, is recognised in this mobility context as a leader in sustainability. It has the second-largest number of electric public buses in Santiago, only after China, a number that has increased in other cities of the country throughout the year (Monroy, 2023). In February 2025, the construction of new bicycle lanes in the city centre of Santiago started. Which, once ready, could crown the country as one of the most cyclable places in the region, according to the Governor of the Santiago Metropolitan Region, Claudio Orrego (<https://magnet.cl>, no date; *Gobernador Orrego por Expo Smartcity Santiago: “Buscamos transformar a Santiago en una ciudad cada vez más inteligente”* | *ADN Radio*, no date). However, of the existing bicycle lanes in Santiago, by 2022, only 29 per cent followed the legal regulation of construction guidelines (CEDEUS, 2022).

When it comes to research and reports a few have been made, for example, in 2019 a report was commissioned by the government relating the habits of cyclists in Santiago and the use of security elements in this mode of transportation, however, the gender issue remained minimal, pinpointing only differences on physical settings preferences and level of accidents, as well as mentioning the existing gap between men and women that took part of the report (CONASET, 2019). Some academic research has also been done on cycling mobility; however, it also lacks the gender component, even when, again, there is a clear difference between the number of men and women who cycle (Arellano Yévenes and Saavedra Peláez, 2017; Boye *et al.*, 2021; Mora, Truffello and Oyarzún, 2021; Mora, Becker, *et al.*, 2024; Mora, Waintrub, *et al.*, 2024).

1.2. Background

The bicycle, as it was, was introduced to Europe at the end of the 19th century; it featured a lower frame that helped women accommodate their clothing, such as dresses and corsets (‘Pedal to the people: the bicycle as a feminist tool’, 2026). The bicycle became an emancipatory tool for women, as it provided greater mobility without the constraints of a motor vehicle and offered independence, since it was designed for a single rider, which prevented chaperoning (‘Pedal to the people: the bicycle as a feminist tool’, 2026). In its use, it also increased access to education, employment and social networks, as it is a faster and more affordable mode of transportation (‘Pedal to the people: the bicycle as a feminist tool’, 2026). With time, it became a symbol of the women's emancipatory movement in Europe and North America; this movement recalled

that this mode of transportation embodied “freedom, health and equality” (‘Pedal to the people: the bicycle as a feminist tool’, 2026).

Social Movements and COVID-19

Since 1990, several organisations have mobilised to create awareness about cycling in Chile. One of the most prominent in Chile was Furiosos Ciclistas (*Furious Cyclists*), which started to advocate for a city where people can take cycling as a valid and accessible mode of transportation, that is convenient but also worthy of its users (‘Movimiento Furiosos Ciclistas’, no date; *Biciactivismo: Imagina*, no date). They started by sending letters to newspapers and later by organising cycling protests through cities to empower urban cycling. In 2010, they became one of the biggest cyclo-activist movements in the world thanks to the great attendance at every first Tuesday of the month cycling protest in Santiago (‘Movimiento Furiosos Ciclistas’, no date). In recent years, cycling collectives have started to grow, taking into consideration the gender approach to cycling, stating this activity as an emancipatory action towards women (García, 2020). This movement became even more prominent in 2019, when the social uprising in Chile reached its peak and culminated in a failed attempt to write a new constitution. Positively, COVID-19 presented itself as an extraordinary motivation for cycling, especially for those looking to avoid spreading the virus who did not have access to a car or looked to engage in physical activity as a countermeasure to home confinement dictated by the authorities, thus increasing its use a 10 per cent (‘La bicicleta: Lo positivo del COVID-19 – Noticias UACH’, 2021).

Regulations and Infrastructure

In 2018, the Law of coexistence of traffic modes (Ley de Convivencia de Modos) was promulgated, which included the bicycle as a mode of transportation in its legal framework, regularising and protecting its users. Some of the included measures were a mandatory distance of 1,5 meters between cars and bicycles, as well as enforcement of bicycle helmet use and the mandatory use of bicycle lanes when available. In 2021, a review also introduced accreditation for bicycle lanes, setting standards for their planning, design, and maintenance. Some of the principles of this accreditation include that bicycle lanes should be secure, connected, ensure intermodality and safe interaction with other users, have direct trajectories that minimise interruption, and be harmoniously integrated with the environment (<https://magnet.cl>, 2021). However, in 2022, a study found that only 29 per cent of bicycle lanes complied with this norm,

deviating from the minimum recommended widths of 1.5 metres for recreational lanes and 2.2 metres for bidirectional lanes (CEDEUS, 2022).

Urban Mobility in Chile

In Chile, only 7 per cent of the population uses the bicycle, and in Santiago, the same percentage (Mora, Becker, *et al.*, 2024). In the metropolitan region, according to a report in 2019, only 31 per cent of those who bicycle identify themselves as women, and 77.5 per cent of the surveyed belong to medium and low economic status, and most of them reported using this mode of transportation for less than 3 years (CONASET, 2019). Regarding gender differences in this mode of transportation, the report highlighted that women prioritised the presence of bicycle lanes over shorter distances to their destination than men (CONASET, 2019). A survey revealed in 2024 interesting findings, although consistent with tendencies around the world: while men use the car and the bicycle more than women, the opposite happens with the use of public transportation, walking and the use of taxis (Hurtubia, Waintrub and Raveau, 2024). Along these lines, when the respondents were asked about their purpose of travel, women presented a majority in the care of other people and shopping, while their male counterparts were predominant in travel for the purpose of work (Hurtubia, Waintrub and Raveau, 2024).

Regarding security perception in mobility, the participants of the survey recognised having fear of suffering assault and harassment and that they have stopped doing certain activities because of it, with a vast majority of women over men, and agreed that harassment towards women in the streets and public transportation is a real problem that affects women daily, both genders agreeing in this regard with similar percentages (Hurtubia, Waintrub and Raveau, 2024). Along these lines, over 80 per cent of the respondents reported that public investment and space should be directed towards cycling (Hurtubia, Waintrub and Raveau, 2024). Among the barriers to not using the bicycle, fear of being robbed and assaulted and the need to transport others were the most prominent, and the facilitators for cycling that were most agreed upon were the presence of bicycle infrastructure, such as bicycle lanes on their route (Hurtubia, Waintrub and Raveau, 2024).

The Research Gap

Research on gender mobility has expanded in recent years, but research on gendered bicycle mobility is scarce; the literature highlights that most of the research is concentrated in the Global North, such as European countries, the US, Canada and Australia (Akar, Fischer and Namgung, 2013; Eyer and Ferreira, 2015; Prati, 2018; Ravensbergen, Buliung and Laliberté,

2019). Although research in Chile exists on genderised mobility, when it comes to specifically bicycle mobility and with a gender component, it is a minority within minorities. Research in Chile has mostly focused on government surveys and reports, such as the ones mentioned before, and on a few academic papers that examine mobility and bicycle use but lack qualitative analysis from a gender perspective.

1.3. Aim and Research Question

This thesis aims to fill a gap in research and bring visibility to gender-differentiated cycling experiences on daily trips in Santiago, Chile, and their link to perceived challenges in security, infrastructure, and access, from a gender perspective. The research question is:

“How can gender and individual background be a factor that differentiates cyclists' perceptions and influence their experiences in Santiago, Chile?”

This research question addresses the gender gap in cycling, highlighting that men and women have distinct perspectives that may influence their perspectives and experiences during journeys and, consequently, how they interact with the city.

It is crucial to recognise that genders perceive and thus act differently in response to the environments they experience. This understanding is important for advocating for more inclusive cycling infrastructure and policies that consider the realities faced by everyone, not just the dominant class. Cities did not fall from the sky but were imagined, planned, and created primarily by elites who, throughout history, have been dominated by males, excluding women and marginalised communities from the decision-making processes.

2. Literature Review

Gauvin *et al.* (2020) mention that cities, when they were designed, were not gender-neutral; people have differentiated experiences when it comes to urban environments, especially when it comes to the gender experience (Gauvin *et al.*, 2020). Whether urban mobility is experienced on foot or by wheels, different experiences will emerge; in this case, this is evident in gender-differentiated behaviour towards urban mobility. It is also important to highlight that research on this topic, especially regarding gendered bicycle mobility, is mostly concentrated in the Global North, creating a research gap. Although it is tried to bring to light Latin American research, as the topic becomes more specific, it gets harder and more Western.

In this section, I aim to introduce gendered bicycle mobility by first presenting gendered mobility as a general concept and highlighting that women and men move through and interact with our urban environments differently. It is not a coincidence that urban infrastructure and its policies are involved in this. Secondly, it introduces accessibility and diversity in cycling mobility; here, I highlight how infrastructure can affect accessibility for people of different ages, as well as for men and women, in different ways. Lastly, I aim to highlight research on gendered behaviour in urban bicycle mobility.

2.2. Gender and Urban Mobility

Several studies have suggested that urban mobility can be gendered (Gauvin *et al.*, 2020; Olivieri and Fageda, 2021; Macedo *et al.*, 2022). Among Latin American research on this topic, Gauvin *et al.* (2020) were able to differentiate by gender and identified indicators of mobility differences in Santiago, Chile; the results showed that “men have visited 30% more locations than women on average” (Gauvin *et al.*, 2020, p. 5). Similarly, Macedo *et al.* (2022) conducted a study analysing data from the past thirty years in Bogotá and Medellín, Colombia, and São Paulo, Brazil, revealing similar findings, such as women taking shorter trips than men and avoiding certain destinations at late hours that their male peers do not (Macedo *et al.*, 2022). On the same hand, Olivieri and Fageda (2021), by analysing travel patterns in the Metropolitan area of Montevideo, suggest that mobility patterns are affected by, among other things, the household composition and the responsibilities and roles that men and women assume (Olivieri and Fageda, 2021). The studies highlighted that men and women exhibit distinct mobility patterns, with women tending to stay more localised than men (Gauvin *et al.*, 2020; Olivieri and Fageda, 2021; Macedo *et al.*, 2022).

Furthermore, these studies noted that women with fewer economic resources, typically residing in more marginalised areas where local transportation may be limited, are even more localised than their male counterparts (Gauvin *et al.*, 2020; Olivieri and Fageda, 2021; Macedo *et al.*, 2022). This trend is less pronounced but still present among the wealthiest, though on a smaller scale, according to the studies (Gauvin *et al.*, 2020; Macedo *et al.*, 2022). Interestingly, Macedo *et al.* (2022) also observed that individuals with both low and high economic status exhibit similarly limited mobility, albeit for different reasons: the poor due to lack of resources, and the wealthy due to the ability to afford living in areas with better access to work and shopping options (Gauvin *et al.*, 2020; Macedo *et al.*, 2022). In the case of Olivieri and Fageda (2021), the results showed that in households where there is a presence of children, women tended to

be less mobile than men, a phenomenon that repeated itself in households of couples without kids (Olivieri and Fageda, 2021). Evidence also showed that women use public transportation more intensively, making residential areas with less access to it a spot where women's mobility is particularly affected (Gauvin *et al.*, 2020; Olivieri and Fageda, 2021).

Although, according to Olivieri and Fageda (2021) “Socioeconomic issues appear to be more relevant than infrastructure development in explaining gender differences in commuting patterns” (Olivieri and Fageda, 2021, p. 9). Macedo *et al.* (2022) have highlighted that evidence showed that the genderised mobility can decrease over time, showing that urban policies regarding the improvement of urban mobility do have positive effects, thus reducing the gender gap in urban mobility (Olivieri and Fageda, 2021; Macedo *et al.*, 2022).

2.3. Diversity and Accessibility in Cycling

Several studies have pointed out that cycling can be beneficial in several ways; for example, it can improve people's health as it can be considered a form of physical activity, and also improve the air quality since it does not use any fuel to function (Aldred, Woodcock and Goodman, 2016; Prati, 2018; Mora, Truffello and Oyarzún, 2021). This might seem like an incentive for local governance to invest in their people to use this mode of transportation; however, studies find this lacking, noting that access to, and diversity in this mode of transportation are not sufficient, given the positive outcomes it could have (Aldred, Woodcock and Goodman, 2016; Prati, 2018; Mora, Truffello and Oyarzún, 2021; Soukhov, Mooney and Ravensbergen, 2025).

Disparities between genders and age groups have become an important research area in cycling, with a focus on accessibility, diversity, and equity. Access to cycling infrastructure directly influences equity and accessibility. Many cities exhibit significant infrastructure disparities by income level; Santiago, Chile, exemplifies this issue (Mora, Truffello and Oyarzún, 2021). Research indicates that cycling infrastructure is heavily influenced by income level and political factors, with Santiago's high-income, right-leaning municipalities favouring car use over sustainable options, even in commercial and office zones (Mora, Truffello and Oyarzún, 2021). Consequently, cycling is viewed more as recreation than as essential transportation. Conversely, low-income households, often on the outskirts, have limited access to cycling infrastructure and rely mainly on public transport due to scarce job opportunities (Mora, Truffello and Oyarzún, 2021). Middle-income households, with greater access to cycle lanes, still face challenges: over 70 per cent of their infrastructure is poorly maintained or does not meet national standards (Mora, Truffello and Oyarzún, 2021).

Chile's situation is not surprising through the lens of other countries, where access to cycling infrastructure has been related not only to income groups but also to gender and age groups, where women and older people represent a minority in this mode of transportation. A study made with data from the English and Welsh Census from 2001 and 2011 examines whether increases in transport cycling are associated with increases in diversity, referring to gender and age (Aldred, Woodcock and Goodman, 2016). The results were not surprising: they showed that the participation of older people had actually decreased, and that women, and older women in this case already a minority within a minority, had not decreased but maintained their numbers despite the general increases in cycling in these regions (Aldred, Woodcock and Goodman, 2016).

On the other hand, a study in the European Union has shown that gender differences in cycling are related to the Gender Equality Index (main domains being: work, money, knowledge, time, power and health), with greater equality associated with higher participation in transport cycling (Prati, 2018). Along these lines, it is not strange that one of the hypothesised reasons for this gender gap in several studies is the weight of household responsibilities, mostly on women's shoulders (Prati, 2018; Soukhov, Mooney and Ravensbergen, 2025). But also, urban planning for cycling has mostly been imagined through the lens of men and motorised vehicle drivers, leaving limited spatial availability for people who want to use sustainable modes of transportation such as the bicycle (Prati, 2018; Mora, Truffello and Oyarzún, 2021; Soukhov, Mooney and Ravensbergen, 2025).

2.4. Gender and Bicycle Behaviour

In recent years, research on attitudes and behaviours towards bicycle mobility has become more frequent; however, studies that include a gender component in their analyses remain a minority and are mostly in the Global North. However, a few studies have tried to shed light on, for example, road preference. Research on women's preference for roads with or without separation from motorised traffic compared to men's has shown a clear preference for the latter option, especially for women, according to a study realised in Melbourne, Australia, while men's proportion on roads and on-road bicycle was almost identical (Garrard, Rose and Lo, 2008). A similar study made in the US, using a college Campus in Ohio, showed interesting results (Akar, Fischer and Namgung, 2013). Taking away the factor of family responsibility, as the majority of students are there by themselves, they analysed the commute behaviour of those living on campus premises; the results showed that women were more concerned about safety and hence

were more likely to take a car as transport instead of a bicycle, as it is seen as a less insecure mode of transportation (Akar, Fischer and Namgung, 2013). In this line, the majority of women saw themselves as beginner cyclists, which could explain their insecurity about it, given their perceptions about the lack of existing bicycle infrastructure on campus (Akar, Fischer and Namgung, 2013).

On the same line, perceptions and behaviour regarding cycling in the USA, specifically in Davis, a city with a higher rate of cycling among its inhabitants than the national average, have brought to light evidence on behaviour and attitudes towards cycling in a gender differentiated analysis (Emond, Tang and Handy, 2009). Women reported a higher rate of limitations than men that prevented them from cycling; some of these factors that affected negatively such as not having access to cycling infrastructure, such as bicycle lanes, interestingly, men who cycled as youth had more positive association with men taking the bicycle than women (Emond, Tang and Handy, 2009). In terms of age, it is not strange that both genders reported a decrease; however, the older, specifically women, the less likely they are to bicycle compared to men (Emond, Tang and Handy, 2009). Another factor that increases the probability of women cycling is comfort, as environmental and psychological factors can influence it, such as mentioned before, having an appropriate infrastructure to cycle that makes women cyclists feel safe in the streets; interestingly, having a friendly cycling community is something that affected more men in a positive way than women (Emond, Tang and Handy, 2009).

Data from Europe (Hungary, Italy, Sweden, Spain, the United Kingdom, and the Netherlands) indicate that women reported more gender-stereotyped reasons than men, except for cycling as a social activity (Prati et al., 2019). According to Prati et al. (2019), gender differences in size were not practically significant for attitudes towards cycling (Prati *et al.*, 2019). Women reported more positive attitudes towards the personal benefits of cycling than towards its mobility effects, compared with men (Prati et al., 2019). Another important finding is that, in this study, women cyclists' risk perception was reported to be higher than men's, and that women also reported higher discomfort scores when cycling without a bicycle lane than their counterparts (Prati *et al.*, 2019). A similar study in Italy, conducted in the Lombardy region, including the metropolitan area of Milan, indicated that the use of the bicycle is affected by four constructs: perceptions of "Conflict with Other Vehicles", 'Quality of Urban Space', 'Quality of Bike Path', and 'Physical and Mental Fatigue', alongside variables such as 'Presence of Other Cyclists' and 'Ambient Temperature', some relevant results from this constructs were having good weather and presence of cyclist having a positive effect in bikeability perceptions,

and women being statistically more negatively affected by conflict with other vehicles, especially in bigger cities (De Fabiis, Baldini and Coppola, 2026, p. 1). This study is relevant since it adds this construct and more variables to the analysis, permitting us to consider factors that are missing or not considered before, or just hypothesised, for example, differences between towns and cities, factors that can affect comfort such as the weather, but also considering age as a variable that can differentiate more groups of women and men. Thus, it permits reconsideration of certain views or hypotheses about perceptions and behaviour towards genderised bicycle mobility (De Fabiis, Baldini and Coppola, 2026).

3. Theoretical Framework: Feminist Geographies

By analysing the gender-differentiated material and symbolic conditions that shape daily life, feminist researchers began to bring gender and women to the centre at the start of the 70s, in an attempt to bring visibility to women's experiences, which had been deeply neglected previously in academia and beyond (Nelson and Seager, 2005). This project, far from complete, has since been documenting and bringing "into geographical inquiry the analytical significance of gendered spatial divisions between public and private, particularly as they shape work (paid and unpaid), and urban processes" (Nelson and Seager, 2005, p. 3). In this line, feminist geography is constantly influenced by social-historical dynamics and movements such as globalisation processes, in tandem with neoliberal discourses, which makes it not limited to connections that go beyond local and national limits (Nelson and Seager, 2005).

Day (2011) highlights "that gender shapes women's experiences of public space" (Day, 2011, p. 5), which is not strange when women's mobility starts to get limited from early childhood, which in consequence shapes their perspectives of what is safe and what is not, shaping spatial relations through the fear of violence and constructing gendered power relations in society and space (Nelson and Seager, 2005; Day, 2011). On this line, Day (2011) argues that women are often seen as the background and not the person in action in the imaginary of the city, this may be a result of how gender identities can shape the city and the use of the urban environment, but also showing that urban environment can be as well constraining and discriminatory, reinforcing gender roles of the society, for example highlighting that men have been mostly associated with the public and productive spheres while women have, until recently, been associated with domestic and private ones (Nelson and Seager, 2005; Day, 2011).

Even though women make a similar number of trips as men, these trips are characterised by shorter distances and greater proximity to their domicile (Day, 2011). In this regard, when we consider modes of transportation, women are more likely to walk or use public transportation (Day, 2011). At the same time, due to safety concerns and stereotypes about how women should be presented, women are less likely to bicycle to work than men (Day, 2011). Regarding the theory on gendered bicycle use, according to Ravensbergen, Buliung and Laliberté (2019), two main theories remain: the first is that safety concerns negatively affect women's cycling frequency, and the second is that household responsibilities deeply affect women's travel patterns (Ravensbergen, Buliung and Laliberté, 2019). In this context, Day (2011) highlights that the women's movement is often constrained by access to time and money, difficulties more often related to the gendered division of labour and childcare (Day, 2011). Hence, bringing time-space geographies, there is an acknowledgement that women's capability to access resources has a direct link with the capability of mobility to move between locations (Nelson and Seager, 2005).

This takes us to mobility issues. Mimi Sheller (2018) writes about 'uneven mobilities', which refers to movement with differential pathways, access, and connectivity that is impartial, but also when the pathways can have differential levels of ease, security, speed, etc.; this can relate to transport modes that lead to spatial patterns, ways of mobility management and power dynamics (Sheller, 2018). In this sense, movement is not equal. It is shaped and framed in different ways that can either facilitate or restrain our movement. In this regard, not only social circumstances but also personal experiences and feelings can shape gender relations in space; power structures can be revealed by women's daily exercise of judging whether a path is secure enough or not (Nelson and Seager, 2005). In this sense, everyday life entails dynamics of fear and boldness, especially for women who have a constant, internal negotiation of 'Where to go?', 'When to go?', and 'With whom to go?', are spatial, temporal and social dimensions, respectively (Nelson and Seager, 2005, p. 261). On this line, Sheller (2018) invites us to reflect and ask, "Who is able to exercise rights to mobility and who is not capable of mobility within particular situations? Who is mobile or immobile and why?" (Sheller, 2018, p. 22).

4. Methodology

This thesis uses a convergent mixed-methods approach, which involves collecting and analysing quantitative and qualitative data separately, for later comparison and to present how they relate to each other in the discussion (Creswell and Creswell, 2018). A feminist perspective

is used in the analysis of the results to understand how different genders relate to this issue, that is, the challenges of cycling in Santiago, Chile. It is important to consider that a binary gender approach was used for this case in the analysis, due to the low number of participants who did not consider their genders to be part of the mainstream, that is, woman and man. Even though they are not included in the analysis, they are shown in the results figures in the appendix, because this research considers that being a minority does not make you non-existent or unimportant; representation matters.

4.2. Feminist Perspective

To understand the gender constraints and challenges of cycling in Santiago, a feminist approach was used. Thus, seeking to vindicate women's place in data and research, the data presented and analysed always consider gender as a social construct that shapes places and individuals (Nelson and Seager, 2005). It is important to highlight that this is not a method, but a perspective and/or a belief that can be grounded in the context that is presented to develop and shape methodology (Reinharz and Davidman, 1992; Nelson and Seager, 2005).

4.3. Positionality

I, Florencia Isidora De La Maza Allendes, am a feminist Latin American woman, born and raised in Chile. As a teenager, I started biking to school, an activity I resumed during the COVID pandemic to avoid getting sick. Later, I moved to Sweden, where I continued to bicycle. I consider that engaging in a feminist perspective in research is essential to understand that different phenomena do not affect people equally, especially when we consider that historically, gender has been a factor of division in society, and in some places and cultures, it still is. Using a feminist perspective on this issue allows me to address the gender gap in cycling and understand how genders differ in their perceptions of this mode of transportation.

4.4. Data collection

The first step in data collection is a 24-question survey, with the final item inviting participants to the second phase, the interviews. The survey was directed to people who lived in the Province of Santiago, which comprises 32 communes, and who cycled in any capacity, whether for urban, road, or sports purposes. It was shared on social media, including Instagram, Facebook, and Reddit, as well as on university forums such as U-Cursos of the Universidad de Chile. To officially launch the study, Instagram and Facebook pages were created to post the survey. This

was also done to protect my identity and personal social media accounts in case people engaged in violent internet behaviour.

The Instagram ID was @estudiociclistastgo, and a Facebook Page called 'Estudio sobre Género y Ciclismo en Santiago' (Study about gender and cycling in Santiago) was created, along with an email address for participants with further questions (estudiociclistastgo@gmail.com). Once the invitation was posted on Facebook and Instagram, both were converted into paid ads to increase visibility and participation. A custom audience was set up in Meta, covering the geographical area of Santiago, Metropolitan Region, Chile, for ages 13 to 65, which is the maximum range Meta offers. The tags or interests included were 'Road bicycle', 'mountain bike', 'ciclismo a fondo', 'mountain bike racing', 'racing bicycle', 'bicycle touring', 'track cycling', 'specialised bicycle components', 'cycle sport', 'cycling', 'cycling team', 'road bicycling racing', and 'bicycle or cycling club', which are the most relevant tags related to cycling. On Instagram, 3 separate posts were published as paid ads to better adapt to the audience, building on experience in this area. Once the paid ads were running, they gathered around 100 respondents each day. After 22 days, the participant count reached 2084. The ad was then paused, and the survey closed.

The second phase of data collection was the interview phase. The participants' contact information, including their email addresses, was obtained from the survey they voluntarily completed. A total of 20 were emailed, and only 5 attended the interview (3 women and 2 men). Participants were selected based on whether they cycled to work; an equal number of men and women of different ages were chosen, and responses were recorded. There were 7 semi-structured interview questions, and the interviews lasted between 8 and 20 minutes.

4.5. Data Analysis

To provide a broader picture of the matter, the quantitative data from the survey and the qualitative data from the interviews complement each other. (Moss, 2002). The presentation of the results and analysis consists of presenting the survey results and highlighting the most relevant findings in a descriptive analysis. This will allow us to identify important findings that might help bring a broader picture into focus before later analysing the interviews through thematic analysis, with findings presented and explained using interview quotes. The decision to conduct this analysis was guided by not only the research question but also by Moss (2002), who, in the book *Feminist Geography in Practice*, gives guidance in feminist research, arguing

that “using multiple methods in a single study may provide a more complete understanding of the question at hand” (Moss, 2002, p. 163).

4.6. Delimitations

All data were collected as part of a fieldwork studies course (SGED07), which was conducted as an independent track from the thesis course in 2025. Survey questions and the interview guide are available in the Appendix of this paper. To suit the data for this bachelor’s thesis, the data were simplified for analysis in the Results and Analysis section.

The communes of the province of Santiago were classified according to the Index of Urban Quality 2023 (Orellana and Moreno, 2024), which takes into consideration 44 variables divided into 6 dimensions: work conditions, business environment, sociocultural conditions, connectivity and mobility, health and environmental conditions, and housing environment (Orellana and Moreno, 2024). Since the survey was answered voluntarily and posted digitally on social media, targeting the communes of the Province of Santiago, most participants belong to communes that are medium or high according to the Index.

The individual backgrounds of the participants in this thesis are limited to characteristics that provide context for the cyclists' experiences and perceptions, as collected through the survey and interviews. In this sense, background includes demographic and educational characteristics; family and social circumstances, such as potential caregiving responsibilities and the influence of family and friends; and cycling-related background, such as the life stage at which they learned to cycle and cycling experience. As gender is considered separately as the main analytical dimension, it is not included within the definition of individual background. Variables related to cycling patterns, such as frequency, duration of the cycling trip, and its purpose, are treated as characteristics of cycling behaviour. Background characteristics of socioeconomic and spatial context are considered through the education and characteristics of the communes measured using the Urban Life Quality Index, in which participants reported living; however, individual income was not directly measured in this thesis.

The survey dataset is not available for review, nor are the full interviews.

4.7. Ethical considerations

Under Chilean Law 21719, which seeks to protect and regulate the treatment of personal data, the participants were informed of the study’s purpose and that all their responses would be anonymous. During the interviews, the participants were again told that their identities would

be anonymised and that they could withdraw at any time and request that the interview be deleted. They were informed that participation in the interview required consent to being recorded, and verbal consent was also obtained at the beginning of the interview.

5. Results and Analysis of Survey

The survey comprised 2075 valid cases, of which 29,8 per cent (619) were women and 69,3 per cent (1437) were men (Figure 1). The majority of cyclists were between the ages of 25 and 44, with women more predominant on the younger side; however, both genders were very close to each other from ages 35 to 44 (Figure 2). The occupations in which most participants are workers of both genders are over 80 per cent. It is interesting to note that even with a vast minority of participants considering themselves homemakers, this section is heavily occupied by women, marking clear gender roles (Figure 3).

The educational level of cyclists is characterised by a majority holding a university degree, with women reporting a higher percentage at 73,2 per cent and men at 60,3 per cent. Men also report lower levels of education, such as technical degrees or only secondary education (Figure 4). Regarding household composition, the majority of cyclists report not having a minor under their care, whereas women are the majority (Figure 5). The same pattern emerges when an elderly person is added to the picture, with fewer women having an elderly person in their household than their male counterparts. This could be related to the responsibilities of taking care of another person, or assuming greater household responsibilities, which might prevent them from cycling or restrict their mobility (Figure 6).

When looking at the distribution of the places where the participating cyclists live, we can see a clear predominance of cyclists living in the ‘comunas’ of Santiago, Ñuñoa, La Florida and Providencia. Among the communes with over 5 per cent of participants, it is interesting to note that women are more predominant in Ñuñoa, Providencia and Santiago, accounting for 51.6 per cent of the female participants. At the same time, men are more predominant in La Florida and Maipú, accounting for 19.6 per cent of the male participants (Figure 7). It is not surprising that these communes have a high or medium-high Urban Life Quality Index and high or medium-high connectivity and mobility indicators within the same index, making these places more suitable for living when using the bicycle as a mode of transportation.

5.2. Mobility Patterns

The participants' mode of transport is predominantly bicycle and public transport, followed by car. It is interesting to note that the bicycle and public transport are used by over 60 per cent of women, with the former predominant, whereas this is not the case for the bicycle alongside car use (Figure 8). Among the activities that participants cycle to most often, cycling to work is the most common, with men and women at nearly the same percentage, around 40 per cent, with the latter a few decimals higher. The second most common activity is cycling for sport, with men representing the majority. Interestingly, for the remaining activities that could be considered odd, such as grocery shopping, women represent a majority (Figure 9).

The cycling frequency among participants is relatively high, with over 40 per cent of participants of both genders cycling five or more times per week. The second-most-common frequency for both genders is 3 days per week. At lower frequencies, such as once or twice per week, women tend to have a higher percentage than men, whereas men are more prevalent at higher frequencies (3, 4, 5, or more times per week) (Figure 10). When we examine the duration of their main reported journey, there is a clear predominance of journeys over 40 minutes. Interestingly, most women, unlike men, reported journeys of under 40 minutes, with the most common range being 20 to 30 minutes, and journeys under 10 minutes were uncommon for both groups (Figure 11).

5.3. Cycling Motivation and Social Influence

For participants, the main reason for starting to use a bicycle as a means of transport is simply enjoying cycling, with a vast majority, over 60 per cent, across both genders. This is followed by health reasons, saving time and money, and having a friend who cycles as motivation. Interestingly, saving money and having a friend who is also a cyclist are reasons for which women have a higher share than men (Figure 12). Participants who reported having a family member who is a cyclist are mostly women, with 62,7 per cent, and men, 51,6 per cent, with the most commonly reported family member being their partner (26 per cent for both genders). Among participants who reported not having a relative who uses this mode of transport, men are the most represented, at 48 per cent, followed by women at 37 per cent (Figure 13). When asked at what stage in life they learned to ride a bicycle, most participants said they learned as children. Notably, the share of women who learned as adults is more than 3 times that of men (4,5 per cent), and the share of men who learned as teenagers is slightly higher (4,4 per cent for men and 3,6 per cent for women) (Figure 14).

5.4. Use of Infrastructure, Access and Preferences

When we look at our respondents' infrastructure use and preferences, we can see a clear relationship between security and infrastructure, with insecurity associated with high traffic and interactions between cyclists and motorised traffic. In this context, when choosing a path, there is clear care in the decision-making, with security as an important factor. For example, we can see that the majority of participants prefer a route with more cycling infrastructure, even if it means they will take longer to reach their destination. This choice is represented mostly by women, with 59,8 per cent, and 50,9 per cent of men. Another choice, in which respondents avoid heavy motorised traffic, even if this means there is no cycling infrastructure at all, is represented by 24,6 per cent among women and 23,9 per cent among men. The last choice the participant made was choosing a faster route over safety, which has a share of 15.6 per cent among women, representing a minority, and 25.3 per cent among men, which could imply that men may care less about the importance of cycling infrastructure in exchange for a faster route to their destination (Figure 15).

Along the same lines, when we examine the use and access to bicycle lanes, a principal component of bicycle infrastructure in our cities, there is a clear preference for their use. Even where the majority of respondents report using the bicycle lanes at some point in the journey, with 47,5 per cent of women and 53,4 per cent of men, there is a considerable gender difference in those who use the lanes for most of the journey, with 44,3 per cent of women versus 34 per cent of men, and in those who do not use them at all, with 8,2 per cent of women and 12,3 per cent of men. This could imply that access to bicycle infrastructure, such as bicycle lanes, can be an important factor in women's choice to cycle rather than use another mode of transport (Figure 16).

5.5. Challenges when cycling

When we talk about the challenges our respondents face when they cycle to their main occupation, there is a clear distinction between factors related to infrastructure and access and those related to personal security. Of these, option “J” was excluded from the analysis. The answers to the question were separated into two categories: “D”, “E”, “I”, “B”, and “C” were reclassified as Personal Security, and “A”, “F”, “H”, and “G” were reclassified as Infrastructure and Access. In the first reclassified category (Personal Security), women represent 49.8 per cent and men 44.2 per cent. In the second reclassified category (Infrastructure and Access), women represent 43.6 per cent and men 41 per cent (Figure 18).

When respondents are asked about their perceived challenges in general (using the same reclassification here), the representation changes slightly. When the options related to Personal Security appear, women represent 51,9 per cent and men 47,5 per cent; and in Infrastructure and Access, women represent 40,2 per cent and men 38 per cent (Figure 19). It is interesting to note that both genders in both questions show a similar, high share, and in both, respondents perceive great challenges to their personal security and infrastructure; interestingly, this is higher for main occupation or work trips, which might be related to the lack of options for choosing a route contrary for other kind of activities, such as grocery shopping or visiting friends where maybe time, is not a priority. There is the possibility of choosing what could be considered a more comfortable or safer path.

6. Interview Findings and Analysis

Through thematic analysis, interviews with three women and two men were analysed. The identified themes are Infrastructure, with Perceptions of urban infrastructure and Use of bicycle lanes as subthemes. The second theme is Challenges, with subthemes including safety and traffic, comfort and accessibility. The third is gender-related challenges, including discrimination and harassment, and perceptions of gender differences. These themes are interrelated, with some becoming cause-and-effect variables.

Interview Findings					
Infrastructure		Challenges		Gender related challenges	
Perceptions of Urban Infrastructure	Use of bicycle lanes	Traffic and Safety	Comfort and Accessibility	Discrimination and harassment	Perceptions of gender differences

Table 1 describes the structure on which the interview findings are organised.

When asked about their general experience, they began by telling how they started using their bicycles for transportation; some said that one of the main reasons was that they enjoy cycling, along with other benefits such as saving time and money. They also explained that although some of them use it for work, they choose to ride bicycles for social activities.

"To be honest, I'm not very sporty, but I use the bicycle a lot; Not every day, but 2 or 3 times a week, for trips around the city. That is, I go to a meeting, I go to teach, I go to a march, I go to see a friend, something like that" (Woman, 38).

Although these experiences could be considered gender-neutral, it is interesting to note that neither of the participating men mentioned or highlighted the moment when they started cycling as a mode of transportation, something that women did; this might be because the importance of the decision was not considered a life-changing one in their lifestyles; however, this is merely a theory.

6.2. Infrastructure

This theme is often recurrent, as it is central to the influence on urban cycling and shapes our participants' paths and decision-making. It was decided to blend the two subthemes of Perceptions on urban infrastructure and Use of bicycle lanes into Use and perception of urban infrastructure, as they merge seamlessly.

Use and perception of urban infrastructure:

Interviewed men were questioned about infrastructure for cycling and how it affects their preference to choose a path when cycling; they expressed that even when bicycle lanes exist in the streets, which could be considered the safest option, the planning of those lanes is not optimal for their journeys, or their condition is not appealing enough to choose a safer option than the street itself.

"I must say that I prefer not to use the bike lanes. I am one of those cyclists who ride on the street, between buses, because most bike lanes are two-way and are usually narrow; they usually pass between poles and trees and do not allow a very fluid ride" (Man, 31).

Although women share the view that bicycle lanes are not optimal, they still see merit in the existing infrastructure and, when in acceptable physical condition, prefer to use them when available. There is also an understanding that appropriate infrastructure is an important factor to consider when starting to bicycle, as it gives some of the women participants a sense of security on the streets; however, as riders become more experienced, this perception changes, and so do route choices.

"When you ride a bike on a bike path, I personally think you can relax a little more. You can enjoy riding a bike even more because, when you ride on the street, which is something I do

regularly, when there is no bike lane I still have to cycle on the street, you concentrate much more on cars seeing you and them leaving you space; So, the bike path still generates a feeling of security and also allows a joy and enjoyment of riding a bicycle. (...) [So], in general, I prefer routes that have bike lanes, unless they make my route excessively longer"
(Woman, 38).

As we can see, there is a clear gender-differentiated choice regarding bicycle lane use in this case: women prefer to use them when available, unless the conditions are too poor or the route is too long, whereas the participating men preferred not to use them at all, even when available and in good condition. This could be seen as gender discrimination in urban infrastructure, since in this example women benefit most from bicycle infrastructure, and its absence could affect them disproportionately. In contrast, men in this case do not prioritise using it.

6.3. Perceived Challenges when Cycling

Challenges for cycling can be varied, from hostile infrastructure to a lack of appropriate clothing and traffic, which can affect perceptions of safety; here, the interview participants share their perceptions and experiences on the matter.

Traffic and safety:

Traffic can be seen as an important safety factor when starting to use the bicycle as a mode of transport, given the risk of a traffic accident. In this case, all participants agree that Santiago can be a tough place to bicycle, since heavy traffic can instigate fear or frustration, and that negative attitudes towards cyclists from motorised vehicles are also present; however, they acknowledged that with experience one can start to gain confidence while cycling in the streets. Both genders share this sentiment.

"At first one is afraid. They drive the car next to you, and you are not used to that, so little by little one acquires confidence and stability to ride alongside cars" (Woman, 29).

"It's not a good experience to ride, for example, at the peak places of Santiago, because there's too much traffic, a lot of cars; you kind of try to be respectful, but people come and go, and the cars don't respect the cyclists." (Man, 22).

As we can see, there is clear discomfort related to traffic, and participants perceive that pedestrians and those who use other modes of transportation are at fault, creating a sense of insecurity.

Comfort and Accessibility:

Comfort with cycling can be an important factor, as is access to bicycle infrastructure and appropriate clothing; both can influence the decision to use a bicycle as a mode of transport.

"Before, my limitation was that, at my work, for example, there was no space to leave the bicycle or any infrastructure. Now I have a shower, and a place for my bicycle" (Woman, 29).

As we can analyse, it is clear that infrastructure such as a place to park or to refresh oneself is important to experienced users of the bicycle, and that accessibility to their destination, such as travel time, can be an important factor to consider; only in one male case does the weather suggest to be a sporadic limitation to choosing another mode of transportation than the bicycle. This shows that, for experienced bicycle riders, uncomfortable conditions are not enough to deter them from preferring bicycles, as the benefits they offer outweigh the drawbacks; however, this could be seen as a challenge for someone starting to use this mode of transportation regularly.

6.4. Gender differentiated challenges.

Here are the interview findings regarding gender-differentiated challenges, starting with the subthemes Discrimination and harassment, followed by perceptions of gender differences.

Discrimination and harassment:

From the participants, there is a common understanding that women are the ones who are mostly influenced negatively by discrimination and harassment. However, women recognise that street harassment has declined in recent years, thanks to feminist pressure and social movements.

"At the beginning, about 10 years ago, they would honk at you or harass you in the street; It's not so much anymore, almost nothing, but it was common for them to shout something at you. Since the feminist movement, the 8M, it has been made visible that people should not harass, that it is not appropriate, that catcalling is not well received" (Woman, 29).

"I think that the experience of cycling reflects an attitude that leans towards risk-taking or higher speed, perhaps with less awareness that we need to share the road. I see this among men as an expression of a super-risk-oriented masculinity that is more willing to go faster, overtake, etc., in terms of perception. I believe it is quite a lot; I think street harassment has decreased, or at least I feel that way when I compare it with past years. But it also has happened to me that, when you insist that motor vehicles respect the 1, 5 meters of distance

from the car, that by law should be respected, male drivers get a lot of shock from being confronted by a woman and stay stunned, but some reply with a patriarchal hostility such as comments referring to our bodies and the typical sexist insults that are often directed at women" (Woman, 38)

Men, on their part, recognise the struggles of their female partners and friends; however, they do not report experiencing similar situations.

Women suffer more harassment than men and may be more affected by the environment when riding bicycles, (...) My partner has never been yelled at when we are together. And I don't drive the same way when I bicycle with her; we are cycling slower, because she can't cycle at the speed I usually do" (Man, 22).

"I think cycling in Santiago can be a bit aggressive at times, and that can benefit men more in general. I have talked with female friends and my girlfriend, who are somewhat hesitant to use urban bicycle transport, (...) Well, there isn't that much space; in reality, the space for the bicycle ride is limited. It is a small amount of infrastructure; it is unfriendly for those who perhaps do not give the size of the bicycle" (Man, 31).

There is a clear reflection of how cycling is still a male-dominated mode of transportation, and that female participants still feel vulnerable on the streets and have to fight for the right to use the street alongside their male counterparts, who are often perceived to bicycle in a more hostile style than they are. As mentioned before, interviewed men do recognise some of the hindrances for women; however, they do so in a more general way and less personally, although they do recognise seeing and hearing negative experiences from women close to them. There is also the positive side that gendered violence towards women is perceived to have decreased among the female participants. This reinforces the analysis of infrastructure, as participants perceive it as a safe space, particularly benefiting female cyclists.

Perceptions of gender differences:

Most women interviewed perceived that gender differences are clear in this mode of transportation, especially where women are at a disadvantage. Recognising that most of their fears are not perceived by men. And that public spaces are contested.

"As a woman, I would be afraid to expose myself to cycling on the sidewalk, because there are already people who can do something to you, such as harassing you, something that is not going to happen to men. So, I would consider it safer to ride on the bike path than on the

sidewalk, even though the sidewalk is safer because there are no motor vehicles. A male cyclist does not see that difference or would only see the risk of a car or a pothole, or the intrinsic risks of the activity; we must add the risk that they could attack or harass us. So, the infrastructure also helps, at least when you travel; it decreases the risks" (Woman, 29).

"I think that, in general, the public space in Chile has been super vetoed and super hostile towards women. When there is a better public space, we can inhabit it in a better way. There is also a positive impact from being out on the streets more. So, I think that more bike lanes also allow us to bicycle more in the city. I think cycling is even safer than walking at night because it's faster. So, I think that the bike path would also allow a better use of public space by women and dissidents" (Woman, 38).

Some disagree on this matter, arguing that both men and women are equally affected by the physical conditions of cycling and that there is not really a gender difference in that regard; however, there could be a difference in how different genders react to these conditions.

"It doesn't affect whether we are men or women. (...) There should not be a difference between men and women in terms of infrastructure. Maybe that, I don't know, a man has more strength in his body, but no, I don't think so" (Woman, 55).

Although some participants do differ in gender-differentiated reactions to situations, infrastructure is a factor in gender disparity in cycling. There is a clear perception that cycling spaces are contested. Most women, on their side, recognise that male cyclists often do not recognise or perceive the same risks that are inherent in the perceptions of insecurity and fear towards violence for being a woman. However, those who oppose this view, only in terms of infrastructure, do not see a difference in how infrastructure can be a factor, but agree that violence can be a factor that can make women specifically choose another mode of transportation. In this debate, participants commenting on this topic highlight how infrastructure can be a real help in avoiding violent situations and increasing the sense of security on the street while cycling.

6.5. Conclusions

As we have seen in this analysis, there is a clear gender-differentiated perception of how cyclists are affected in Santiago. Starting from infrastructure, our participants reflect on their use and how it affects their journey. The male participants reported that their use of urban bicycle infrastructure is minimal. Preferring, in this sense, not to use the lanes and engage in risky

cycling behaviour, something that participating women also perceive from them. However, women, on their part, expressed a preference for using bicycle lanes as long as they are in an acceptable condition. In this sense, this shows more reasonable behaviour, oriented more towards the carefulness of the activity. Infrastructure is a recurring theme across most interviews and intersects with the other subthemes. There is a constant reflection, especially among women, that infrastructure such as bicycle lanes can be a freeing factor for this mode of transportation, as it can ensure greater security during the ride and reduce risks from motorised vehicles and pedestrians.

Already getting into the perceived challenges when cycling, traffic and safety were important factors that recurred and other themes as well; in this sense, participants highlighted mostly that traffic creates a perception of unsafety since there is also the factor of cars and pedestrians not respecting the cycling movement either; The lack of appropriate infrastructure is also mentioned here but as a factor of discomfort as it creates insecurities with pedestrians and motorised vehicle. It was also mentioned that there was a lack of appropriate clothing for cycling and for weather conditions; another limitation was distance, with one female participant preferring shorter bicycle trips, no longer than 30 minutes. What is interesting is that only one participant mentioned these conditions as something that could divert them from taking the bicycle, but even then, this male only saw it as a possibility and not as a condition; this highlights that experienced cyclists, although suffering discomfort and challenges, take the bicycle as an act of resistance against the system that undermines this mode of transportation, benefiting motorised traffic.

When it comes to gender-differentiated challenges, most of the previous themes recur. However, safety seems to be one of the most important here, as discrimination and harassment experiences come out. Along this line, women highlight that although harassment and violence in the street towards female cyclists have decreased in recent years, they still have experienced it on occasion, but now more as an exception than a systematic event, thanks to social movements, such as 8M. There is also a reflection on masculinity and how it encourages risky behaviours, which can give the impression that carefulness is seen as annoying by male riders. On the male side in this regard, they recognise that there is a more general view; they mention mostly second-hand experiences from close friends and reflect on it; however, they do not express suffering harassment for being a male on a bicycle or being a witness to genderised violence in the street, nor how their bicycle behaviour might affect their counterparts.

Amplifying their answers on gender differences now from a more explicit question, and more of a perspective of the urban infrastructure, most women reflect that the lack of bicycle infrastructure creates perceptions of insecurity that men mostly do not consider, such as the risk of harassment and violence because of their gender when they head out. According to them, women live with the constant reminder that something not intrinsic to cycling might happen to them. In this line, they argue that public space in Chile remains contested and can be hostile towards women, and that constructing more cycling infrastructure, such as bicycle lanes, can benefit them by helping them claim and better use the public space. However, one person in each group does not agree that infrastructure is important towards gender inequality; the male participant argues that the difference lies in how each gender is affected by violence, although it does not connect it with the effect that infrastructure can have on that behaviour.

7. Discussion

This research project aimed to address the gender gap in urban cycling in Santiago, Chile, by understanding the gender-differentiated experiences and perspectives of cyclists, as well as cyclists' backgrounds, to gain a broader picture and delve into implicit answers hidden in their behaviours. This section aims to answer the research question, **“How can gender and individual background be a factor that differentiates cyclists' perceptions and influence their experiences in Santiago, Chile?”** This is achieved by combining both quantitative and qualitative data gathered in this project with existing literature and background.

7.2. Background can reflect cyclists' perceptions and experiences

The survey showed that most female cyclists were younger than men; this is not uncommon compared with international experience. Aldred, Woodcock and Goodman (2016) highlight that the number of older cyclists has decreased over the years; this is particularly true for women, whose share of older cyclists is even a minority within minorities (Aldred, Woodcock and Goodman, 2016). Compared with previous data in Chile, the sample from the survey by Hurtubia, Waintrub and Raveau (2024) shows that cyclists aged 65 years or older are a minority as well (Hurtubia, Waintrub and Raveau, 2024). This is not strange, considering that interviews highlighted that cycling can be a risky activity, which might not be attractive to someone who believes that age increases the risk of an accident. On the same line, according to Emond, Tang and Handy (2009) a study in Davis proved that although both gender reported a decrease in cycling when older, this was higher among women, this could be related with results in the

same study were levels of comfort while cycling were an important factor for cycling among women, something that might decrease when getting older (Emond, Tang and Handy, 2009).

Along these lines, the reasons the participants reported for starting to bicycle were, in the majority, that they enjoyed cycling, followed by health reasons, saving time and money, and having a friend who cycles; interestingly, the last two have a higher share among women. Previous research has shown that liking cycling is an important determinant for both genders, as well as being in good health; this is considered a gender-neutral variable; in this line, women have shown to perceive more that cycling is a convenient and practical mode of transportation (Emond, Tang and Handy, 2009; Prati *et al.*, 2019). When reporting on not having a family member who cycles, men were the majority; this could imply that women who bicycle have had, or might need, a stronger influence from their close circle to start using this mode of transportation. Although this is not a factor that has been studied in the previous research mentioned, it is interesting and could be studied in the future as a social influence factor for starting to cycle.

When asked at what stage of their lives they started to cycle, although most participants reported having learned as kids, those who learned as adults were mostly women. According to Emond, Tang and Handy (2009), cycling during their youth was a factor that influenced men more than women, discussing that these results might be due to the fact that males in general are allowed more freedom at an early age than women, allowing them to take more risky activities and to cycle (Emond, Tang and Handy, 2009). On the same line, theory highlights that women's mobility specifically starts to get limited from an early age, shaping identities consequently and narrowing spaces for them (Nelson and Seager, 2005; Day, 2011)

Most cyclists reported not having minors or elderly under their care; however, men reported having one of them more than women. This suggests that women who have family under their care might be less likely to bicycle in Santiago, whereas this factor might not be as important for males. This is consistent with previous research, highlighting that the gender equality index is related to gender differences in cycling, noting that the major household responsibilities carried by women can be a factor that dissuades them from cycling (Day, 2011; Prati, 2018; Soukhov, Mooney and Ravensbergen, 2025). Also, considering responsibilities such as caring for family members, cycling might not be the ideal mode of transportation for this, Hurtubia, Waintrub and Raveau (2024) in their survey, they highlight that among the more prominent barriers to cycling was the necessity of transporting others, adding this to the lack of

infrastructure that could, for example, accommodate a bicycle with a carriage that could facilitate collective bicycle transportation (Hurtubia, Waintrub and Raveau, 2024). In this line, the survey also pointed out participants' wish for more investment in bicycle transport (Mora, Truffello and Oyarzún, 2021; Hurtubia, Waintrub and Raveau, 2024). Along the same lines, although a minority of participants identified themselves as homemakers, these were predominantly women, which marks clear gender roles.

Most cyclists reported living in communes with a high and medium-high Urban life quality index, with the same levels of connectivity and mobility indicators (Orellana and Moreno, 2024). This is not strange, as this sector of Santiago is characterised by abundant infrastructure and bicycle lanes; this also might reflect their income, as Mora, Truffello and Oyarzún (2021) point out that middle-income communes in Chile are more likely to have a greater presence of bicycle infrastructure (Mora, Truffello and Oyarzún, 2021). Interestingly, previous research on gendered attitudes towards cycling has highlighted that having a bicycle-friendly community and the presence of other cyclists are factors that encourage people to cycle; however, this is something reported mostly by men (Emond, Tang and Handy, 2009; De Fabiis, Baldini and Coppola, 2026). Women become or are encouraged to cycle regardless of whether their community is bicycle-friendly or if there is more presence of cyclists in their environment compared to men (Emond, Tang and Handy, 2009; De Fabiis, Baldini and Coppola, 2026).

At the same time, women revealed a higher share of higher educational attainment than men; this could be connected to the income-education relationship, although education level is positively associated with cycling, it is considered a gender-neutral variable by Emond, Tang and Handy (2009). In this sense, it could be inferred that people who live in a place with a medium-high to high urban quality index, with middle income and high education, have a higher probability of cycling; although this is only theoretical, it is worth studying in more detail in the future.

According to the survey on mobility patterns, women reported cycling less frequently and over shorter trips than men. This is not unusual, as the bicycle is mostly used for cycling to work and for sport. Interestingly, in odd activities such as grocery shopping, visiting friends and family, running errands, and picking up relatives, women make up the majority. Interview findings also highlighted that women participants preferred to bicycle shorter distances. This pattern is not unique to this project; mobility research has highlighted that women travel shorter distances and visit more localised places than men (Gauvin *et al.*, 2020).

Most participants reported using bicycles and public transport more than motorised modes of transportation; note that the first two options are mostly used by women. As the survey was directed to cyclists, it is not weird that the majority of participants use mostly the bicycle as a mode of transportation; however, literature has shown that women, are more dependent on public transportation than men, making them more vulnerable when urban planning lacks sight on transportation that goes beyond the car, and chastise those dependant on for example buses and metro trains to be more localised (Gauvin *et al.*, 2020; Macedo *et al.*, 2022). In this line of thought, women's access to resources, according to feminist thinkers, depends on their ability to move between different locations; in this sense, the more mobile, the more capable of bringing what is needed home (Nelson and Seager, 2005). Although this project does not dive into public transportation, it is important to keep pushing for more democratic urban planning that includes all modes of transportation that suit its inhabitants, especially those who today might be less mobile due to exclusionary urban transport planning.

7.3. The role of infrastructure as a differentiating factor

Although most participants reported preferring a path with more bicycle infrastructure, such as bicycle lanes, even if it meant taking longer to reach their destination, and choosing a route without motorised traffic, even if it meant no cycling infrastructure at all, these two options were mostly chosen by women. These choices reflect a precaution against motorised traffic on both occasions: the first avoids engaging with cars by using, for example, bicycle lanes, and the second avoids interactions with motorised traffic altogether. The last choice is to take the fastest route, even though this could mean sharing the street with motorised vehicles; although it represents a minority, men chose it. Literature has highlighted that women make longer trips than individuals with the same characteristics; this can be explained by the fact that men use faster modes of transportation. However, in general, women make shorter and fewer trips than men (Olivieri and Fageda, 2021). In cycling, it could be related to the choice of faster routes that might not be bicycle-friendly in terms of infrastructure, such as bicycle lanes.

Similarly, women made up the majority of those who reported using bicycle lanes for most of their journey, and a similar share also reported using them at some point; although this option was dominated by men, interestingly, those who never used the lanes were mostly men. Along the same line, interview findings highlighted that men argued that bicycle lanes in poor condition slowed them down and were an inconvenience that led them to avoid using them, whereas women expressed that even in poor condition there was merit, and they chose to use

them unless they were in an extremely bad state or made their journey too long. This shows a clear prioritisation of security by women, demonstrating that they can benefit the most from inclusive infrastructure, whereas men, who could also benefit from it, choose riskier pathways when cycling.

In this context, studies and theory have highlighted that women are more concerned than men about their safety, arguing that their risk perceptions are higher and that they report greater discomfort when cycling without a bicycle lane than men, reporting that not only do they prefer journeys with bicycle lanes, but also with off-road lanes as well (Garrard, Rose and Lo, 2008; Akar, Fischer and Namgung, 2013; Prati *et al.*, 2019; De Fabiis, Baldini and Coppola, 2026). Survey data in Chile also backs this, as reports showed similar results: when choosing a route to travel by bicycle, although both genders prioritise the safest option with bicycle lanes, this was dominated by women (CONASET, 2019).

7.4. Public space as a contested environment

Survey results on perceived challenges showed that, in general, women perceive more challenges in personal security and in infrastructure and access than men do. This trend repeats itself, but with a higher share of specifically work trips. As mentioned before, access to bicycle infrastructure, such as bicycle lanes, does shape the way women move themselves (Garrard, Rose and Lo, 2008; Akar, Fischer and Namgung, 2013; Prati *et al.*, 2019; De Fabiis, Baldini and Coppola, 2026). Whereas existing infrastructure can shape their movement, their interactions with the environment can also shape and shake their perspectives on security. In this line, not only social circumstances but also personal experiences and feelings can shape gender relations with space; in this sense, deciding if a place is safe enough to go through is an everyday practical question for women, and it is directly a matter of personal feelings that can reveal power structures (Nelson and Seager, 2005).

Interview findings revealed that both men and women perceive traffic as a challenging factor, which creates a perception of unsafety and risky dynamics between cars, cyclists, and pedestrians. Both walking lanes and the bare street present risks when bicycle infrastructure is missing. Although women describe that as they get more experience in urban cycling, the fear of traffic decreases, there is still the fear that these risky interactions might develop into gender-based violence, such as harassment. Although gender-based violence in the street is perceived as decreased, and it is perceived more as something occasional and not systematic, there is still fear of encountering this kind of interaction. Women report that cycling infrastructure, such as

bicycle lanes, can help them avoid risky situations by reducing interactions with vehicles and pedestrians. Literature suggests that when cyclists start considering themselves as experienced riders, gender differentiated attitudes towards cycling tend to decrease; however, the fear of traffic presents itself as a barrier that, with the right infrastructure to cycle, could lessen this barrier for even the field between experienced and beginner cyclists (Prati *et al.*, 2019).

Although their male counterparts recognise gender-related violence in the street, there is no reflection on how risky behaviour can affect it and how it influences women's perceptions of cycling in the streets. Similarly, literature has highlighted that men's perception of the risk of cycling is lower; however, they have a higher risk of suffering an accident than their counterparts (Prati *et al.*, 2019). On this line, women expressed that men's risky behaviour does not go unnoticed and that there is a constant struggle to be recognised as part of the cycling community by their male counterparts, and that sharing the street is not something to take for granted. Literature has highlighted that power dynamics can shape experiences, marking differences in perceptions and behaviour between genders, affecting women especially; on this line, dynamics of fear and boldness, of belonging and not belonging to the urban space are daily lived (Nelson and Seager, 2005).

8. Conclusion

This thesis examines how gender and individual background characteristics shape perceptions and experiences of urban cycling in Santiago, Chile. A mixed-methods approach was used, analysing a survey and interviews, and discussing the findings in the discussion. Findings suggest that perspectives on cycling and experiences can be shaped by the interaction of factors such as gender, individual background characteristics, and the urban environment. This suggests that gender, rather than work as an isolated factor, interacts with characteristics such as age, caregiving responsibilities, education, and travel preferences to influence how cyclists experience and perceive cycling in Santiago.

Quantitative results highlighted gender differences in the proportions of women and men, particularly in their backgrounds. Older age was found to be a factor that disincentivises cycling, potentially linked to comfort levels, which is suggested to be an important factor for women cyclists (Emond, Tang and Handy, 2009; Aldred, Woodcock and Goodman, 2016). In addition, women with children and/or elderly in their care represented a minority when compared to men. It is important to highlight that these findings do not establish a direct

relationship; they could suggest that family responsibilities, gender roles, and the difficulty of using a bicycle to transport family members might be limiting factors that disincentivise cycling (Day, 2011; Prati, 2018; Soukhov, Mooney and Ravensbergen, 2025). Another factor that showed up, however, could not be discussed with the mentioned literature, was the influence of a close circle for cycling, as most women reported having a friend or family member who also cycles, leaving this finding as a recommendation for further research.

Gender differences were also found in travel patterns. Women reported shorter bicycle trips in terms of time and frequency, which is consistent with Olivieri and Fageda (2021). Compared with men, they also reported doing more odd activities, such as shopping, running errands, and visiting friends. This is consistent with research that suggests that women tend to have more localised travel patterns than men and are more likely to visit more spaces that are near shopping malls (Gauvin *et al.*, 2020). Women also reported to have a higher level of education than men and live in their majority in medium-high to high Urban life quality index, which helped infer that they belong to a middle-income group (Mora, Truffello and Oyarzún, 2021).

Adding to travel patterns and preferences, survey data highlighted that women prefer routes that avoid interaction with motorised traffic more than men, this being through the use of bicycle lanes or quieter streets. Although both genders, in the majority, reported safer options for cycling paths, men were dominant in insecure cycling paths, such as route choices that involved riding among motor vehicles and not using bicycle lanes. In this context, the presence of infrastructure represented an important factor for female cyclists. Interview findings reflected men's risk behaviour, fear of accidents, and fear of suffering gender-based harassment and violence, specifically by women.

In this regard, women highlighted the role of infrastructure for cycling, such as bicycle lanes, as a preventative measure against violence, as it helps to avoid interactions and confrontations between cyclists, motorised vehicles and pedestrians. The survey results also suggested that both women and men perceive challenges in personal security, infrastructure, and access; women even reported being the majority in both general and work trips, with an even higher share of participants. Literature highlighted that taking into consideration women's perspectives in urban planning and increasing the infrastructure for cycling could be a positive and efficient way to incentivise more women to bicycle and thus decrease the gender imbalance in the mode of transportation; however, taking into consideration also men's risky behaviour, even when perceiving less risk than women, they tend to suffer more accidents in cycling (Prati *et al.*,

2019). In this sense, improving infrastructure for cycling is not only beneficial for women but also makes cycling safer for everyone.

These findings can be seen through the lens of the feminist geography perspective that was adopted in this thesis. Nelson and Seager (2005) highlight that women are not inherently victims, and that it is important to challenge the view that fear is an essential female quality (Nelson and Seager, 2005). Women's acts of boldness in relation to urban space are often a response to the labelling of women's fear as normal (Nelson and Seager, 2005). In this context, "spatial relations, including restricted access to public space and limited mobility because of fear of violence, can be seen as a test for equality" (Nelson and Seager, 2005, p. 261). This perspective is relevant to the findings of this thesis, as women's concerns about security, gendered harassment and violence are not only related to the physical conditions that entangle cycling but also to feeling secure and being able to move through the public space without fear.

To conclude, findings suggest that gender and individual background characteristics can shape cyclists' perceptions and experiences through their interactions with the physical urban environment and its social characteristics. On perceptions of personal security and fear of harassment and violence, gender was shown to be highly relevant. Individual background contributed to identifying gender differences in mobility patterns, cycling behaviour, and the characteristics that affect opportunities to adopt this mode of transportation. In short, different genders experience and perceive the urban environment differently, as the same urban conditions present non-uniform challenges, leading them to interact with it in different ways. On this line, improving urban infrastructure for cycling, such as bicycle lanes, can help address the gender imbalance in this mode of transportation and create a more inclusive and safer city for everyone.

9. AI Statement

Artificial intelligence tools were used solely to improve and support grammar checking, language clarity, and academic expression in English. The tools were used only to improve the readability and correctness of the text, preserving the original meaning, analysis, and arguments of the thesis. No artificial intelligence was used to generate the research question, collect data, analyse the survey and interview findings, or replace the author's own interpretations. The content of this thesis final version is the responsibility of the author.

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11. Appendix

11.2. Survey

Welcome to the study about cycling behaviour and gender gaps in cycling in Santiago, Chile! This survey should take around 10 minutes to complete. I kindly ask you to answer as truthfully as possible. This survey is part of the fieldwork for the SGED07 course at Lund University, Sweden.

All data collected is completely anonymous and will be used exclusively for research purposes. Under no circumstances will any individual data be published or shared for commercial purposes, and, after its use, it will be deleted. By participating in this survey, you agree to the use of your responses under these terms and conditions.

Questions? Send an email to:

1. Do you live in Santiago?

- a) Yes
- b) No

2. Do you bicycle?

- a) Yes
- b) No

3. Age.

- a) Under 18
- b) 18-24
- c) 25-34
- d) 35-44
- e) 45-54
- f) 55-64
- g) 65+

4. Gender

- a) Woman

- b) Man
 - c) Other
5. What is your main occupation?
- a) Work
 - b) Study
 - c) Unemployed
 - d) Housewife or househusband
 - e) Retired
6. Do you have kids under your care?
- a) Yes
 - b) No
7. How many people currently live in your household, besides you?
- a) At least 1 Adult (Over 18)
 - b) At least 1 Child (Under 18)
 - c) At least 1 Elderly (from 60)
 - d) I live alone
8. What is your highest level of completed education?
- a) Primary school
 - b) Secondary school
 - c) Technical degree education
 - d) Bachelor's degree
 - e) Graduate school
 - f) Doctoral studies or higher
9. In which commune of Santiago do you live?
- a) Choose from the list. (Communes from the province of Santiago were included)
10. What are your two main ways of transporting yourself? (Choose 2)
- a) Car
 - b) Bicycle
 - c) Public transportation

- d) Motorcycle
11. To what activity do you bicycle most?
- a) To work
 - b) To study
 - c) To run errands
 - d) To pick up relatives
 - e) For sport
 - f) To go buy things
 - g) To visit friends or relatives
12. On average, how often do you bicycle? Times per week
- a) 1 time per week
 - b) 2 times per week
 - c) 3 times per week
 - d) 4 times per week
 - e) 5 times per week or more
13. How long is the main journey you bicycle for on average?
- a) 5 minutes or less
 - b) Between 5 to 10 minutes
 - c) Between 10 to 20 minutes
 - d) Between 20 to 30 minutes
 - e) Between 30 to 40 minutes
 - f) More than 40 minutes
14. What is the main reason you started bicycling?
- a) Save money.
 - b) Save time.
 - c) My friend bicycled.
 - d) For health reasons
 - e) I like bicycling.
15. Do you have someone in your family who also bicycles regularly?
- a) No

- b) Father
- c) Mother
- d) Sibling
- e) Partner
- f) Other

16. When did you learn to bicycle?

- a) As a kid
- b) As a teenager
- c) As an adult

18. When you choose your cycling route, what is the stronger factor?

- a) Choose a route that might be longer but has a better cycling structure.
- b) Choose the faster route but with poor cycling infrastructure.
- c) Choose a route that has low motorised traffic but no cycling infrastructure.
- d) Other. Write a maximum of 20 words.

19. How many bicycle lanes do you use in your journey?

- a) I do not use bicycle lanes at all
- b) I use bicycle lanes in some parts of my journey
- c) I use bicycle lanes for most of my journey

20. What is the biggest limitation or challenge that you would encounter if you wanted to bicycle in your main activity?

- a) Too long distances
- b) My clothes are not appropriate for cycling
- c) I fear the traffic in the streets might provoke an accident
- d) I fear someone might harass me while bicycling
- e) I fear someone might attack me while bicycling
- f) There are not enough bicycle lanes on my way there
- g) I fear someone might steal my bicycle
- h) I have no appropriate place to park my bicycle
- i) Car drivers are very aggressive towards cyclists
- j) I do not feel recognised in the previous options

21. What is your main or second challenge for your cycling activity?

- a) Too long distances
- b) My clothes are not appropriate for cycling
- c) I fear the traffic in the streets might provoke an accident
- d) I fear someone might harass me while bicycling
- e) I fear someone might attack me while bicycling
- f) There are not enough bicycle lanes on my way there
- g) I fear someone might steal my bicycle
- h) I have no appropriate place to park my bicycle
- i) Car drivers are very aggressive towards cyclists
- j) I do not feel recognised in the previous options

Do you agree or disagree with the following statements:

1. I prefer to take the fastest route by bicycle, even if it lacks bike lanes or is perceived as less safe, rather than choosing a slower route with better cycling infrastructure and greater safety.

- 1. Strongly disagree
- 2. Disagree
- 3. Partially disagree
- 4. Partially agree
- 5. Agree
- 6. Strongly Agree

2. I would rather not cycle to work or school due to the hazard of physical activity that might affect my image or presentation

- 1. Strongly disagree
- 2. Disagree
- 3. Partially disagree
- 4. Partially agree

5. Agree
6. Strongly Agree

- Would you like to participate in the interview stage of this study? Leave email

11.3. Email for interviews:

Hola, / Hello,

Has sido seleccionada(o) para participar en la etapa de entrevistas para el estudio sobre las brechas de género en el ciclismo en Santiago enmarcado en mi tesis. / *You have been selected to participate in the interview stage for the study on gender gaps in cycling in Santiago framed in my thesis.*

Te cuento más sobre el proyecto: / *I'll tell you more about the project:*

Enmarcada en la pregunta de investigación *¿Cuales son los desafíos diferenciados por género que perciben los ciclistas en Santiago de Chile y qué factores se encuentran detrás? (What are the gender-differentiated challenges that are perceived when bicycling in Santiago, Chile, and what factors are behind them?)*. Esta entrevista ayudará a entender los desafíos y dificultades que enfrentan las y los ciclistas en Santiago de Chile, poniendo en foco la calle como influencia a los distintos comportamientos. / *Framed in the research question: What are the gender-differentiated challenges perceived by cyclists in Santiago de Chile and what factors are behind them? This interview will help to understand the challenges and difficulties faced by cyclists in Santiago de Chile, focusing on the street as an influence on different behaviours*

Las entrevistas forman parte de la segunda etapa parte del Estudio sobre el ciclismo y género en Santiago, parte del curso de recolección de data (SGED07) de la Universidad de Lund encuadrada en el proyecto de Tesis, llevada a cabo por la estudiante Florencia De la Maza Allendes (Yo). / *The interviews are part of the second stage of the Study on Cycling and Gender in Santiago, part of the data collection course (SGED07) of the University of Lund framed in the Thesis project, carried out by the student Florencia De la Maza Allendes (Me).*

Las entrevistas están idealmente agendadas esta semana de lunes a viernes, de forma online en video llamada. / *Interviews are ideally scheduled this week from Monday to Friday, online on video call.*

Sí aún quieres participar, por favor responde este email lo antes posible indicando tu voluntad y horario en el que te encuentras disponible. La entrevista consiste en ocho preguntas semi estructuradas de final abierto y la duración será de 20 minutos aproximadamente dependiendo de las respuestas. / *If you still want to participate, please answer this email as soon as possible, indicating your willingness and the time when you are available. The interview consists of eight open-ended semi-structured questions, and the duration will be approximately 20 minutes depending on the answers.*

La entrevista será grabada, por lo tanto debes estar de acuerdo con esta condición. Además se pedirá tu consentimiento verbal al inicio de la entrevista. De ninguna manera y en ningún momento se compartirá tu información personal y tus respuestas serán anónimas. En cualquier momento de la entrevista usted se puede retirar del estudio y pedir la eliminación de sus respuestas. / *The interview will be recorded; therefore, you must agree to this condition. In addition, your verbal consent will be asked for at the beginning of the interview. In no way will your personal information be shared, and your responses will be anonymous. At any time during the interview, you can withdraw from the study and ask for the deletion of your answers.*

Muchas gracias por tu participación y espero tu respuesta / *Thank you very much for your participation and I look forward to your response.*

Saludos Cordiales / *Best regards*

Florencia De La Maza Allendes

Estudiante de BSc en Estudios de Desarrollo con Mayor en Geografía Humana de la Universidad de Lund, Suecia. / *BSc student in Development Studies with a major in Human Geography from Lund University, Sweden.*

11.4. Interview Guide

1. Cuéntame en general sobre tu experiencia andando en bicicleta en Santiago. / *Tell me about your general experience of cycling in Santiago.*

2. Cuando vas a andar o cuando andas en bicicletas, ¿Cuáles son los desafíos con los que te encuentras? / *When you are about to cycle or when you are cycling, what are the challenges you encounter?*
3. ¿Sientes que hay una diferencia entre tener ciclovías y no tenerlas al andar en bicicleta? / *Do you feel that there is a difference between having cycling lanes and not having them when riding a bicycle?*
4. ¿Sientes que hay diferencias de género en las experiencias de andar en bicicleta o que el factor de género hacen a los ciclistas ser percibidos de manera distinta por otros? / *Do you feel that there are gender differences in cycling experiences or that the gender factor makes cyclists be perceived differently by others?*
5. ¿Crees que la falta de infraestructura es un factor que afecta de manera distinta a hombres y a mujeres? / *Do you think that the lack of infrastructure is a factor that affects men and women differently?*
6. De los desafíos que percibes, ¿Has considerado estos una razón para elegir otro medio de transporte a la bicicleta? / *Of the challenges you perceive, have you considered these a reason to choose another means of transport to the bicycle?*
7. ¿Cómo percibes que la seguridad vial se ha desarrollado en los últimos años? / *How do you perceive that road safety has developed in recent years?*

11.5. Result Figures

Figure 1 shows that of the 2075 valid answers sample, 619 respondents (29.8 per cent) were women (“Woman”), and 1437 respondents (69,3 per cent) were men (“Man”).

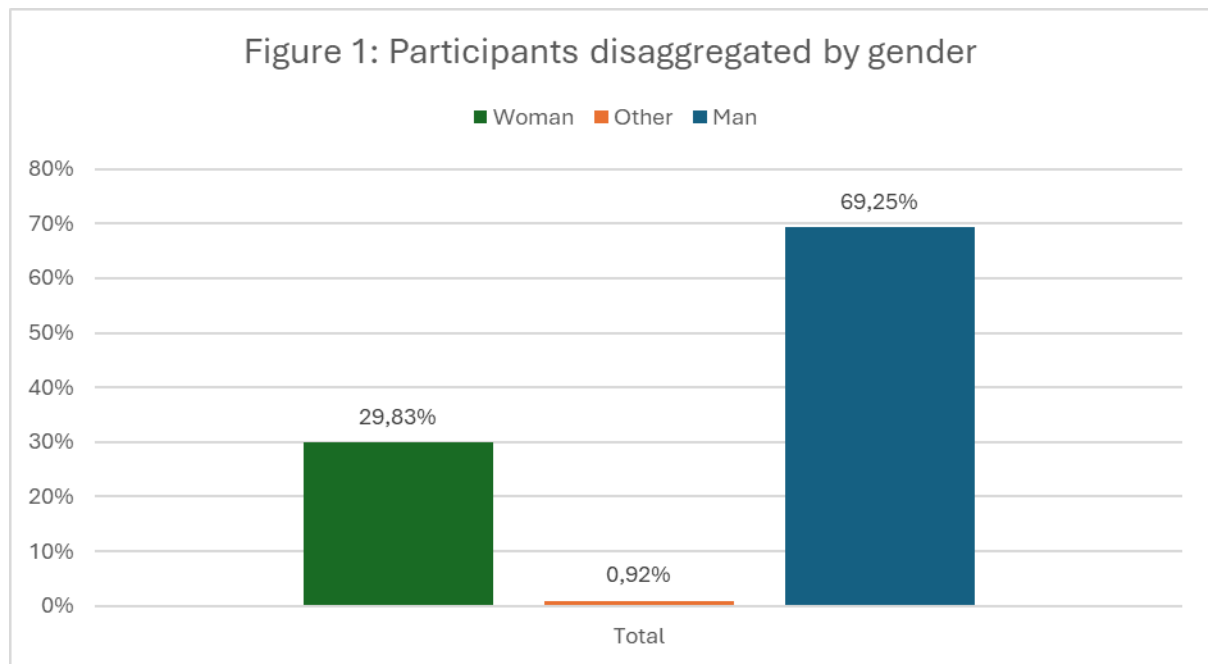


Figure 2 shows the age ranges of respondents disaggregated by gender. Here, there is a clear predominance of cyclists between the ages of 35 and 44 (35-44), comprising 40,4 per cent “Woman” and 40,1 per cent “Man”. Followed by participants between the ages of 25 and 34 (“25-34”), comprising 32,2 per cent “Woman” and 24,2 per cent “Man”; and participants from 45 to 54 years old (“45-54”) are composed of 17,9 per cent “Woman” and 20 per cent “Man”. The rest are composed of less than 5 per cent each, except for “Man” between 55 and 64 years old (“55-64”).

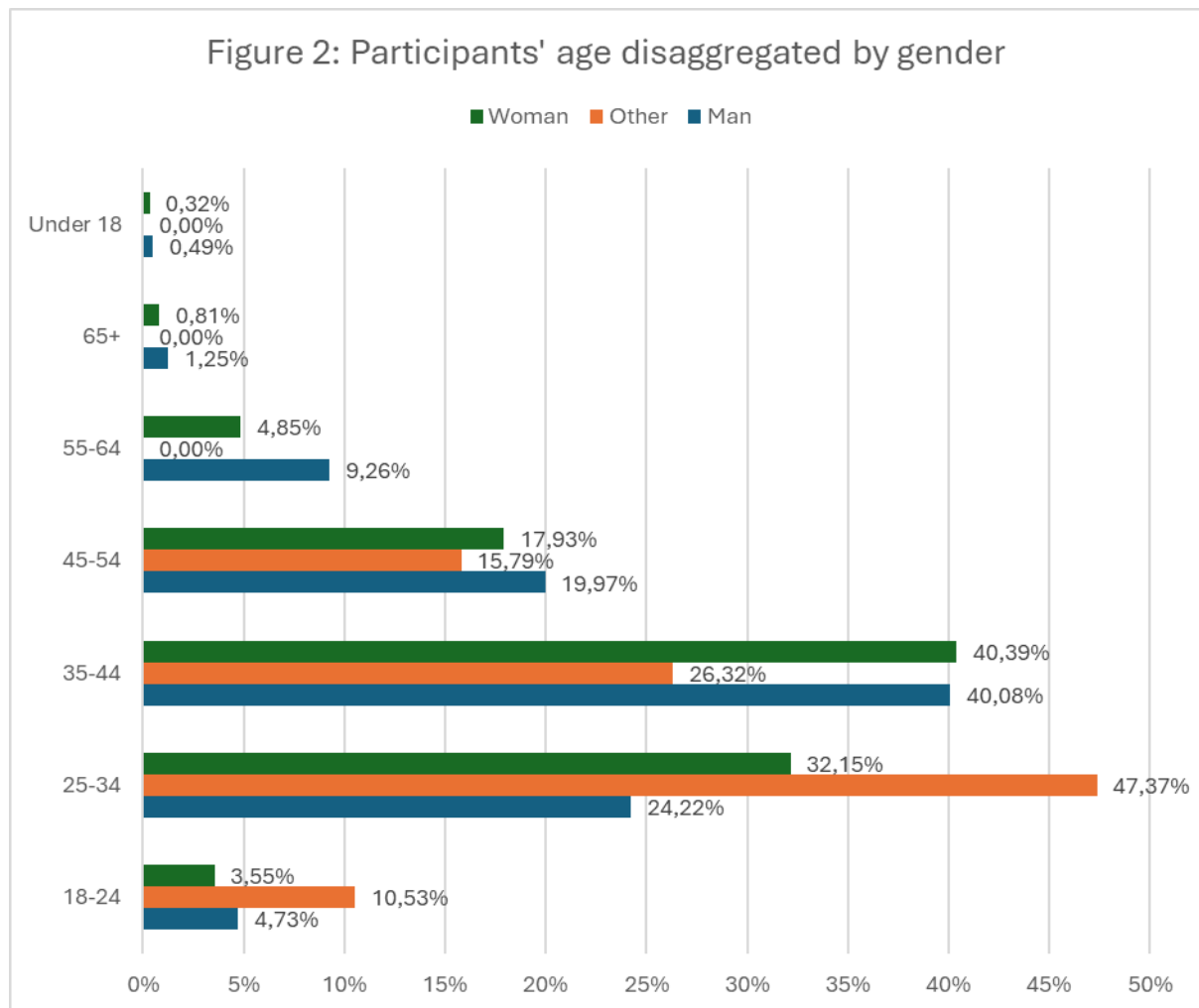
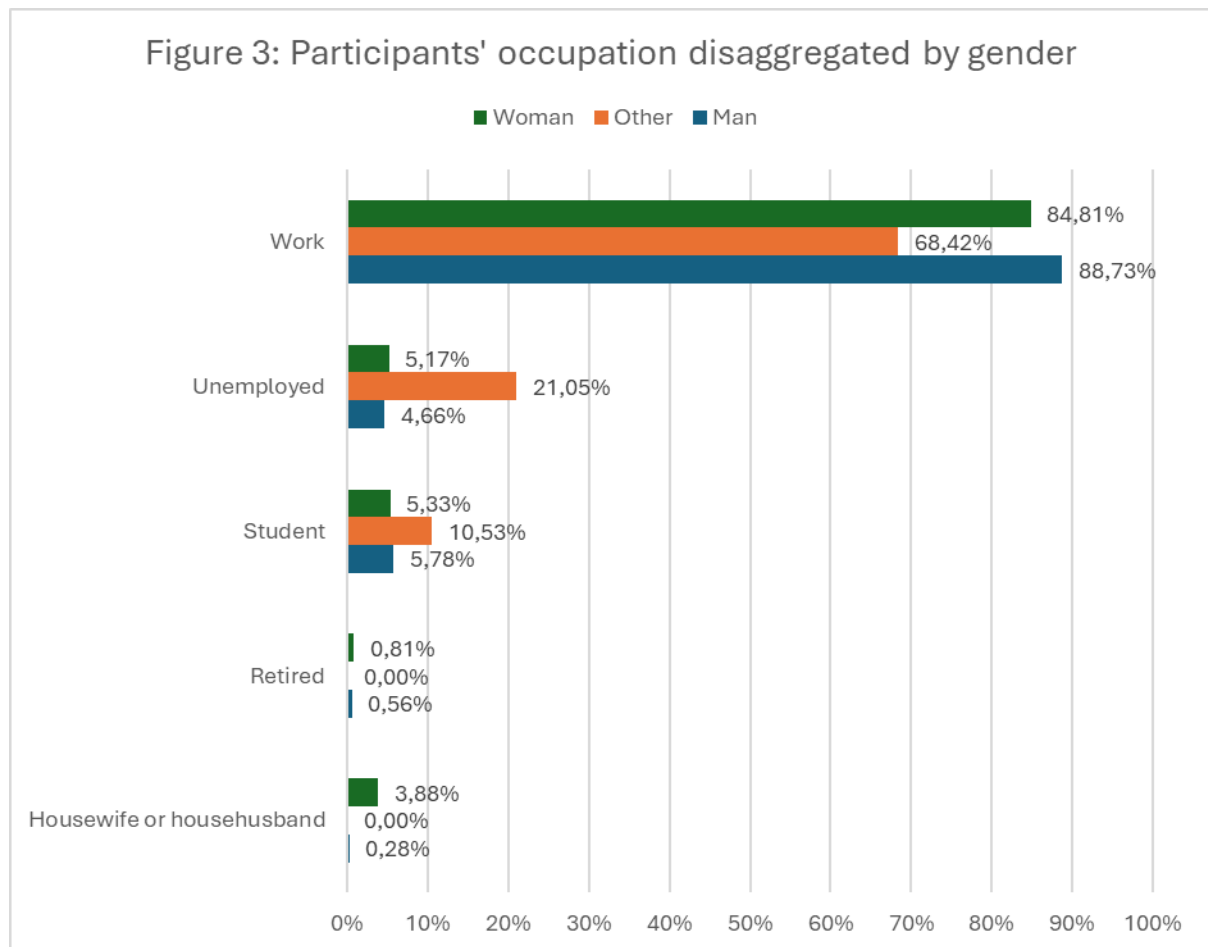
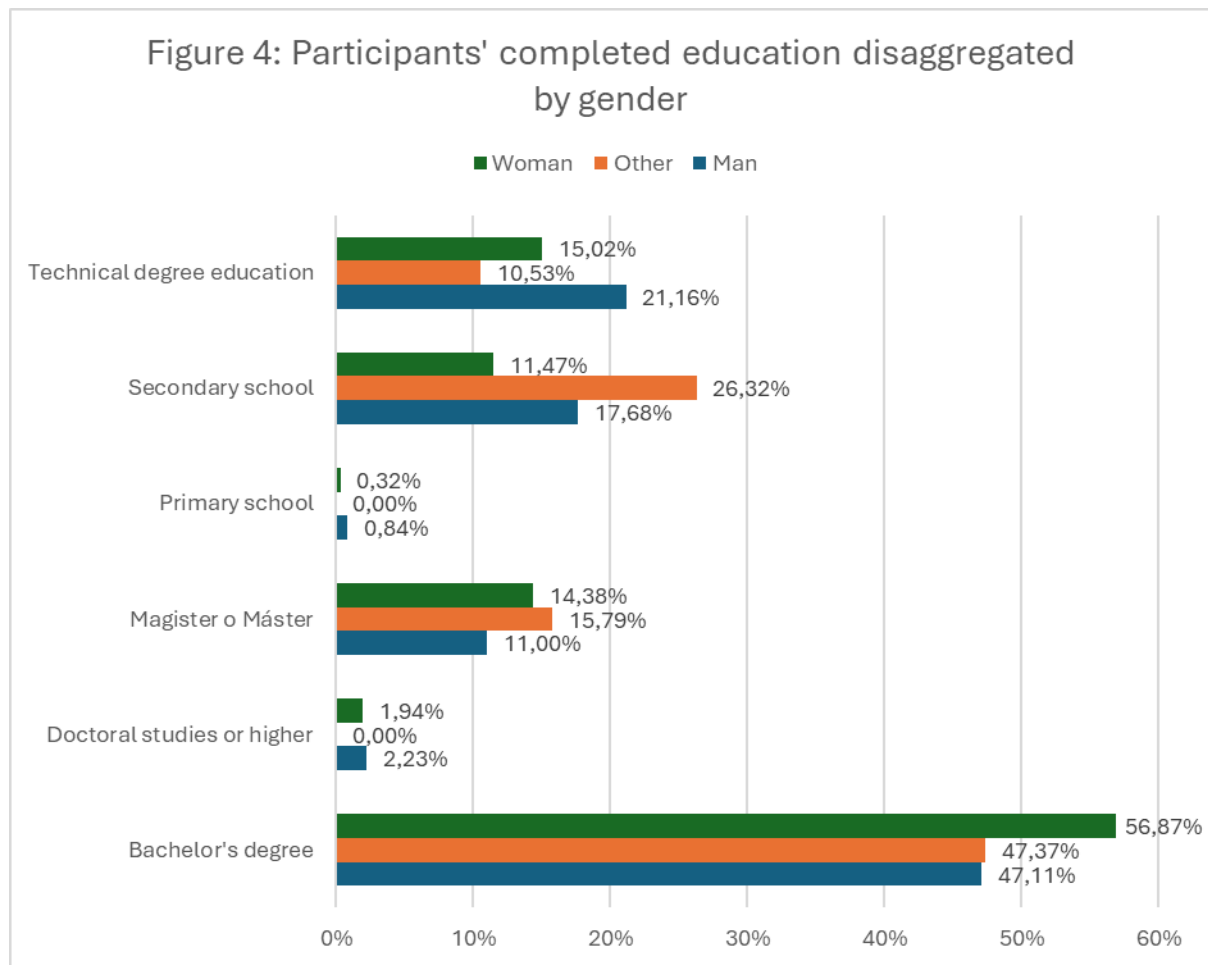


Figure 3 shows the respondents' occupations disaggregated by gender. With the majority of respondents in “Work” with 84,8 per cent of “Woman” and 88,7 per cent of “Man”. In second place is “Student”, with a 5,3 per cent of “Woman” and a 5,8 per cent of “Man”. Next is “Unemployed” with 5,2 per cent of “Woman” and 4,7 per cent of “Man”. In fourth place is “Housewife or househusband”, with 3,9 per cent of “Woman” and the rest with less than 1 per cent of representation.



In Figure 4, we can see the respondents' completed education levels disaggregated by gender. The most commonly reported education level was “Bachelor’s degree”, accounting for 56,9 per cent of “Woman” and 47,1 per cent of “Man”. This was followed by respondents with a completed “Technical degree education”, accounting for 15 per cent of “Woman” and 21,2 per cent of “Men”. Next were respondents with a completed “Magister or Master” degree, with 14,4 per cent of “Woman” and 11 per cent of “Man”. The highest educational level was among respondents with “Doctoral studies or higher”, with 1,9 per cent of “Woman” and 2,2 per cent of “Men”. Primary school was reported by 0,3 per cent of “Woman” and 0,8 per cent of “Man”, while completion of the “Secondary school” level was reported by 11,5 per cent of “Woman” and 17,7 per cent of “Man”, which are the lower levels reported.



In Figure 5, we can see the percentage of participants with kids under their care disaggregated by gender. The respondents who do not have kids under their care are composed of 77,9 per cent of “Woman” and 69,5 per cent of “Men”. The respondents that do have kids under their care are composed of 22,1 per cent of “Woman” and 30,5 per cent of “Man”.

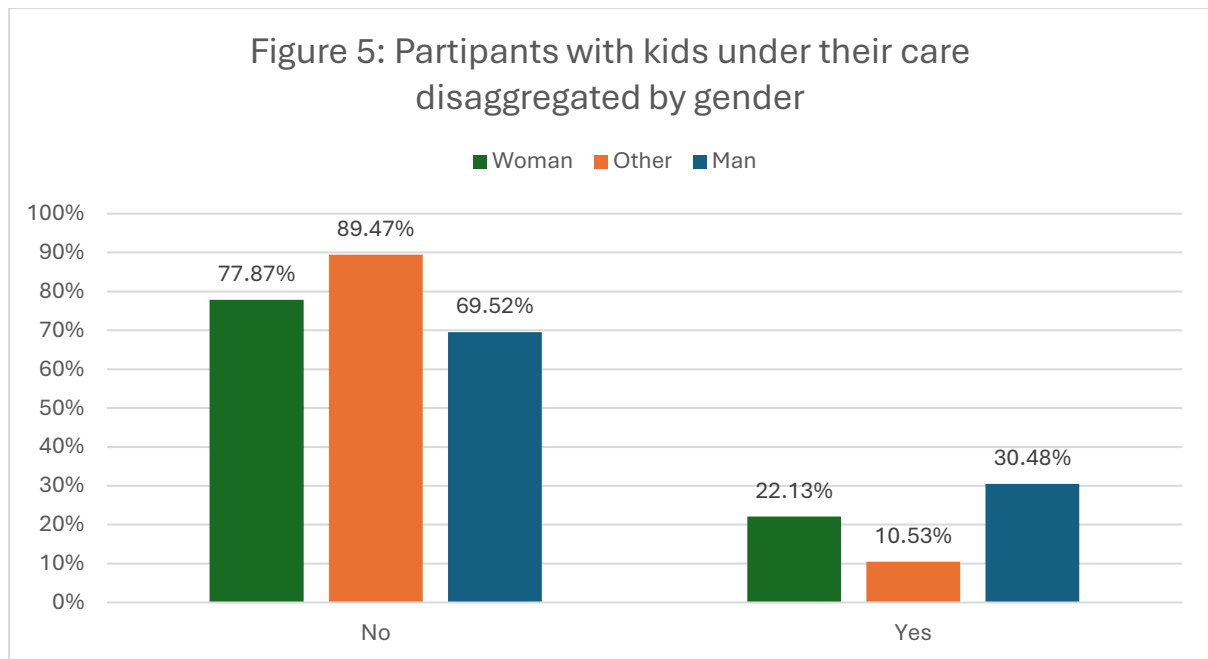


Figure 6 shows the respondents' household composition besides themselves disaggregated by gender. In first place are respondents who live with “At least 1 adult (Over 18)”, with 44,9 per cent of “Woman” and 42,7 per cent of “Man”. In second place are respondents who live by themselves (“I live alone”) with 23,8 per cent of “Woman” and 19,2 per cent of “Man”. The rest of the categories that account for home composition that include either a child (“At least 1 Child (Under 18)”), an elderly (“At least 1 Elderly (Over 60)”), or both count for 31, per cent of “Woman” and 38,2 per cent of “Man”.

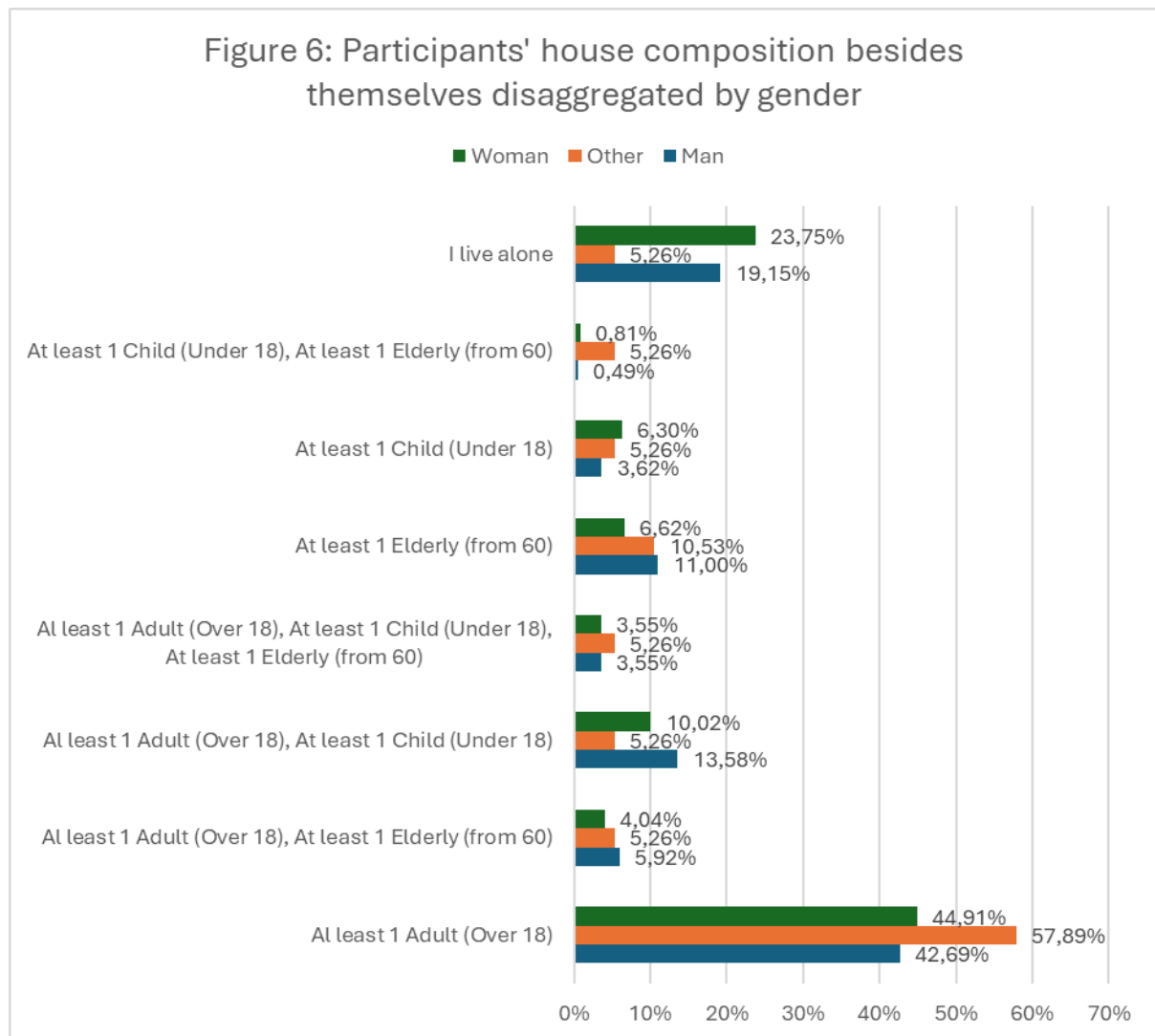
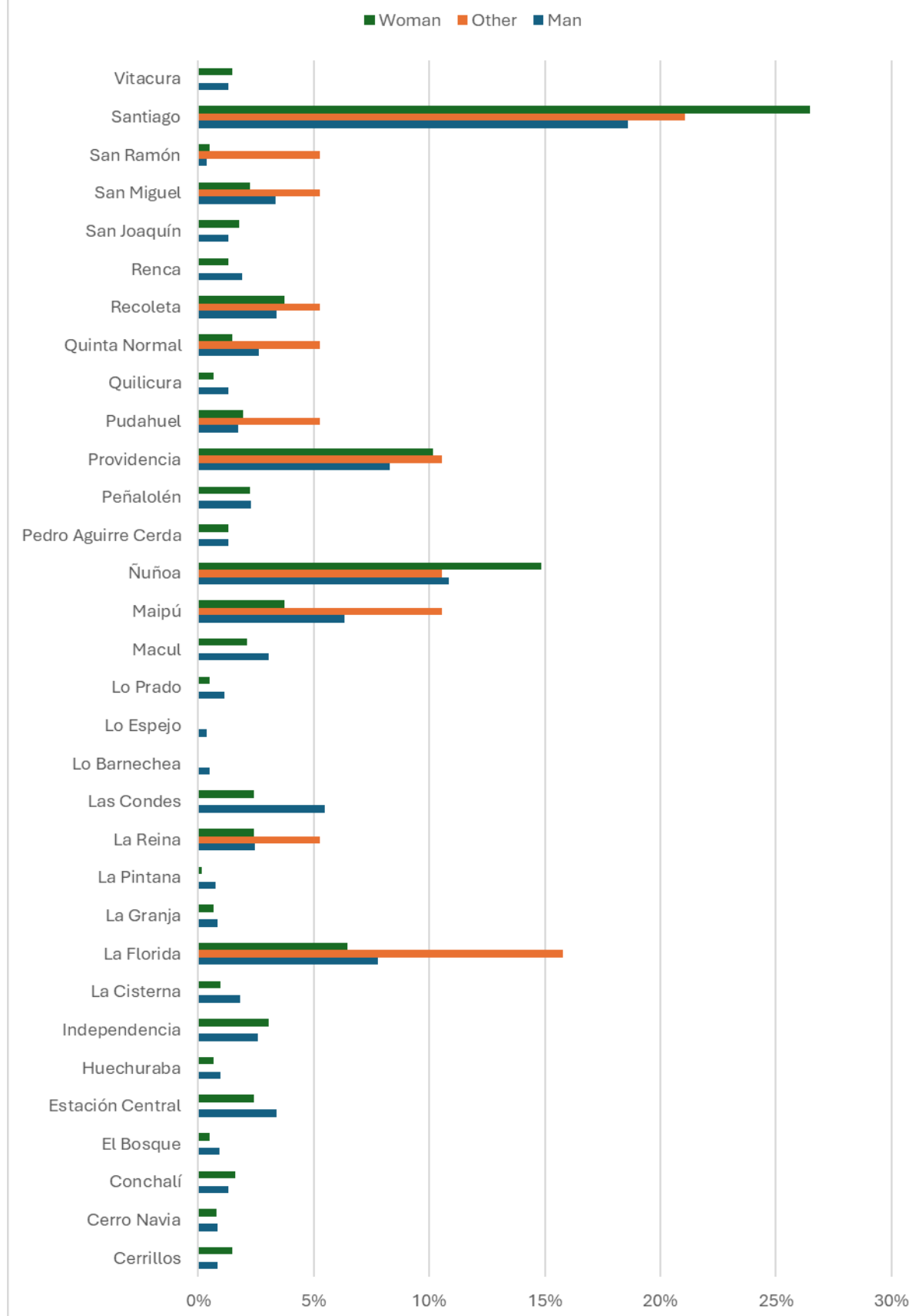


Figure 7 shows the communes of the Province of Santiago in where the respondents live, disaggregated by gender. Cerrillos comprises 1,5 per cent of “Woman” and 0,8 per cent of “Man” respondents. Cerro Navia is composed of 0,8 per cent for both “Woman” and “Man” respondents. Conchalí is composed of 1,6 per cent of “Woman” and 1,3 per cent of “Man” respondents. El Bosque is composed of 0,5 per cent of “Woman” and 0,9 per cent of “Man” respondents. Estación Central is composed of 2,4 per cent of “Woman” and 3,4 per cent of “Man” respondents. Huechuraba is composed of 0,7 per cent of “Woman” and 1 per cent of “Man” respondents. Independencia is composed of 3,1 per cent of “Woman” and 2,6 per cent of “Man” respondents. La Cisterna is composed of 1 per cent “Woman” and 1,8 per cent “Man” respondents. La Florida is composed of 6,5 per cent of “Woman” and 7,8 per cent of “Man” respondents. La Granja is composed of 0,7 per cent of “Woman” and 0,8 per cent of “Man” respondents. La Pintana is composed of 0,2 per cent of “Woman” and 0,8 per cent of “Man”

respondents. La Reina is composed of 2,4 per cent of “Woman” and 2,5 per cent of “Man” respondents. Las Condes is composed of 2,4 per cent of “Woman” and 5,5 per cent of “Man”. Lo Barnechea is composed of only 0,5 per cent of “Man” respondents. Lo Espejo is composed of only 0,4 per cent of “Man” respondents. Lo Prado is composed of 0,5 per cent of “Woman” and 1,1 per cent of “Man” respondents. Macul is composed of 2,1 per cent of “Woman” and 3,1 per cent of “Man” respondents. Maipú is composed of 3,7 per cent of “Woman” and 6,3 per cent of “Man” respondents. Ñuñoa is composed of 14,9 per cent of “Woman” and 10,9 per cent of “Man” respondents. Pedro Aguirre Cerda is composed of 1,3 per cent of both “Woman” and “Man” respondents. Peñalolén is composed of 2,3 per cent of both “Woman” and “Man”. Providencia is composed of 10,2 per cent of “Woman” and 8,3 per cent of “Man” respondents. Pudahuel is composed of 1,9 per cent of “Woman” and 1,7 per cent of “Man” respondents. Quilicura is composed of 0,7 per cent of “Woman” and 1,3 per cent of “Man” respondents. Quinta Normal is composed of 1,5 per cent of “Woman” and 2,6 per cent of “Man” respondents. Recoleta is composed of 3,7 per cent of “Woman” and 3,4 per cent of “Man” respondents. Renca is composed of 1,3 per cent of “Woman” and 1,9 per cent of “Man” respondents. San Joaquín is composed of 1,8 per cent of “Woman” and 1,3 per cent of “Man” respondents. San Miguel is composed of 2,3 per cent of “Woman” and 3,3 per cent of “Man”. San Ramón is composed of 0,5 per cent of “Woman” and 0,4 per cent of “Men” respondents. Santiago is composed of 26,5 per cent of “Woman” and 18,6 per cent of “Man” respondents. Finally, Vitacura is composed of 1,5 per cent of “Woman” and 1,3 per cent of “Man”.

Figure 7: Communes of the Province of Santiago where the participants live at disaggregated by gender



In Figure 8, we can see that the bicycle and the public transportation (“Bicycle, Public Transportation”) are the two most common main modes of transportation that the participants use, with 62,5 per cent of “Woman” leading, versus 54,5 per cent of “Man”. In second place is the car with the bicycle (“Car, Bicycle”) with 26 per cent of “Man” leading versus 21,2 per cent of “Woman”. In third place is only “Bicycle” as a main mode of transportation with an 8,4 per cent of “Man” at the top, followed by 8,1 per cent of “Woman”. In fourth place is the car and public transportation (“Car, Public transportation”), with 5,5 per cent of “Woman” taking the lead versus 4,7 of “Man” in second place. In fifth place is “Public transportation” alone by itself, with 2,1 per cent of “Woman” and 1,9 per cent of “Man”. In the lowest places are the bicycle with the motorcycle (“Bicycle, Motorcycle”) with a 2,9 per cent of “Man” leading over a 0,5 per cent of “Woman”; the “Car” with 1,1 per cent of “Man” versus a 0,2 per cent of “Woman”; in the last places with the same scores are “Motorcycle” and “Public Transportation, Motorcycle” with only 0,1 per cent of “Man”.

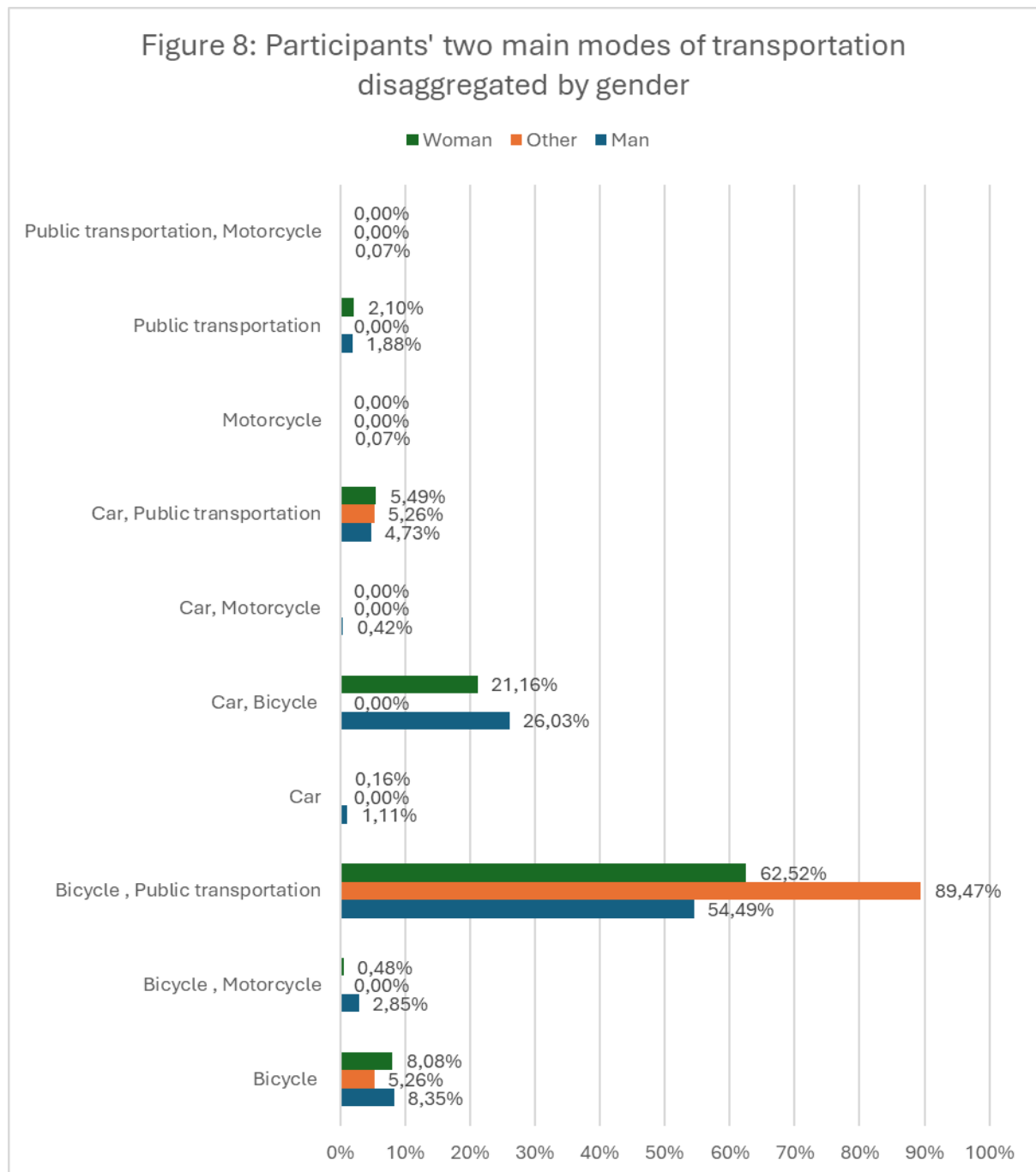


Figure 9 shows the respondents' main activity to cycle to, disaggregated by gender. In first place are respondents who cycle to “Work”, with 48 per cent of “Woman” and 47,6 per cent of “Men”. In second place are respondents who cycle “For sport”, with 39,6 per cent of “Woman” and 43.9 per cent of “Man”. In third place are respondents who cycle “To run errands”, with 4,4 per cent of “Woman” and 2,6 per cent of “Man”. In fourth place are respondents who cycle to “Visit friends or relatives”, with 3,4 per cent of “Woman” and 2,1 per cent of “Men”. In fifth place are respondents who cycle to go “To study”, with 2,3 per cent of “Woman” and 2 per cent of “Man”.

In sixth place are respondents who cycle “To buy things”, with 2,1 per cent of “Woman” and 1,6 per cent of “Man”. In last place are respondents who cycle “To pick up relatives”, with 0,3 per cent of “Woman” and 0,2 per cent of “Man”.

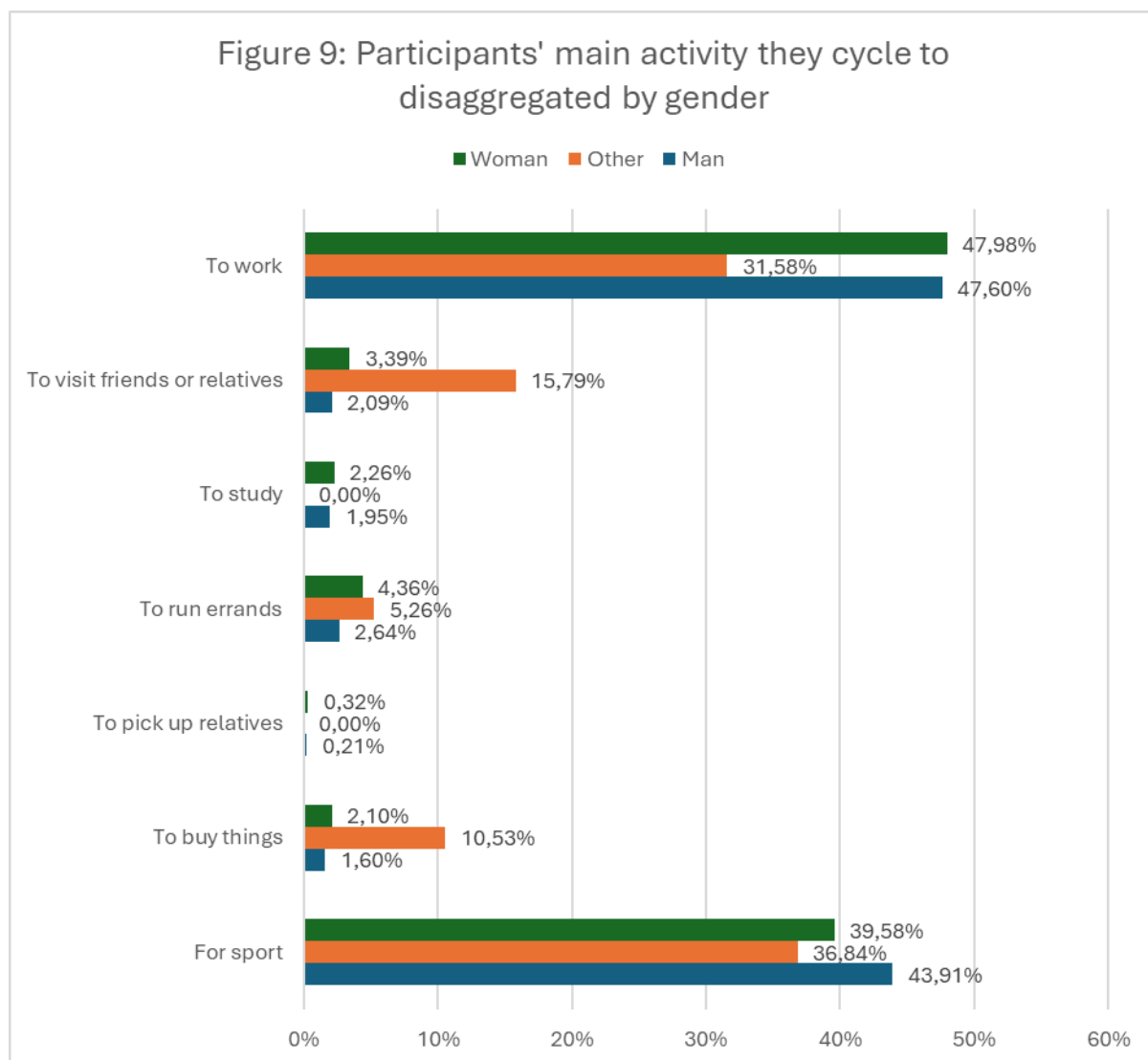


Figure 10 presents respondents' cycling frequency disaggregated by gender. Respondents who cycle “1 time per week” are composed of 7,4 per cent of “Woman” and 5,5 per cent of “Men”. Respondents who cycle “2 times per week” are composed of 14,2 per cent of “Woman” and 10,2 per cent of “Men”. Respondents who cycle “3 times per week” are composed of 20,7 per cent of “Woman” and 21,7 per cent of “Men”. Respondents who cycle “3 times per week” are composed of 20,7 per cent of “Woman” and 21,7 per cent of “Man”. Respondents who cycle “4 times per week” are composed of 15,5 per cent of “Woman” and 15,7 per cent of “Man”. Finally, respondents who cycle “5 times per week or more” are composed of 42,2 per cent of “Woman” and 46,9 per cent of “Man”.

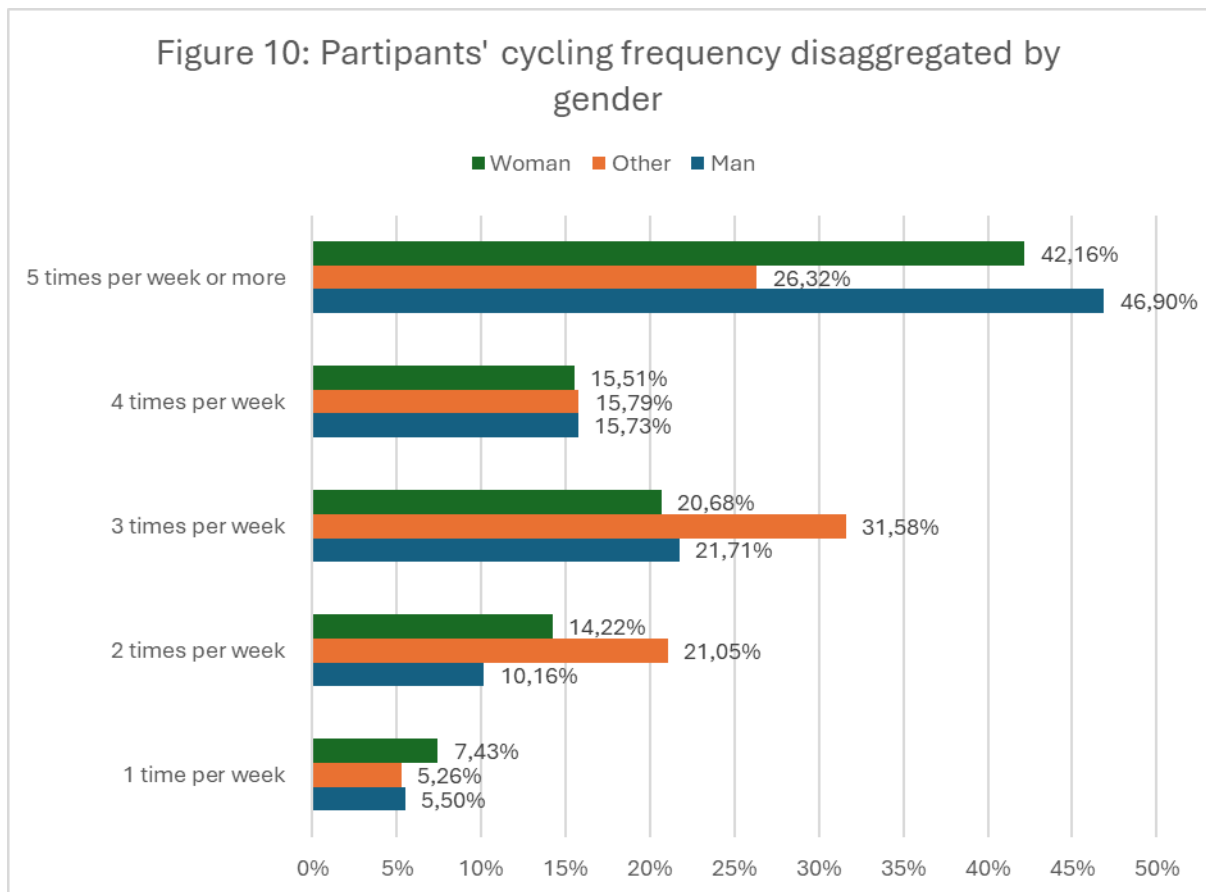


Figure 11 shows the participants' main journey duration disaggregated by gender. Respondents with a journey duration of “5 minutes or less” are composed of only 0,1 per cent of “Man”. Respondents with a journey duration between “5 to 10 minutes” are composed of 2,3 per cent of “Woman” and 1,5 per cent of “Man”. Respondents with a journey duration between “10 to 20 minutes” are composed of 11,5 per cent of “Woman” and 9,5 per cent of “Man”. Respondents with a journey duration between “20 to 30 minutes” are composed of 21,7 per cent of “Woman” and 16,8 per cent of “Man”. Respondents with a journey duration between “30 to 40 minutes” are composed of 20 per cent of “Woman” and 17,2 per cent of “Man”. Respondents with a journey duration of “More than 40 minutes” are composed of 44,6 per cent of “Woman” and 55,1 per cent of “Man”.

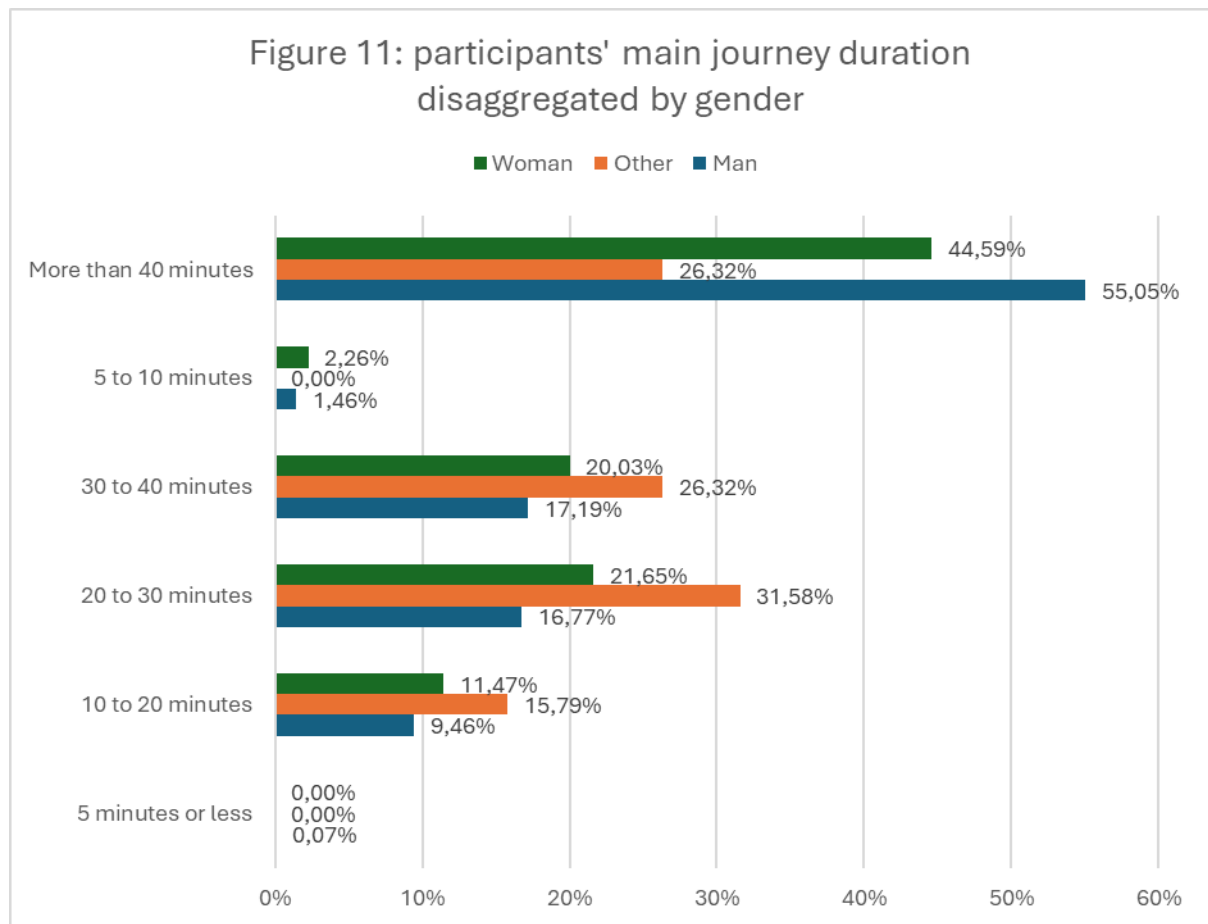


Figure 12 shows respondents' main reasons to start cycling disaggregated by gender. The reason in the first place is “I like cycling”, with 65,3 per cent of “Woman” versus 67,3 per cent of “Man”. The second is “For health reasons”, with 13,3 per cent of “Woman” and 14,5 per cent of “Man”. The third is the reason to “Save money”, with 11,5 per cent of “Woman” and 7,2 per cent of “Man”. The fourth reason is “Save time”, with 7,4 per cent of “Woman” and 9,2 per cent of “Man”. The reason in the last place is “My friend cycled”, with 2,6 per cent of “Woman” and 1,9 per cent of “Man”.

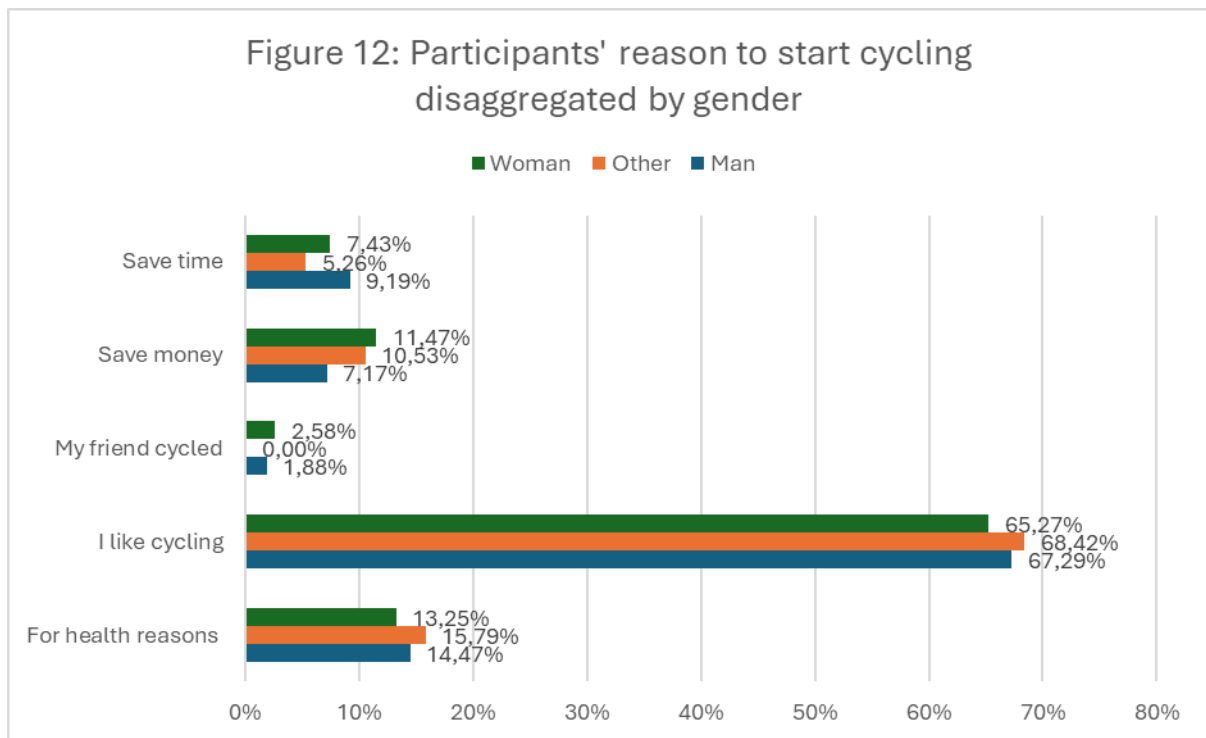


Figure 13 shows respondents with a family member who cycles disaggregated by gender. In the first place are the respondents who do not have a family member who cycles (“No”), with 37,3 per cent of “Woman” and 48,4 per cent of “Man”. In second place are respondents with a “Partner” who cycle, with the same percentage for “Woman” and “Man” of 26,3 per cent. In third place are respondents who reported having “Other” family member who cycles, with 15,4 per cent of “Woman” and 16,4 per cent of “Man”. In fourth place are respondents with a sibling who cycles, with 13,4 per cent of “Woman” and 13,2 per cent of “Men”. In fifth place are respondents who have a “Father” who cycles, composed of 6 per cent of “Woman” and 5,3 per cent of “Man”. In last place are respondents who reported that their “Mother” cycles, with 1,6 per cent of “Woman” and 1,3 per cent of “Man”.

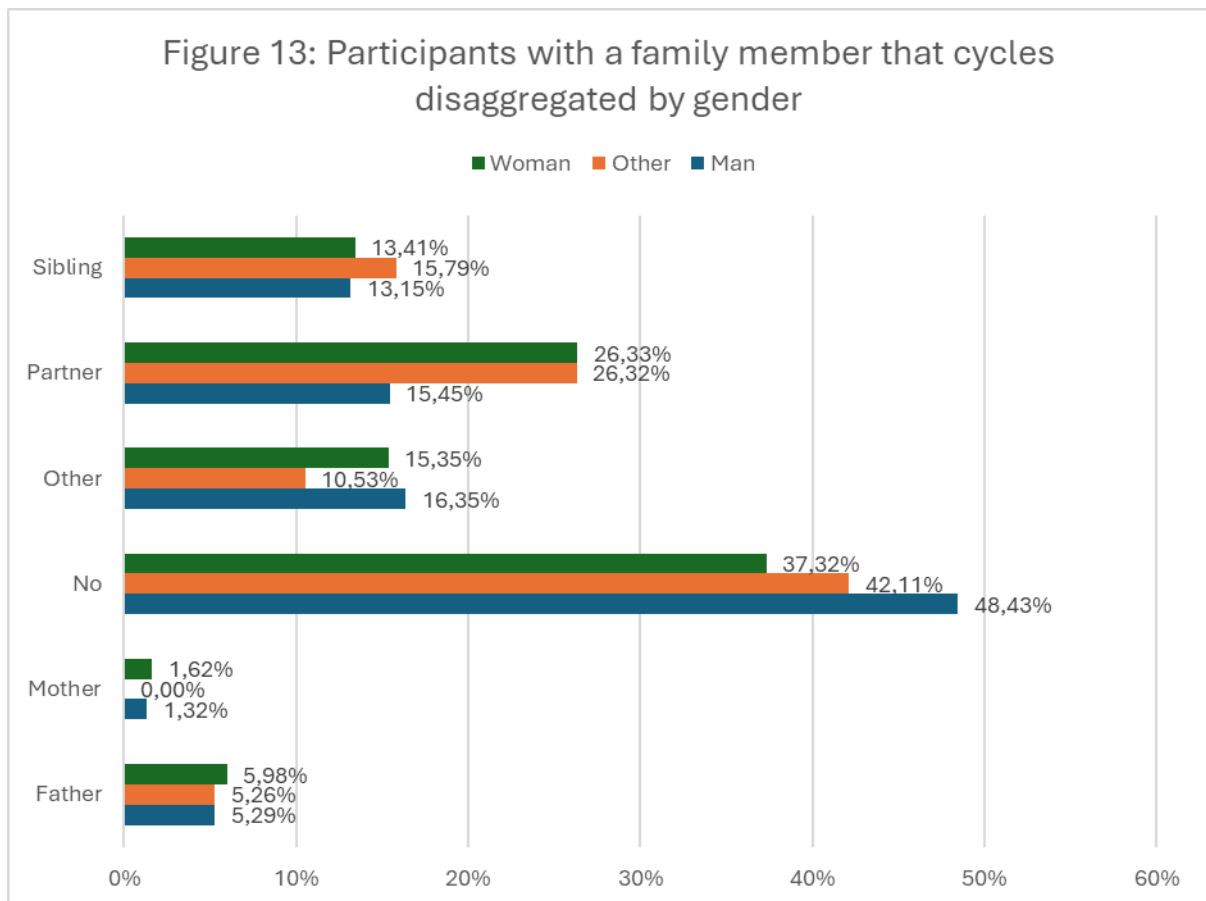


Figure 14 shows respondents' life stage when they learned to cycle disaggregated by gender. Respondents who learned to cycle “As a kid” represent the majority, with 91,9 per cent of “Woman” and 94,3 per cent of “Man”. Respondents who learned to cycle “As a teenager” are composed of 3,6 per cent of “Woman” and 4,4 per cent of “Man”. Finally, respondents who learned to cycle “As an adult” are composed of 4,5 per cent of “Woman” and 1,3 per cent of “Man”.

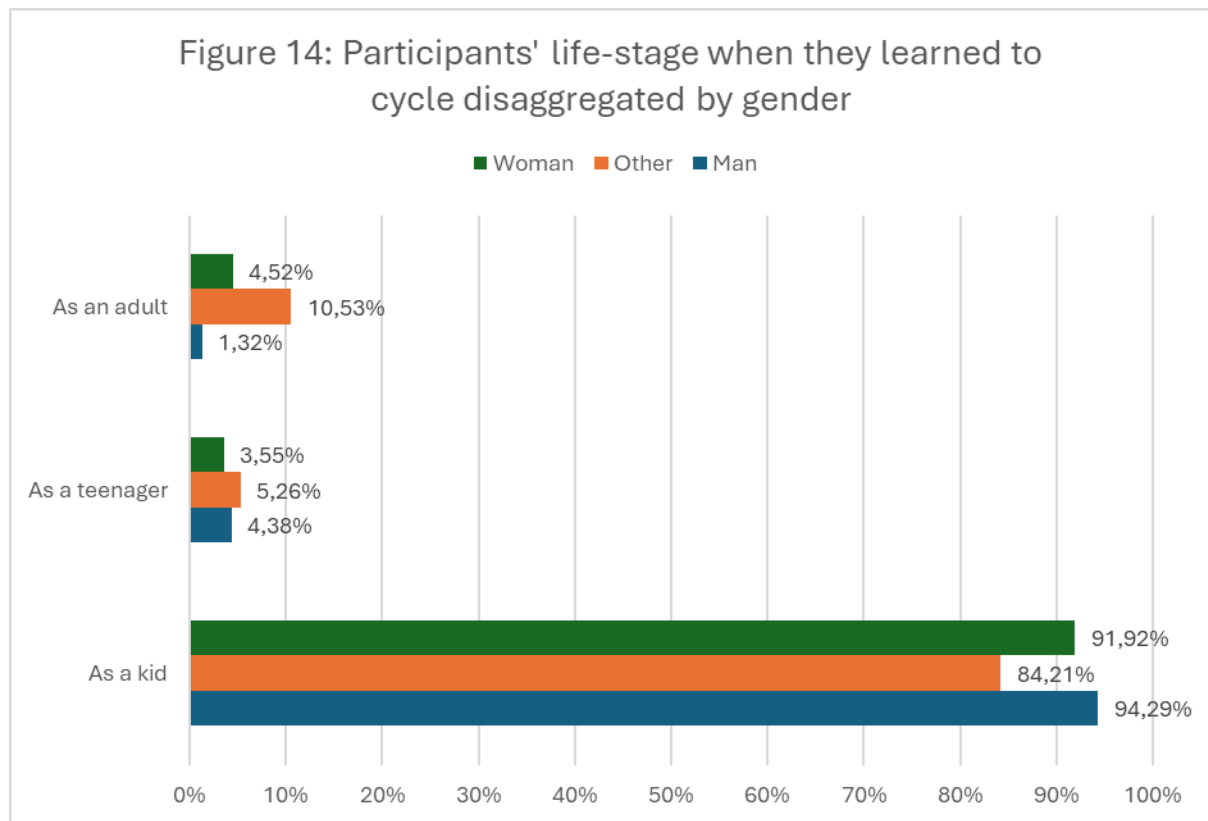


Figure 15 shows respondents' choice of route, disaggregated by gender. Respondents who chose the option other were excluded from the figure due to the large variety in the answer and will be presented separately. Respondents who “Choose[s] a route that has low motorised traffic but no cycling infrastructure” are composed of 24,6 per cent of “Woman” and 23,9 per cent of “Man”. Respondents who “Choose[s] a route that might be longer but has a better cycling infrastructure” are composed of 59,8 per cent of “Women” and 50,9 per cent of “Man”. Respondents who “Choose[s] the faster route but with poor cycling infrastructure” are composed of 15,6 per cent of “Woman” and 25,3 per cent of “Man”.

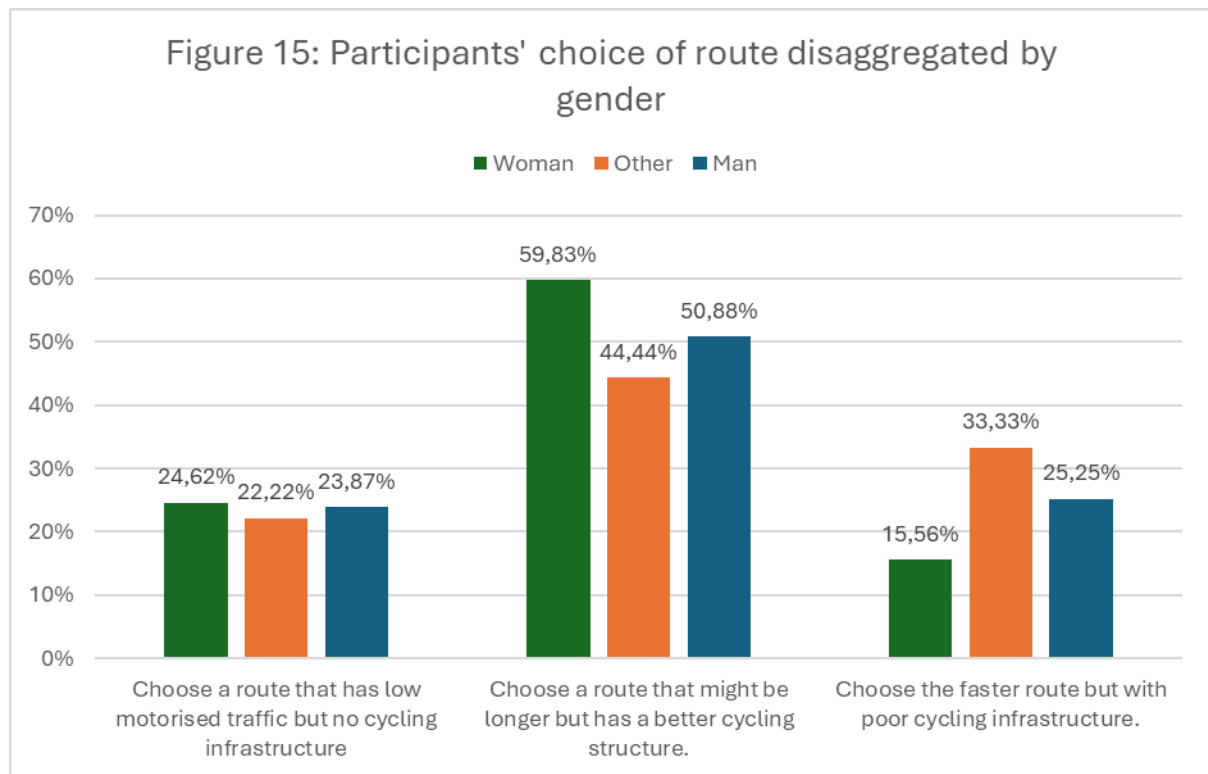


Figure 16 shows respondents' use of cycling lanes on their journey disaggregated by gender. Respondents who do not use cycling lanes at all during their journey ("I do not use bicycle lanes at all") are composed of 8,2 per cent of "Woman" and 12,3 per cent of "Man". Respondents who use the cycling lanes in parts of their journey ("I use bicycle lanes in some parts of my journey") are composed of 47,5 per cent of "Woman" and 53,4 per cent of "Man". Respondents who use cycling lanes in most of their journey ("I use bicycle lanes in the most part of my journey") are composed of 44,3 per cent of "Woman" and 34,3 per cent of "Man".

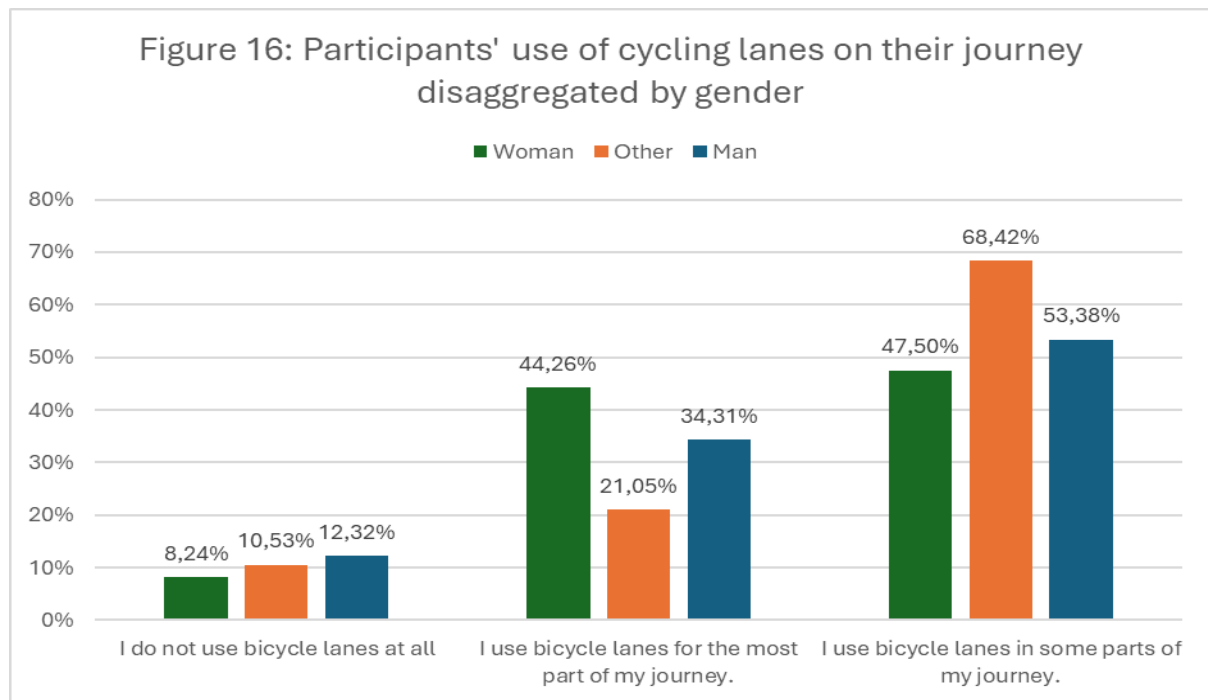


Figure 17 shows the level of agreement to the statement "I prefer to take the fastest route by bicycle, even if it lacks bicycle lanes or is perceived as less safe, rather than choosing a slower route with better cycling infrastructure and greater safety" in a Likert scale; being 1: Strongly disagree, 2: Disagree, 3: Partially disagree, 4: Partially agree, 5: Agree, and 6: Strongly Agree; disaggregated by gender. Respondents who strongly disagree with the statement ("1") are composed of 22,9 per cent of "Woman" and 18,4 per cent of "Man". Respondents who disagree with the statement ("2") are composed of 21,7 per cent of "Woman" and 15,5 per cent of "Man". Respondent who partially disagrees with the statement ("3") are composed of 15 per cent of "Woman" and 12,2 per cent of "Man". Respondents who partially agree with the statement ("4") are composed of 15,8 per cent of "Woman" and 20 per cent of "Man". Respondents who agree with the statement ("5") are composed of 12,8 per cent of "Woman" and 16,6 per cent of "Man". Respondents who strongly agree with the statement ("6") are composed of 11,8 per cent of "Woman" and 17,26 per cent of "Man".

Figure 17: Participants' level of agreement with the statement "I prefer to take the fastest route by bicycle, even if it lacks bicycle lanes or is perceived as less safe, rather than choosing a slower route with better cycling infrastructure and greater

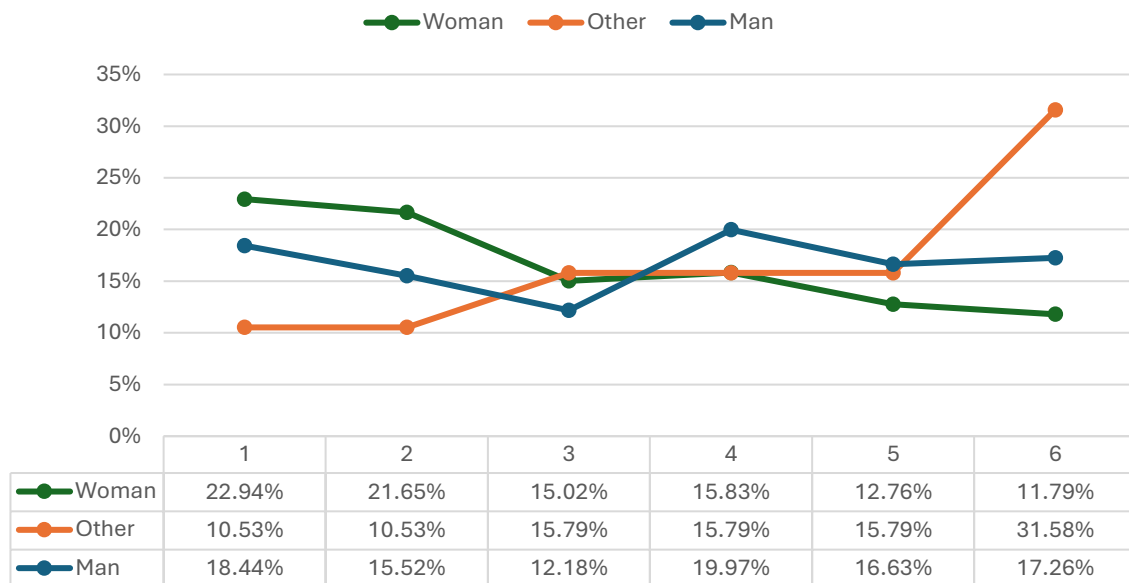


Figure 18 shows respondents' challenges for cycling to their main occupation disaggregated by gender. Respondents who perceive that "Car drivers are very aggressive towards cyclists" as a challenge are composed of 30,4 per cent of "Woman" and 22,4 per cent of "Man" and are in first place. In second place are respondents who perceive that "There are not enough bicycle lanes on my way there" and are composed of 14,5 per cent of "Woman" and 16,6 per cent of "Man". In third place are respondents who "fear the traffic in the streets might provoke an accident", composed of 12,3 per cent of "Woman" and 13,9 per cent of "Man". In fourth place are respondents who do not feel recognised in any option ("I do not feel recognised in the previous options"), composed of 6,6 per cent of "Woman" and 15 per cent of "Man". In fifth place are respondents who fear the theft of their bicycle ("I fear someone might steal my bicycle"), composed of 11 per cent of "Woman" and 9,2 per cent of "Man". In sixth place are respondents who perceive "Too long distances" to their main occupation and are composed of 9,9 per cent of "Woman" and 7,8 per cent of "Man". In seventh place are respondents who do not have an appropriate place to park their bicycle ("I have no appropriate place to park my bicycle"), composed of 8,2 per cent of "Woman" and 7,4 per cent of "Man". In eighth place are respondents who fear being attacked while cycling ("I fear someone might attack me while

bicycling”), composed of 5 per cent of “Woman” and 3,8 per cent of “Man”. In ninth place are respondents who find their clothes inappropriate for cycling to their occupation (“My clothes are not appropriate for cycling”), composed of 1,6 per cent of “Woman” and 4 per cent of “Man”. In last place are respondents who fear harassment while cycling (“I fear someone might harass me while bicycling”), composed of 0,5 per cent of “Woman” and 0,1 per cent of “Man”.

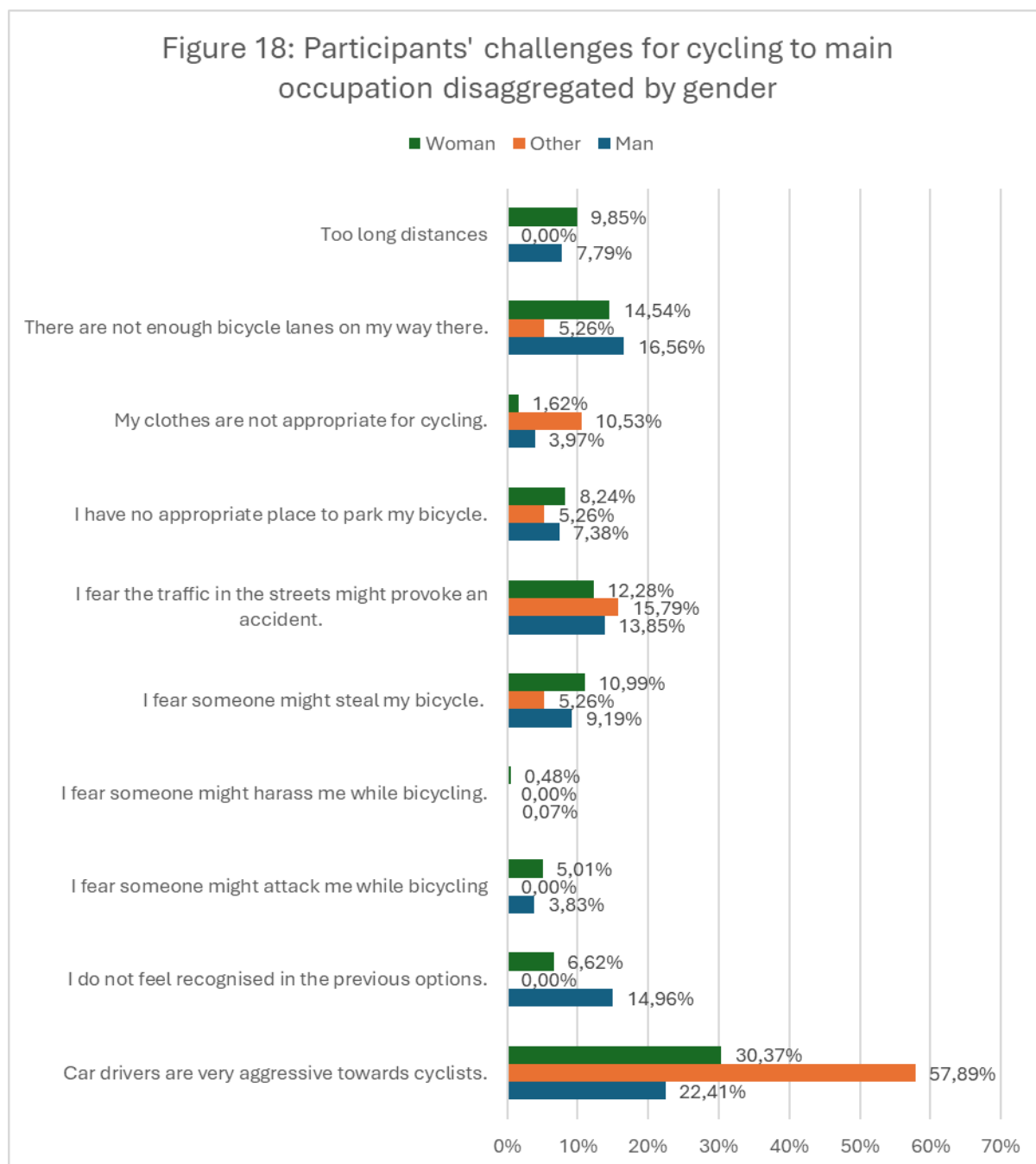


Figure 19 shows respondents' main or second challenge in general while cycling, disaggregated by gender. In first place are respondents who perceive that “Car drivers are very aggressive towards cyclists”, composed of 22,8 per cent of “Woman” and 19,6 per cent of “Man”. In

second place are respondents who fear the traffic of the streets might provoke an accident (“I fear the traffic in the streets might provoke an accident”), composed of 18,3 per cent of “Woman” and 18,6 per cent of “Man”. In third place are respondents who perceive that lanes for bicycles are not enough in their journey (“There are not enough bicycle lanes on my way there”), composed of 14,7 per cent of “Woman” and 13,4 per cent of “Man”. In fourth place are respondents who fear the theft of their bicycle (“I fear someone might steal my bicycle”), composed of 14,4 per cent of “Woman” and 11,3 of “Man”. In fifth place are respondents who did not find their challenge among the alternatives (“I do not feel recognised in the previous options”), composed of 7,9 per cent of “Woman” and 14,5 per cent of “Man”. In sixth place are respondents who miss a proper place to park their bicycle (“I have no appropriate place to park my bicycle”), composed of 7,9 per cent of “Woman” and 9,2 per cent of “Men”. In seventh place are respondents who fear an attack while cycling (“I fear someone might attack me while bicycling”), composed of 5,8 per cent of “Woman” and 4,7 per cent of “Man”. In eighth place are respondents who perceive that “Too long distances” is a challenge when cycling, composed of 3,2 per cent of “Woman” and 4,1 per cent of “Man”. In ninth place are respondents who perceived their clothes inappropriate for cycling as a challenge (“My clothes are not appropriate for cycling”), composed of 2,1 per cent of “Woman” and 4,2 per cent of “Man”. In last place are respondents who fear harassment while cycling as a challenge (“I fear someone might harass me while bicycling”), composed of 2,9 per cent of “Woman” and 0,4 per cent of “Man”.

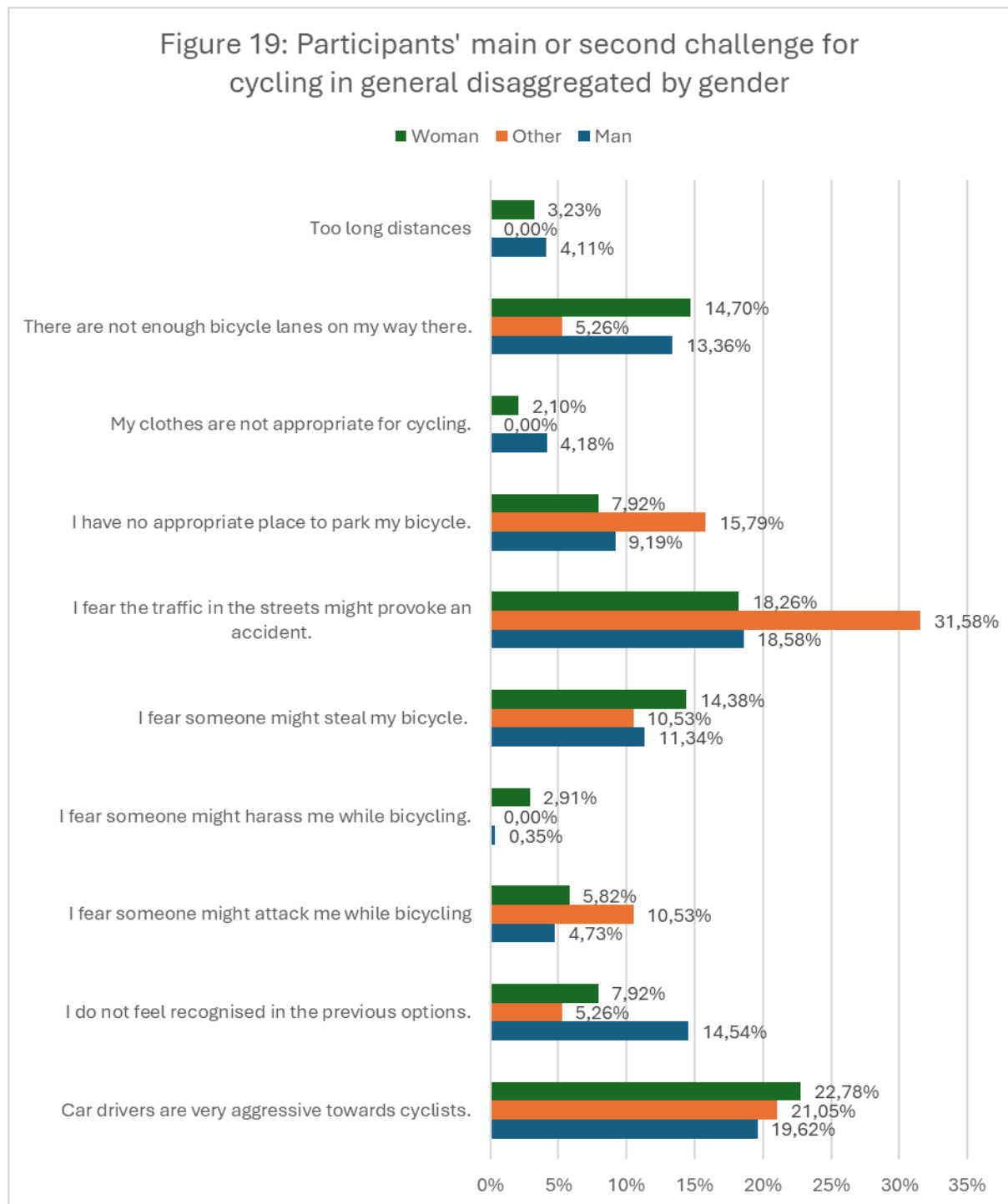


Figure 20 shows the level of agreement to the statement "I would rather not cycle to work or school due to the hazard of physical activity might affect my image or presentation" in a Likert scale; being 1: Strongly disagree, 2: Disagree, 3: Partially disagree, 4: Partially agree, 5: Agree, and 6: Strongly Agree; disaggregated by gender. Respondents who strongly disagree with the statement ("1") are composed of 53,8 per cent of "Woman" and 53,6 per cent of "Man". Respondents who disagree with the statement ("2") are composed of 16,6 per cent of "Woman" and 18,7 per cent of "Man". Respondent who partially disagrees with the statement ("3") are

composed of 9,2 per cent of “Woman” and 7,5 per cent of “Man”. Respondents who partially agree with the statement (“4”) are composed of 10,3 per cent of “Woman” and 7,6 per cent of “Man”. Respondents who agree with the statement (“5”) are composed of 4 per cent of “Woman” and 5,1 per cent of “Man”. Respondents who strongly agree with the statement (“6”) are composed of 6 per cent of “Woman” and 7,5 per cent of “Man”.

