

Empowering women to cycle

Insights beyond numbers



Empowering women to cycle

Most women in Ireland can cycle and have access to a bike, but are only half as likely as men to choose cycling as a mode of travel.

Women cycling will contribute to Ireland's transition to a more sustainable carbon-neutral transport system.

Understanding why women cycle less is essential for achieving a sustainable and equitable transport system.

This study was commissioned by Transport Infrastructure Ireland (TII).

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Foreword



Helen Hughes Director of Professional Services

This study is a product of TII's commitment to evidence-based decision-making, research, and best practice. It was developed and delivered under one of the TII Research Programmes titled TII Open Research Calls. Further background is outlined in [TII's Research Strategy](#).

By informing policy development and infrastructure design with robust research, we strengthen our ability to support national objectives, to manage transport challenges, encourage a shift towards more active modes of transport, and provide safer travel opportunities.

I welcome this research and encourage its findings to be used to inform the continued development of Ireland's transport networks.



Rachel Cahill Director of Executive Office and Sustainability Lead

To effect change and influence modal shift, transport agencies like TII who have responsibility for delivering sustainable transport infrastructure need to understand the reasons behind why people choose their day-to-day modes of transport and what it will take to shift people from the car onto more sustainable forms, such as light rail, bus, walking and cycling.

This research provides key insights, and an understanding of barriers women experience when travelling in addition to recommendations for unlocking cycling as a modal choice for more women in Ireland.

Transport is often seen as gender neutral, but this is not the case. Transport and travel experiences and needs can vary for different people throughout their lifetime.

This research builds on TII's 'Travelling in a Woman's Shoes' study and explores experiences and needs of women in Ireland who want to cycle more, particularly for everyday journeys.

Understanding the particular needs and experiences of women will allow us to develop and influence better policies and processes to provide transport networks for all.

Cycling can take many forms

This study includes the following cycle types when discussing cycling. There are many different types of cycles and mobility aids which should be considered when designing cycling infrastructure.

These types of cycles and aids are often wider and sometimes longer than standard two-wheel cycles. Cycling infrastructure takes many forms too, and Greenways, the National Cycle Network and connecting paths and streets should be designed to accommodate access and avoid barriers to these users.



Cargo bike
front-loader



Bike with
trailer



Recumbent
cycle



Passenger
bike



Adapted
hand-cycle



Tag-along
third wheel

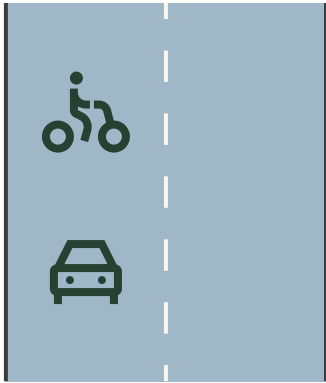


Bicycle

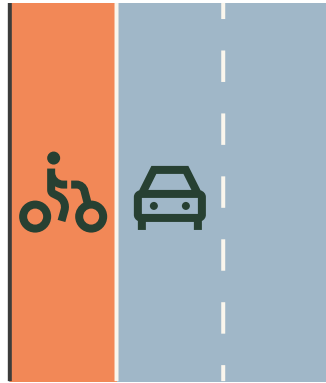


Tandem

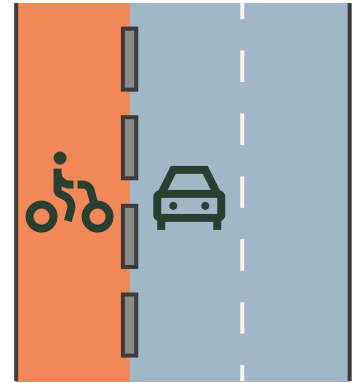
Infrastructure types



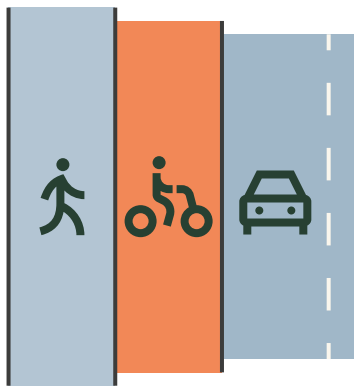
Mixed traffic



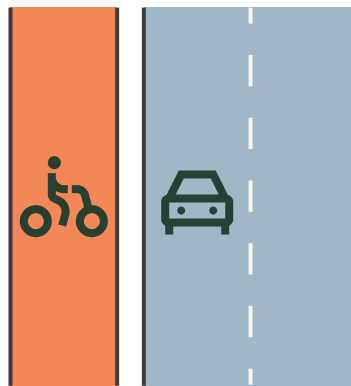
Cycle lane
(road markings)



Protected
cycle lane



Stepped cycle track



Standard cycle track
(segregated)



Shared Active Travel
Facility / Greenway



Photo: Martin Bond

Executive summary

This study explores how to empower women to cycle by understanding the factors that prevent or inhibit women from choosing cycling as a mode of travel.

Our research brings together existing research from Irish and international literature and combines it with new information about women in Ireland collected from surveys, workshops, and ethnographic studies carried out as part of this research.

Key findings in the literature

Cycling represents a very low mode share of the overall trips completed in Ireland. While men completed 3% of all trips by cycle, this only applied to 1.3% of women.^[1]

As children in Ireland transition to secondary education, the rates that they cycle to and from school more than double among boys to 3.8% but more than halve among girls to 0.4%^[2] and this gender gap continues throughout life in Ireland.

This gender gap is much less prevalent in countries with an established cycle culture, such as The Netherlands, where women are more than 20 times more likely to cycle than women in Ireland and have parity with Dutch men.^[3]

In Ireland, women's journey types and daily travel experiences are notably different from men's, for example, women are more likely to carry out accompanying trips (for example transporting children), compared to men (26% vs 15.5%).^[4]

Survey results

The main findings of our survey of over 1,000 women in Ireland are:

- 45% believed that cycling has a negative image.
- 22% stated that cycle journeys were the norm where they lived.
- 49% stated that unsafe roads are a barrier to cycling.
- 39% stated that traffic volumes and speeds are a barrier to cycling.
- 54% stated that safer roads would encourage them to cycle more.
- 37% stated that more cycling specific routes would encourage them to cycle more.
- 29% stated that more segregated cycle lanes would encourage them to cycle more.
- 27% stated that well lit routes would encourage them to cycle more.
- 25% stated that well connected routes would encourage them to cycle more.
- 55% stated they could ride a cycle and had access to one.
- 32% stated they are not confident or able to ride a cycle, however 47% of these women would like to improve their cycling skills.
- 22% stated that being able to combine cycling with public transport more easily would encourage them to make more journeys by cycle.

Thematic areas

The findings from the research phases can be categorised into three main thematic areas. This enables understanding of the research findings from various perspectives.

Personal / lived experience

There are many factors impacting women's travel experiences and trip purposes. These experiences and priorities can vary with age depending on a woman's stage in life for example student, young professional, parent, retired, etc. Life stages are an important determining factor that affects transport needs and accessibility.

While there has been a significant increase in the proportion of women in the workplace in Ireland in the last few decades, most of the caring and household duties, even in dual-income households, are still carried out by women.^[5] In fact, in most families (84%), women take on the primary or lion's share of childcare duties.^[6]

Women in Ireland are more likely to carry out accompanying trips (for example transporting children), and surveys have found that "family/child related activities" is the most-cited reason for travelling by car.^[1] Caregiving combined with other household and work-related demands mean women's daily journeys are more often multi-purpose and multi-destination. This is referred to as "trip-chaining" and often results in women opting to use the car because it meets their mobility needs best.

27% of our survey respondents are deterred from cycling because they have too much to carry.

A lack of safe cycle parking/storage facilities was also highlighted as a deterrent because choosing cycling for functional trips such as food shopping can be unfeasible due to lack of cycle parking and/or storage. A need for cycle parking/storage facilities was also a factor for women who wanted to combine cycling trips with public transport journeys.

Many women in our study enjoyed cycling as a family on weekends and perceived cycling to be an important skill for their children to develop. However, women stated that these journeys usually involved transporting their cycles by private car to safe, traffic free locations such as Greenways.

Just 30% of our survey respondents agreed that children can cycle safely where they live. As a result, safety concerns deter women from cycling with children.

Interestingly, our study found that women rediscovered cycling in later life after family and work commitments were less pressing, and that they had taken cycling up again for leisure, health and enjoyment.

44% of women in our survey cite a lack of time as a barrier to cycling. However, some also recognised that everyday cycling can provide time savings when compared to using the private car.

Many women in our ethnographic research spoke positively of the health and wellbeing benefits associated with cycling. Women in the survey who cycle regularly (66%) agree that 'it helps keep me fit and healthy' is a motivating factor for cycling. Enjoyment was also a motivating factor (61%) for cycling regularly.

68% of women who can cycle consider themselves confident cyclists. Almost half (47%) of those who consider themselves less confident would be interested in improving their cycling skills.

Research participants identified a need for visible female role models for everyday cycling to build a positive cycle culture for girls and women.

Infrastructure requirements

The type of infrastructure and its place in the transport hierarchy plays an important role for women.

When asked about desirable cycling routes 29% of survey participants agreed that it is important to have segregated cycle lanes. Additionally, there were very strong concerns voiced about routes that involved mixing with traffic on roads while cycling because of traffic speed, volume and vehicle sizes.

22% of women stated they would cycle more if cyclists turning or crossing at junctions were protected. In particular the dangers of cycle lanes suddenly ending at junctions leaving them exposed to traffic was noted.

Personal safety is also an issue. The literature review indicates that women have notably stronger concerns than men "of being bullied or verbally abused" when cycling, irrespective of existence of cycle lanes.¹⁷¹ Our research found that this type of behaviour towards cyclists acts as a deterrent for some women.

27% of our survey respondents cited well-lit routes as a factor influencing their decision to cycle. Outside of daylight hours even familiar routes are off-putting for women when there is a lack of lighting.

The type of overall network provided has an impact on women's propensity to cycle, a quarter of women surveyed (25%) stated that well-connected routes would encourage them to cycle more.

Contributing to poor connectivity, women in the study expressed frustration at a lack of coherent network information, directional signage, and in particular the sudden ending of isolated sections of cycle lanes.

Given the choice between a poor quality route and a slightly longer but better quality route women in the research revealed that they prefer to cycle the better quality route. In the workshops women expressed a need for cycle networks to connect from their home to services and destinations that women commonly use every day.

The women in our research who use adapted cycles and cargo bikes brought attention to accessibility issues caused by the use of bollards and chicanes which are common features of cycling infrastructure in Ireland.

Cultural perceptions

Women in the workshop observed how urban sprawl and car based land-use planning has left many with little practical option but to travel by car.

It was also noted that the characteristics of road traffic in Ireland are changing. Women's concerns revolve around high traffic speeds and volume, as well as the increasing size of vehicles.

45% of our survey respondents believed that cyclists have a negative image in Ireland. Workshop participants observed that the relationship of cyclists with other road users is often adversarial.

Interestingly, most women in our ethnographic study and the workshops, despite cycling regularly, did not perceive themselves as 'cyclists'. According to the women a 'cyclist' is someone who cycles fast, often and for long distances, wears Lycra, cycles for fitness rather than function and was frequently described as male.

The women in our research described a lack of visible female role models for everyday cycling that represent their experiences, and a lack of positive cycle culture. They also observed an under-representation of women in the transport sector, decision making and design.

There is a positive propensity to cycle among women in Ireland. However, cycling networks and their planning and design need to consider the wider roles and responsibilities that women perform in Irish society.

Key recommendations

Our research clearly shows that there is a core requirement for safe, comfortable and attractive infrastructure, but empowering more women to cycle requires more than the physical cycling infrastructure.

- This research highlights the need to plan and design cycling infrastructure with the women who are expected to use the infrastructure. This will also ensure that the needs for accompanying trips and young cyclists are taken into consideration as women often need to travel with dependents as part of their daily life.
- The lack of female representation in areas associated with cycling services, infrastructure planning and decision making was a noted concern for women in this research. Female voices must be part of decision-making processes, and more women need to be involved in professions associated with network planning and design.
- Road safety is a persistent concern that impacts women's travel choices with traffic volume and speed being the main drivers of these safety concerns. To address these concerns measures that reduce vehicle speed and traffic volumes should be implemented.
- Car-culture and aggressive driver behaviour impacts woman's propensity to cycle. In addition, women typically do not see themselves as a "cyclist" as the prevailing image of cycling appears to be male, and sport orientated. Strategies to change normative images and attitudes concerning cycling should be developed to shift societal norms towards visible and positive images of women who cycle every day.

Our research demonstrates that empowering women to cycle will require societal change beyond the transport sector, and it will require systemic change through a number of pathways illustrated in this report.



Photo: Lukasz Pedlowski

Introduction and context

TII is tasked with developing the National Cycle Network and supporting the delivery of Greenways and rural Active Travel Schemes. The National Cycle Network will consist of 3,500 km of safe bike corridors, integrating existing and planned Greenways and other cycling infrastructure. Against a backdrop of national strategies addressing the Climate Crisis there is a need to encourage more people away from car use to more sustainable and healthy modes of transport.

While cycling rates are generally higher in urban areas where cycling infrastructure has been installed, in rural areas cycling levels are low. The Department of Transport 'National Cycle Network Plan Report 2023'^[8] highlights the large gender disparity between male and female cycling participation in Ireland.

The development of cycling infrastructure and networks aligns with the United Nations Sustainable Development Goals^[9] and supports the Government's strategic objectives within the Climate Action Plan,^[10] which sets a target of net zero carbon emissions by 2050. The move to zero emissions transport and mobility options such as cycling plays a major role in reaching this target. Increasing active travel (walking, wheeling and cycling) is a key component of this move and has been highlighted as a priority by many policy and strategy documents including the National Sustainable Mobility Policy (NSMP).^[11] The NSMP states that 'we must ensure that sustainable mobility options meet the needs of all sectors of our society and are accessible to everyone regardless of ability, age, ethnicity, gender, income and sexuality'. 'Travelling in a Woman's Shoes'^[12] found that cycling can compete directly with the private car but current conditions fail to meet many women's needs and thus cycling accounts for the lowest modal share among women.

Policy

UN Sustainable Development Goals

The United Nations Sustainable Development Goals, to which Ireland has been a signatory since 2015 includes the following five goals which in particular are relevant to the subject of this research and cycling in general.

- 3.** Good Health and Wellbeing
- 5.** Gender Equality
- 10.** Reduced Inequalities
- 11.** Sustainable Cities and Communities
- 13.** Climate Action

Policy

National Sustainable Mobility Policy

The National Sustainable Mobility Policy (NSMP) outlines the strategy to 2030 for walking, cycling and public transport trips aimed at reducing emissions from transport. The NSMP acknowledges that “Along with supporting the National Planning Framework (NPF) growth targets, we must ensure that sustainable mobility options meet the needs of all sectors of our society and are accessible to everyone regardless of ability, age, ethnicity, gender, income and sexuality”.

TII is the owner of several actions under the NSMP Action Plan 2021-2025, particularly actions 27, 29 and 30 with responsibility for cycle infrastructure delivery that should be accessible to everyone regardless of age and gender.

Policy

Ireland's Climate Action Plans

Promoting cleaner, safer and more sustainable mobility is critical for climate policy, and it also represents an opportunity to improve our health, boost the quality of our lives, meet the needs of our growing urban centres, and connect our rural, urban and suburban communities. Embracing active travel can have improved health benefits in addition to the positive environmental impact. To meet the required level of emissions reduction, by 2030 we will provide for an additional 500,000 daily public transport and active travel journeys (CAP21).

Shift measures in the Avoid-Shift-Improve Framework encourage modal shift to more sustainable modes of transport. These measures can also include those that support a shift to active travel and public transport, including by the reallocation of road space (CAP23).

The National Cycle Network (NCN) will set out the inter-urban cycling network (approximately 3,500km) around the country linking urban centres, and this network will include many existing and planned Greenway routes (CAP24).

Research objective and methodology

The objective of this research is to gain a deep understanding as to why there is a gender disparity in cycling rates in Ireland, and to explore what is needed to ensure that cycling infrastructure and networks in Ireland meet women's mobility needs. This study therefore explores how to achieve higher rates of cycling among women.

The findings of this research are intended to inform and influence the development and design of cycling infrastructure within the transport system in Ireland.

This research combines existing literature from Ireland and across the world with new primary research. The primary research consisted of a quantitative survey, ethnographic research and co-creative workshops.

Literature review

The initial stage of this research set out to establish the breadth of knowledge in this subject area, and to identify potential gaps that could be addressed.

A formal literature review was conducted to explore academic and grey literature relating to women and cycling. The literature was screened by title for relevance using an inclusion criterion that covered the themes of infrastructure, and personal and cultural considerations to provide focus to the review. Once relevant titles were identified, a secondary screening was carried out using the content of the abstracts. The literature reviewed explored 157 titles in total. 103 titles were reviewed after the secondary screening and included in the formal literature review.

Survey

The findings of the literature review informed the design of an online questionnaire to explore cycling habits, attitudes and opinions of women in Ireland. The survey was disseminated to women across Ireland through an online questionnaire. To ensure that a representative sample of women were included in the survey purposive sampling techniques were employed.

In total 1,047 adult women responded to the survey. They ranged in ages from 18 to over 80 years old and proportionately represented women from urban, suburban, and rural areas. Figures from the survey have been rounded in this report.

Ethnographic research

The ethnographic research was used to gather in-depth perspectives to understand women's lived experiences and opinions. This involved collecting travel diary entries and interviews. 30 participants for the ethnographic research were selected from among the survey respondents discussed above, 22 submitted at least one diary entry. Selection criteria included cycling frequency, home location and age.

A smartphone App was provided to participants to record at least three journeys taken by any mode of transport over a two-week period. The use of the App allowed participants to capture images to demonstrate conditions experienced on those journeys. Participants were encouraged to report on infrastructure that either facilitated, inhibited or deterred them undertaking these journeys by cycle.

In addition to the information gathered in the travel diaries, follow up in-depth interviews were conducted with 18 of the 22 women. The interviews provided an opportunity to gain a deeper understanding of their experiences based on the contents of the travel diaries.

Workshops

Informed by the learnings of the previous research phases the workshops were designed to discuss and explore key areas that could contribute to empowering women to cycle.

The participants (14 women and one man) were recruited through those engaged in the previous research stages, and approaches to organisations and individuals working and advocating in the field of active travel, and women's travel in particular. Participants resided in various locations across Ireland, represented a range of ages, and had professional, personal or academic interest in the research topic.

Two workshops were held. The initial workshop was held in person. The follow-up workshop was held online.

The objective of the first workshop was to further understand issues around cycling and cycle provision. The diverse group of participants ensured a wide variety of perspectives were explored. To capture these perspectives, participants were guided through a process to co-develop a causal loop diagram. The causal loop diagram visualises interactions between factors that influence cycling levels among women.

The first objective of the second workshop was to examine the causal loop diagram developed in the first workshop and assess its alignment with the thematic areas identified in the first research phases. The second objective sought to explore how best to engage with women in a meaningful way, and understand what cycling networks need to deliver to empower women to cycle.

Stories from the saddle

To illustrate the views and experiences of the women in our research in a concise way, we have created three profiles of women that embody typical perspectives of women at different stages of life and life situations. The ethnographic research and workshops informed the profiles of [Ailish \(page 36\)](#), [Tara \(page 50\)](#), and [Ciara \(page 57\)](#).





Photo: Lukasz Pedlowski

Research findings

This research brings together, compares, and explores in more depth the outcomes from existing research and data with our own qualitative and quantitative research. The primary research allowed us to explore in detail the reasons why women currently find it difficult to take up cycling or are not attracted to or supported by what is currently on offer.

The main barriers affecting women cycling have been categorised under three areas: personal factors, infrastructure/traffic-related factors, and cultural factors/social norms.

Important determinants for cycling uptake among women are age, life circumstances, location and previous cycling experiences.

The following sections present the findings of the literature review, the survey, the ethnographic research and workshops carried out as part of this research study.

Current situation for women cycling in Ireland and internationally

Women in Ireland are half as likely to cycle as men with the sharpest decline occurring during adolescence.

Amongst men and women that complete at least one cycling trip per week, less than two percent (1.8%) of women aged 18-24 complete at least one weekly cycling trip compared to 17.6% for men. This is a significant gender difference. Among adults, men cycle to work approximately 2.3 times more often than women.^[4]

As women in Ireland are less likely to meet their physical activity guidelines of 150 minutes per week, they stand to gain more health benefits from a modal shift to cycling than men.^[13] The World Health Organisation (WHO) recommends at least 2½ hours of moderate-intensity physical activity per week.^[14] The National Guidelines on Physical Activity for Ireland suggest adults should have at least 30 minutes a day of moderate-intensity physical activity on five days per week.^[15] According to the Healthy Ireland summary report only 54% of men and 38% of women meet these targets.^[16]

The majority of the caring and household duties, even in dual-income households in Ireland, are still carried out by women.^[5]

The Travel Behaviour Trends Survey 20211 showed that “family/child related activities,” was the most-cited reason for travelling by car.

45% of women in Ireland provide care for others on a daily basis (compared to 29% of men).^[6] Trip-chaining (multi-purpose trips) and the need to transport a lot of items is another reason women give for driving. It's not possible to easily transport a 'family shop' on a cycle, resulting in the car being used.

Research shows that currently girls' and women's attitudes towards cycling are more negative than their male counterparts.^[17] International research confirms a greater impact of risks of assaults and harassment on women than men. Women generally report being less confident than men while cycling, especially when mixing with traffic.^[12]

Another deterring factor is the effect of cycling on personal appearance. Girls and women cite this as a barrier to cycling in some studies. In interviews on commuter cycling in the UK, themes emerged of cycling not being conducive to dressing smartly/fashionably for women and that women who cycle are perceived as "tomboys".^[18]

A further study in London observed that users of protected cycle tracks were slightly less likely than those on the parallel roads to wear any kind of specialist clothing; suggesting that protected lanes can help to normalise the image of cycling. In particular, users were less likely to wear sporty clothing associated with the 'Lycra-clad' image of the cyclist. The gender gap in users of these cycle lanes was also reduced suggesting that safety and perhaps practical clothing considerations may factor into a woman's decision to use this infrastructure.^[19]

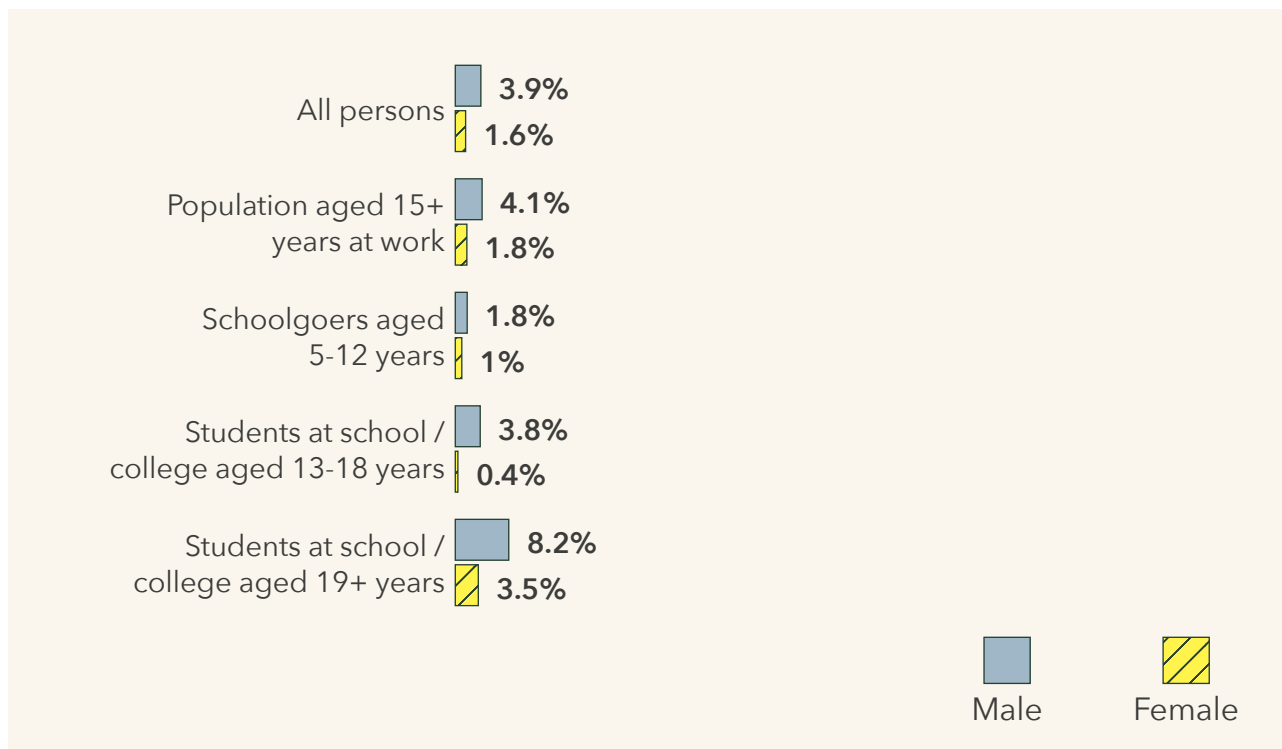
Ireland, like many other developed countries in the world, has a dominant car culture. Private car ownership has risen from 0.71 million in 1985 to 2.23 million in 2021, a rise of more than 300%.^[20] Getting your driver's licence and owning a car have long been seen as a desirable rite of passage for most young people. Women participating in our ethnographic study cited 'learning to drive' as one of the main reasons why they stopped cycling.

Unlike in countries such as The Netherlands and Denmark, which have established cycling cultures, in countries with low levels of cycling, perceptions of cyclists, especially when they mix with traffic, are often negative. This negativity can lead to interactions between cyclists and motorists and result in harassment, conflict and collisions.^[21]

An analysis of ten years of reporting on road fatalities found that newspapers covered cyclists' fatalities more so than motorists' fatalities leveraging the perception that cycling is dangerous.^[22]

Social norms around cycling impact cycling uptake. A cycling culture is a strong predictor of a person's likelihood to cycle. However, a cycling culture takes years to develop and requires governmental support and community buy-in. Countries like the Netherlands and Denmark have strong cycling cultures supported by infrastructural developments, cycling policies and promotions. There are gaps in the research surrounding how to develop a cycling culture and how to encourage more women to cycle, especially for their everyday trips.

Figure 1: Commuter/School cycling rates by population subgroup and gender (2016)^[2]



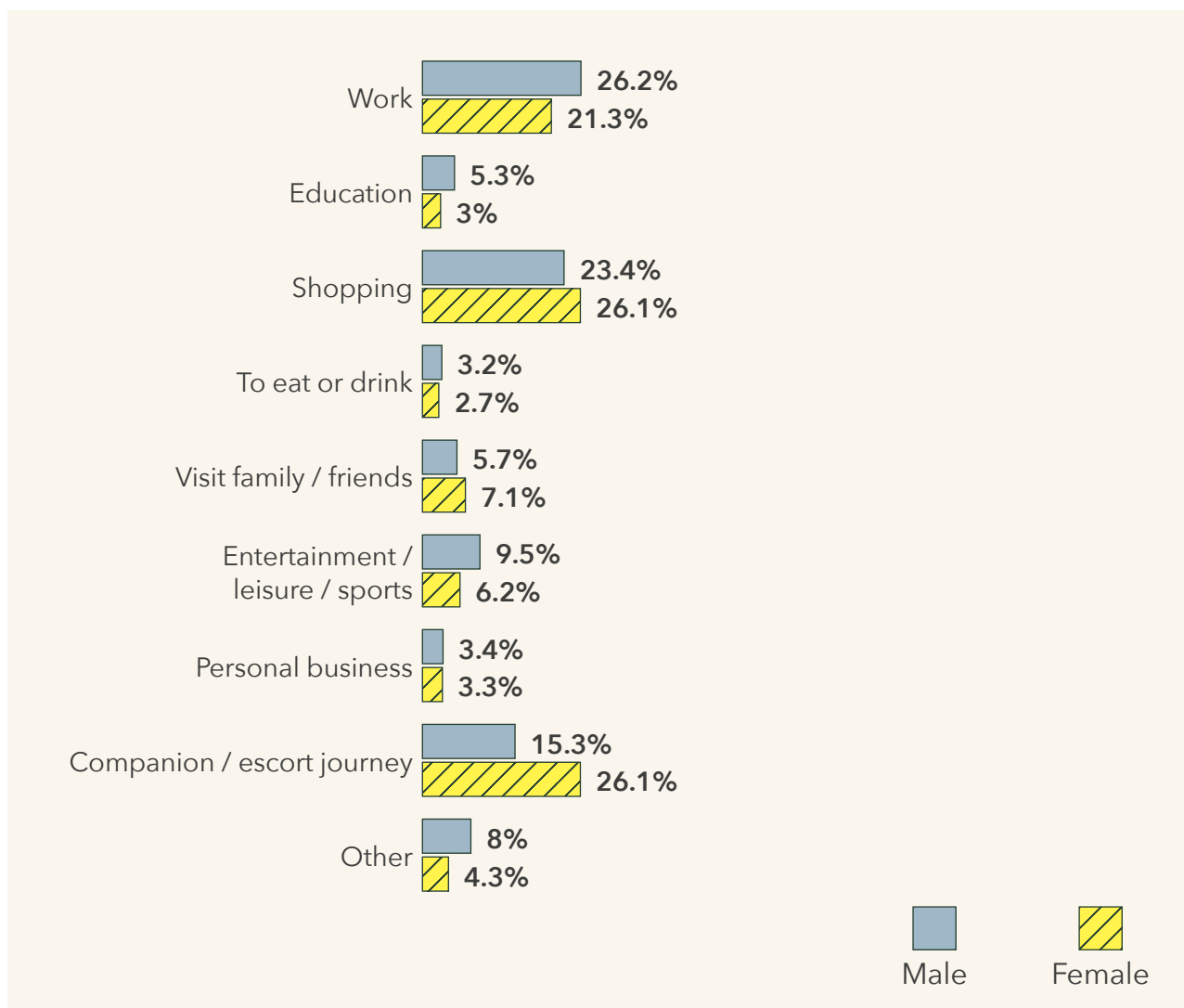
Full data on page 79

The gender disparity observed in adults is evident and more pronounced during childhood and adolescence. Among primary school children boys are twice as likely as girls (1.8% vs 1%) to cycle to school. In secondary school, while more boys take up cycling the opposite is true for girls (3.8% vs 0.4%) making boys ten times as likely to cycle to school. However, cycling rates among women attending third level education institutions increase (3.5%) even though male students are still more than twice as likely to cycle than female students (8.2%).

Women complete more accompanying trips than men

The three main reasons adults travel in Ireland are shopping (24.7%), work (23.8%) and accompanying others (20.7%). Proportionally, women accompany others more often than men (15.3% v 26.1%) and complete more shopping trips. Conversely, men proportionally complete more work trips.^[1]

Figure 2: Percentage distribution of trips by purpose and gender (all modes) (2021)



Full data on page 79

Compared to other European countries such as the Netherlands, Denmark and Sweden, national cycling rates and modal share of cycling are low in Ireland. In addition, in countries where cycling is an established norm the relative proportions of men and women cycling have greater parity.^[23,24]

Table 1: Comparison of cycle rates in other European countries.

| Country | Share of all trips by bicycle | |
|-------------|-------------------------------|--------|
| | Male | Female |
| Ireland | 3% | 1.3% |
| Netherlands | 27% | 29% |
| Denmark | 12.4% | 11.7% |
| Sweden | 14.8% | 14.6% |

Cycling confidence

A lack of confidence in cycling skills is higher in women than men. In a US university, female survey respondents were significantly more likely than men to self-identify as being “a beginner cyclist who prefers to stick to the bike trails, paths and/or sidewalks”, instead of an intermediate or an advanced cyclist. Beginner cyclists represented the smallest proportion of men.^[25] In the UK, surveys completed by over 2,000 respondents on cycle route choice indicated that 81% of male respondents were confident cycling on all roads, while the corresponding rate for women was only 50%.^[26] Consistent with adults, research on secondary school students in Limerick City and suburbs,^[27] showed that girls were significantly more likely than boys to indicate that they “do not feel confident handling a bike”. Therefore, exploring the reasons and ways to address confidence amongst women would address this research gap.

Personal safety

Personal safety is a concern for women particularly at night, even in countries with a strong cycling culture.^[28]

Previous research shows that more women than men (34% vs 24%) cite that “feelings of insecurity” have occasionally deterred them from travelling across all modes of travel.^[12]

Results from a Canadian study reveal that women were significantly more likely to have stronger concerns “of being bullied or verbally abused” than men when cycling, irrespective of the existence of cycle lanes.^[7]

In The Netherlands, where women cycle at least as often as men, personal safety concerns for cycling at night were still stronger among women than men. From interviews with female cyclists in Delft, it was found that personal safety concerns were one of the main barriers to cycling at night.^[29]

Lighting is a factor that can make cyclists, especially women, feel safe. A survey of men and women on a range of cycling facilities, including pavements, parking and showers (at destination), found women rated “lighting” higher than men.^[30]

The literature suggests that there are several aspects to personal safety, real and perceived. This has a greater impact on women than men.

Overall, the National Travel Survey results showed that both men and women would be motivated to cycle more if there were “safer cycling routes”.^[4]

Our literature review revealed multiple findings that women experience more aversion to traffic and are more concerned about traffic safety than men.^[30,31,32,33] There is evidence to suggest that women are more concerned about near misses than men,^[34] and have stronger preferences for separation from traffic than men.^[35]

Women in Ireland have greater preferences for “Greenways” and “off-road” facilities compared to men.^[36]

Multiple studies from Ireland, Canada and Australia, have shown that women prefer roads with cycle lanes or separation from traffic, in comparison to men.^[37,7,38] When cycling with children, both men and women prefer separation from traffic.^[39]

Research carried out on cycle tourists in Australia suggests that anxieties associated with navigating affect female cyclists more than male cyclists and that women have stronger preferences to be informed about the route types they may find themselves on. Lamont et al.^[40] also found that women rated information on distance to the nearest town as more important than men.

While much research has been carried out on bicycle parking, few studies have investigated preferences by gender. A notable exception is the research completed in Dún Laoghaire-Rathdown by Egan et al.^[41] which found that women indicated strong preferences for open cycle parking as opposed to secure enclosed parking, potentially due to personal safety concerns as well as ease of access.

Journey purpose and motivation

Of the 1000+ survey respondents in our primary research, just over half (55%) reported that they are currently able to ride a cycle and have access to one. Our survey explored the types of cycle journeys undertaken by these survey respondents and their motivations to cycle.

Based on the responses 27% reported they cycle ‘just for exercise’ at least once a week, and 21% reported they cycle ‘for leisure or recreation on bike paths or Greenways’ at least once a week. However, only a small number (9%) reported ‘training for or taking part in competitive or club cycling’ at least once a week.

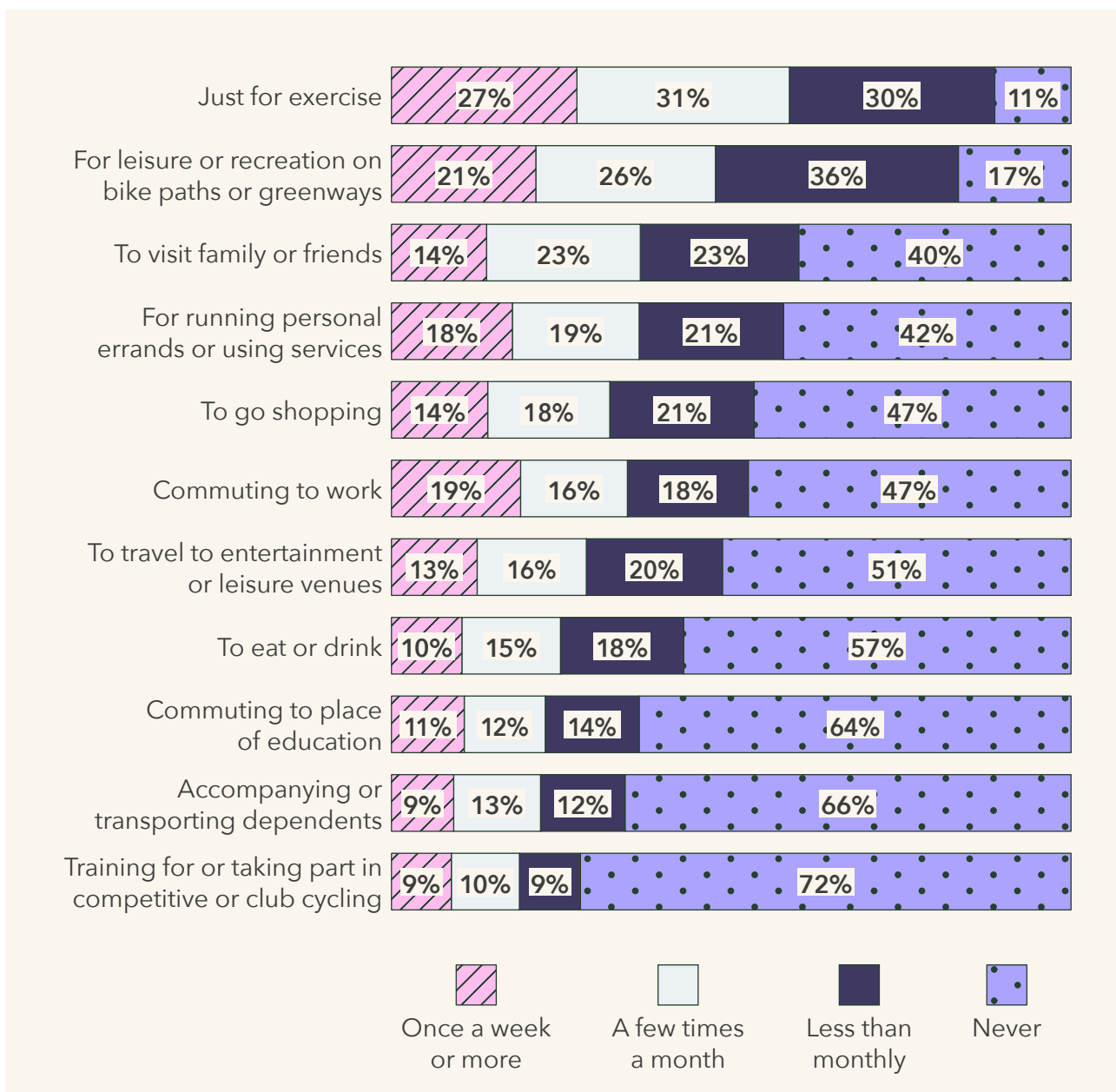
This is encouraging in light of women in Ireland being less likely than men to meet their physical activity targets. However, if more women are empowered to cycle the results

from our survey suggest that more women in Ireland are likely to be more physically active on a daily basis.

The survey results reveal that the most common functional journeys (journeys with a specific purpose other than leisure or exercise) were undertaken to visit family and friends (37%), running personal errands (37%), commuting to work (35%), shopping (32%), and commuting to education (23%).

The large majority of accompanying trips undertaken by women are not undertaken by cycle, with 78% of survey respondents reporting that they rarely (less than once a month or never) chose to cycle when their trip involves accompanying or transporting dependents.

Figure 3: How often do you do the following types of cycling in Ireland?



[Full data on page 80](#)

The ethnographic research findings supported the initial findings from the survey. Most cycling journeys recorded by the women in the ethnographic study were functional, such as commuting, running errands, or visiting family and friends. However, some of the women did cycle for leisure, particularly with their families on weekends or during holidays.

The ethnographic research revealed that women who currently commute by cycle had either commenced when they returned to their workplace after the COVID-19 pandemic or had been doing so for years. This suggests that the travel conditions during the pandemic may have positively influenced women's choice to commute by cycle.

When there are too many items to carry by cycle, such as a shopping trip to a large supermarket, women are less likely to cycle and most often travel by car. In comparison, research participants commonly run errands by cycle if the trip does not require carrying too many items.

A key motivator to cycle for many women is the opportunity to eliminate the need to find additional time in their day to exercise.

The women in our research recognised that choosing cycling for everyday journeys provides a means to achieve daily exercise.

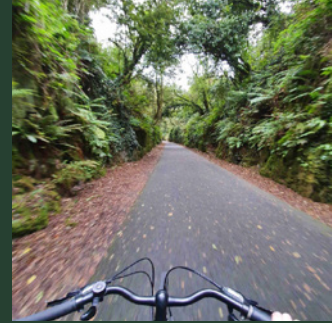
A lack of time to exercise is a barrier particularly for women, who often combine work and caring for children and/or other dependents. In the survey 44% of women cited a lack of time as a barrier to cycling.

In addition, the ethnographic research revealed that few women make the choice to cycle for leisure on their own. Usually the women cycle with their family for example at weekends or during the school holidays. This often involves transporting bikes to a destination by car, rather than cycling from the doorstep. The women noted that locations they favour for leisure cycling include canal paths, local forests, lakes and parks, or for those who were close enough, the beach. Interestingly, participants who live close to a Greenway had either cycled on it or expressed a desire to cycle on it in the future.

Ethnographic Study

25-34 year old woman, living in an urban location

"We have a Greenway, Rock to Waterford, and that's lovely to do as a family. And other families do it, so you get to go with them and make a day out of it."



Ethnographic Study

35-44 year old woman, living in a rural location

"This is an image of lambs and sheep in a field that is near my house. I enjoy cycling because I can see the countryside and I can see animals like the sheep and cows and it just kind of makes me very calm to cycle".



Enjoyment as a key motivator

Participants in the ethnographic study described 'feeling refreshed' and 'energised' following a cycle journey. They also enjoyed taking in the scenery and being in nature. For others, the original motivation for cycling was functional or for health reasons. According to participants their level of enjoyment of cycling increased the more often they cycled. This has a positive impact on their cycling because it motivates them to continue cycling or to cycle more.

Ethnographic Study

25-34 year old woman, living in a suburban location

"First of all cycling was a necessity, but then afterwards I really came to enjoy it, and I looked forward to getting up in the morning to cycle to work. So it kind of changed over time."

Cycle skills and confidence

Existing research suggests that confidence in cycling skills is lower among women than men.^[26,25]

Encouragingly, 68% of our 1000+ survey respondents stated they are confident to cycle. Only 3% had never been able to ride a cycle. Interestingly, according to our research age is a factor that impacts cycling confidence. While 40% of over 65 year olds considered themselves confident to cycle, the most confident age group is the 18-34 year olds with 76% considering themselves confident to cycle.

Table 2: Cycling ability

| Can you ride a cycle? | Percent |
|--|---------|
| Yes, and I am confident to do so | 67.9 |
| I can or have previously been able to, but do not feel able / confident to at the moment | 28.7 |
| No, I have never been able to ride a cycle | 3.3 |

Of those who are currently not able to cycle, 47% indicated that they were interested in learning to ride or refresh their skills (highest in 18-34 year olds at 74%). This indicates that there is potential among women who currently do not cycle to improve cycling skills and build confidence.

55% of the overall survey sample were currently able to ride a cycle and have access to one.

Most of the ethnographic study participants stated they had fond memories of cycling as a child. Workshop participants considered cycle training in childhood to be essential. Participants identified that the visibility of women engaging in everyday cycling as role models as being important to foster a better cycling culture for girls and women in Ireland.

Workshop participants suggested that access to opportunities to try different cycle types and cycle training tailored to the needs of women at different life stages would be beneficial. They indicated that cycle hubs for training activities, social cycle events and cycle loans/trials should be developed on local routes.

The women recognised the importance of workplace based provision for and promotion of cycling to work.

Our research suggests that in Ireland many women have the ability and confidence to cycle. However, age is an overall influential factor on cycling confidence. The main deterrents for women cycling revolve around time constraints, necessity to accompany dependents, and necessity to carry shopping. For example it is difficult to transport a 'family shop' on a cycle, resulting in the car being used.

To support cycling amongst women in Ireland more generally, several opportunities were identified. Women in our research expressed a strong desire for developing a better cycling culture, and provision of broader supporting measures.



Photo: Jon Bewley

Thematic areas

Three thematic areas emerged from our research which encompass factors that influence a woman's decision to cycle:

- Personal/lived experience
- Cultural perceptions
- Infrastructure requirements

Personal/lived experience

Caregiving and household responsibilities

In Ireland, travelling by car is seen to be necessary by many for accompanying trips

Our initial research showed that women in Ireland assume the majority of the household and care responsibilities, which includes accompanying children. As a consequence, many women in Ireland perceive having access to a car as a necessity. Household responsibilities are likely to be an influential factor on women's modal choice, and currently the car often meets their needs best.

Results from our survey supported these findings. Only 7% of the 1000+ survey respondents stated that having access to a cargo cycle would encourage them to make more journeys by cycle. This proportion increases among women who cycle regularly (55% of survey respondents) to 10%.

While having to carry shopping or other loads is a factor, only 27% of overall survey respondents stated that having too much to carry was a deterrent to cycling.

Workshop participants suggested that being able to try different types of cycles, for example by getting access to a 'bike library', could encourage more women to explore the suitability of these options before investing.

Having children impacts both positively and negatively on women's cycling habits

While the research suggests that caregiving can negatively impact cycling among women it is encouraging that some women in the ethnographic study described how

having children had resulted in them cycling more. These participants enjoyed cycling as a family, and perceived cycling to be an important skill for their children to develop.

Ethnographic Study

35-44 year old woman, living in an urban location

"Since we moved here, and since our daughter got a little bit older, for sure, we cycle much more... We try to promote it, even during the weekend me, my husband and my daughter, she's only six, go out and cycle. That's what she loves."

The private car is still an integral part of women participating in recreational cycling with their families. Women in our research described transferring the family cycles by car to a safe, traffic free location (such as a Greenway or park) and cycling there with their children. Women elaborated and explained that safety concerns deterred them from cycling with children on the road. Children's cycling ability levels were also a factor.

Workshop participant

"I used to cycle a lot, if I reflect honestly ... having children, increasing traffic (and its increasing size and weight), sense of safety and public rhetoric influence my travel choices."

Stories from the saddle

Ailish (aged 25-34)

Ailish works full time and lives in a city suburb with her husband and two primary school-aged children, she cycles the 20km round trip to work around 50% of the time and also cycles to the local shops that are a few kilometres away. Despite cycling regularly, she does not consider herself a 'cyclist'.



Having children has increased the amount that Ailish cycles as she believes it is a great way of doing something outdoors as a family, it is important to her that her children grow up as confident cyclists. Ailish cycles her children to school, so they get used to cycling and learn the rules of the road, and the whole family cycle together to and around paths in the woods nearby at the weekend.

For Ailish, cycling is a form of travel that efficiently combines function and exercise, as well as being an enjoyable activity she can do on her own or with her family.

"Once I've cycled, I don't feel like I have to go and do exercise in the afternoon because I feel like I've done it, I've killed two birds with one stone. And that takes a lot of time out of your day that, you don't have to go exercise for an extra hour."

However, Ailish feels that she does not cycle as much as she could. Her commute is partly on a cycle lane but when that ends, she has to ride on a relatively busy road which can feel unsafe at times as she prefers to be separated from the traffic. She is also deterred from cycling to busier shopping areas if there is nowhere she feels is safe to lock her bike.

"I do a good bit [of cycling] at the moment but, the cycle paths do stop me from, probably, travelling to other places that I could go to. You know, even to the other shops on the other side, that would be the same distance. I wouldn't travel there because of the roads, they're so small and narrow that it just wouldn't be safe."

The family will occasionally drive to the closest Greenway for a day out cycling, which Ailish enjoys doing but feels 'defeats the purpose' from an environmental perspective. Although Ailish lives within cycling distance of the beach, she does not feel safe cycling that route with her children. She would love it if there was a Greenway or similar so they could ride to the beach together and feels this would be very popular with local families and also help to ease some of the congestion in the summer.

Personal safety

Women view personal safety as a significant barrier to cycling

Personal safety is a greater concern for women than men. These concerns were also shared amongst ethnographic study participants. The extent of personal safety concerns included a lack of respect towards cyclists from some drivers and this deterred some women from cycling.

Ethnographic Study

25-34 year old woman, living in a suburban location

"I think the majority of Irish drivers do not know what it's like to be a cyclist in Ireland. I believe if they cycled Irish roads for even just a week they would understand cyclists much more."

27% of our survey respondents stated a preference for 'well-lit routes' as a specific infrastructure intervention that would influence women to cycle more. This was second only to segregated cycling facilities. The ethnographic research also found that lack of lighting, even on familiar routes that have been used during daylight, is off-putting for women.

Ethnographic Study

25-34 year old woman, living in an urban location

"Sometimes I just get unpleasant interactions with groups of men or groups of teenage boys that'll yell something at me as I'm going past. I once had some teenage lads try and step in front of me while I was cycling, and made to grab my bike, and I just had to yell at them and go round them."

In addition, women sometimes opt to cycle a longer route (within reason) rather than a more direct route, if they perceive it to be more safe or more pleasant.

Ethnographic Study

45-54 year old woman living in a suburban location

"If I'm out and I'm passing a bunch of young lads and they're menacing or fooling or whatever, I find if I'm walking, it takes a while to get past them, but if I'm cycling, I'm past them fairly quickly. So, it kind of increases the safety in those situations."

However, some women in our study also stated that being on a cycle felt safer than being on foot in some situations.

Ethnographic Study

25-34 year old woman, living in an urban location

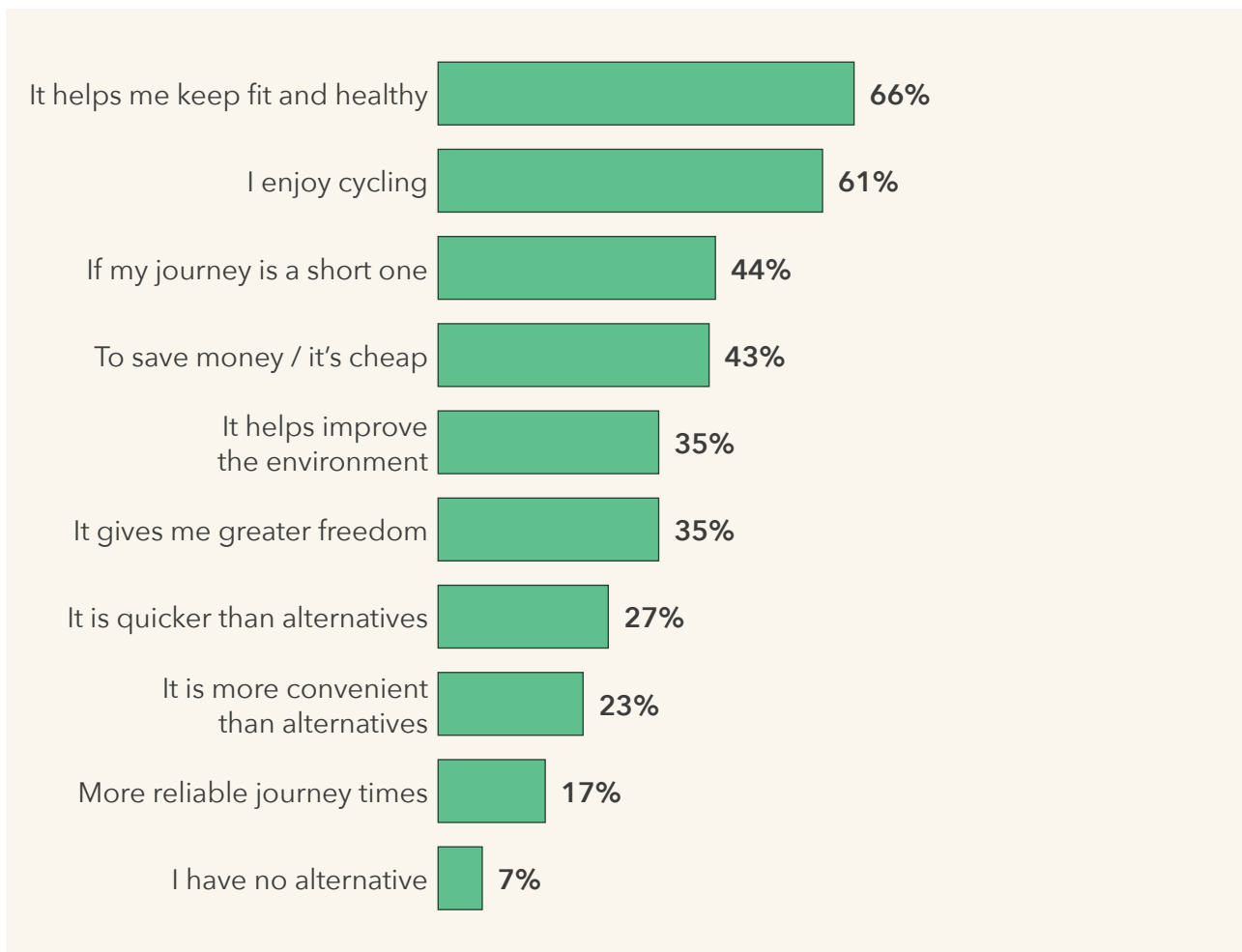
"I actually never felt unsafe because I felt that I was on a getaway vehicle."

Health and wellbeing

In our survey 76% of overall respondents agreed that cycling is enjoyable.

66% of survey respondents who are able to cycle and own/have access to a cycle and undertake functional journeys at least sometimes do so because it helps keep them fit and healthy. Similarly, 61% stated that enjoyment is an influential factor.

Figure 4: What factors influence your decision to do these (functional) journeys by cycle?



Full data on page 81

Everyday functional cycle journeys can tick two boxes at once, for example by combining errands and physical exercise. Women appreciate that it does not 'feel like exercise'.

The women in our ethnographic research recognised the health benefits of cycling, and valued the time saved by integrating exercise into their everyday routine, rather than exercising separately.

Ethnographic Study

25-34 year old woman, living in an urban location

"It's very healthy and means I can do a little bit of exercise. When I have the kids back from school, I don't really have a lot of time for myself. So, I said, 'Well, if I can go and do some shopping and cycle, that would be great.' And that's what I did."

The ethnographic research participants also highlighted mental health and wellbeing benefits that cycling can provide.

Ethnographic Study

25-34 year old woman, living in a suburban location

"I think the impact it has on my mental health is huge. I haven't been cycling for a little bit since I left the position I was at, and I can already tell that my mental health is affected. Just being out and being on the bike really just makes me happy, honestly, there's no other way of saying it. It does me good."

The workshop participants elaborated further on the theme of health and wellbeing and suggested a strong cycling culture can contribute at community level to improved air quality and more vibrant local spaces.

When women in the ethnographic research were asked to compare cycling with other forms of exercise, many of the women expressed a preference for cycling. The opportunity to be outside cycling is perceived to be more flexible, more gentle and lower impact than other forms of exercise.

Ethnographic Study

25-34 year old woman, living in an urban location

"It's not, like going to the gym, when you sign up for lessons and you have to be there at 11 o'clock. I can go whenever."

In addition, cycling requires minimal preparation or organisation compared to other forms of exercise.

Ethnographic Study

25-34 year old woman, living in a rural location

"It works with whatever schedule. I don't need to get in sync with anyone else. I think for women anyway, for family life... it's very, very flexible."

Life stages and changing life circumstances

Cycling may not always be the most convenient or practical mode of travel for women. Generally, changes in a woman's life stage, life circumstances or life situation can influence propensity to cycle.

The ethnographic research showed that changes in women's life situations can be a trigger for giving up or taking up cycling. Having children and caregiving responsibilities can have an effect on cycling levels. Some older participants had 'rediscovered' cycling later in life after family or work commitments were less pressing. The reasons for taking up cycling again included leisure, health and enjoyment.

Another trigger can be a change to where women live. Those living in urban areas (for example ethnographic research participants who lived in Dublin) cycled for functional purposes because it was quicker than driving and more reliable than public transport.

Ethnographic Study

18-24 year old woman, living in an urban location

“At university, in Dublin, I realised that you couldn’t really rely on public transport, so I got cycling then... In a small town, you don’t really get around on a bike, whereas in Dublin it’s an easier option and better than public transport. So, yes, I think I definitely cycle more now.”

For others, walking was considered an easier option than cycling when living in a city with close proximity to work, education and other amenities. Women living in more urban areas have shorter distances to work, education, and shopping that can be cycled. Moving, particularly between urban and rural locations, can also encourage or discourage women from cycling.

Ethnographic Study

25-34 year old woman, living in an urban location

“While I was in college, or in Uni, I didn’t cycle very much at all, because I lived a two-minute walk away and so it didn’t really make sense for me to go via bike. In the last two years or so, it’s become much more prominent.”

Ethnographic study participants noted shorter journey times to reach their destination would motivate them to cycle rather than take a car or public transport. The women often chose to cycle rather than walk, take public transport or even drive during peak times, because it was perceived to be quicker.

Integration with public transport was slightly more favoured by younger age groups (18-34), however, even though around one in five women in the older age groups also stated that being able to combine cycling with public transport more easily would encourage them to cycle more.

Appearance

While the literature review suggested that effects on physical appearance is a barrier to cycling for women, only 15% of our survey respondents considered this a deterrent factor. Of more importance were aspects such as road safety, infrastructure and personal safety concerns.

Cost of travel

According to participants in the ethnographic research cycling is seen as a low-cost alternative to the car. 43% of our survey respondents undertaking functional journeys did so to reduce transport costs by cycling.

Ethnographic Study

25-34 year old woman, living in an urban location

“For our family, it’s just money-saving as well. You know, we don’t need two cars because of it [cycling].”

However, the workshops revealed that costs associated with initial investment in cycling could be a barrier, particularly if e-bikes or adapted/cargo bikes are being considered. Workshop participants suggested that cycle hubs facilitating cycle loans and trials of various cycle types could encourage women to try cycling and decide which cycle is right for them.

Journey time

While the following might apply to everyone, of particular importance to women is the flexibility and journey time savings that cycling can offer.

Ethnographic Study

25-34 year old woman, living in an urban location

"If I'm going to grab a coffee with a friend, I'll cycle down instead of walk, because it's about a 25-minute walk, so it's just quicker to fly down on the bike."

Survey and ethnographic research participants recognise that cycling can provide travel time certainty and journey flexibility compared to other modes such as the car, walking and public transport, particularly at peak times.

Ethnographic Study

45-54 year old woman living in a suburban location

"Not to be smug about it, but it is lovely when there's a massive traffic jam and you're just whizzing past it in the cycle lane."

The flexibility to travel independent of public transport timetables and no need to find car parking make cycling desirable. Control over travel time makes cycling appealing, even in situations where it takes slightly longer than other modes.

Distance travelled is likely to have an inverse effect on time savings, and the advantages discussed above are likely to be relevant to women living in sub-urban or urban areas.

Cultural perceptions

Car culture and cycle culture

Car culture is dominant and established in Ireland

Workshop participants discussed how the strong car culture is adversely impacting developing a better cycling culture in Ireland. Participants observed how cars are consistently marketed as desirable. Whereas public transport and active travel, including cycling, are still perceived as a second-rate option. It was the view of workshop participants that infrastructure planning often prioritises the car which leads to urban sprawl and further reliance on cars.

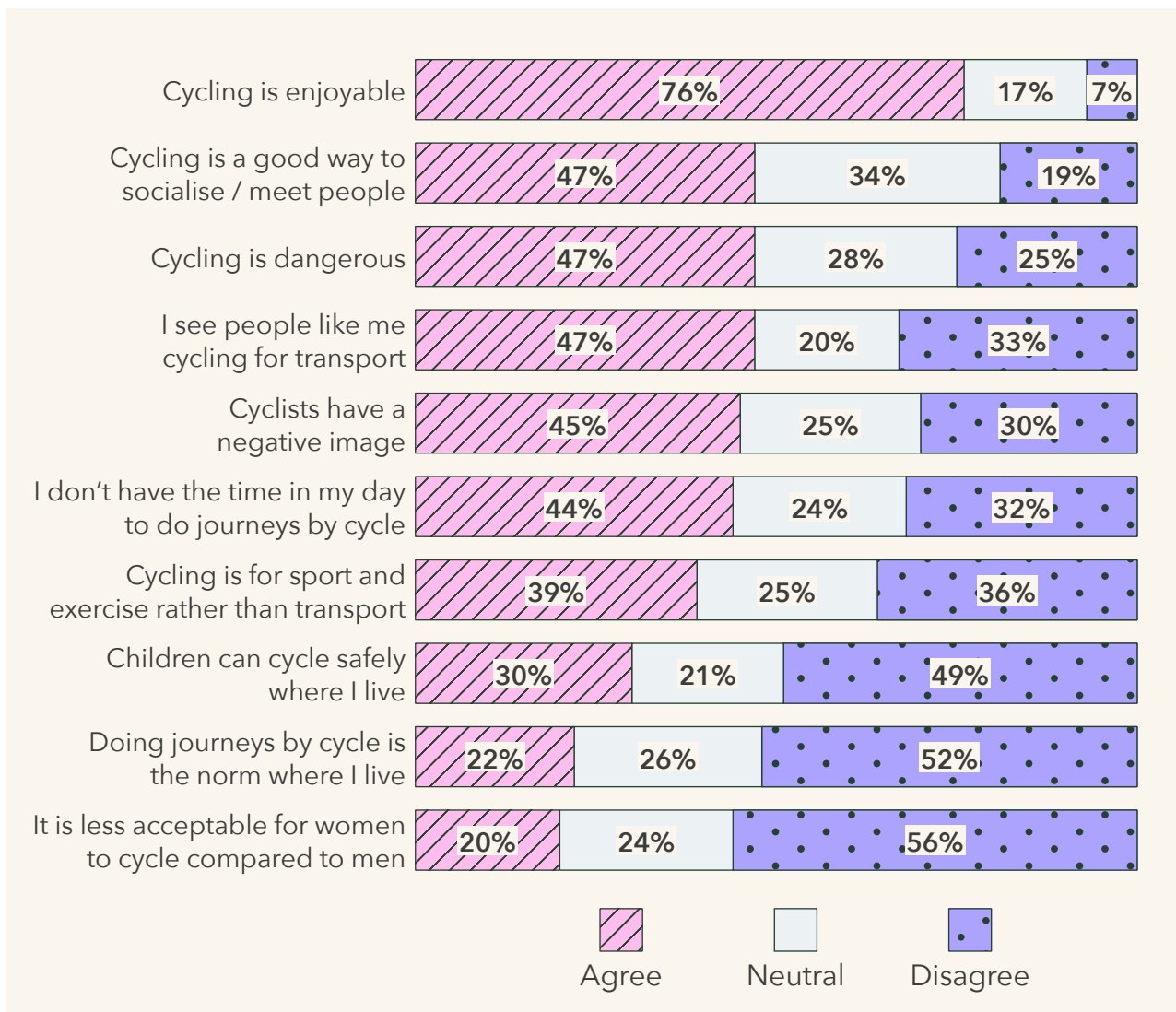
Despite 76% of our survey respondents stating that cycling is enjoyable, only 22% agreed that cycling is the norm where they live. 45% agree that cyclists have a negative image.

Negative perceptions of cyclists vary by age with women in the 55-64 age group having more negative perceptions of cyclists than those in younger age groups.

In Ireland women typically do not cycle if they have to accompany or transport dependents. Furthermore, 49% of our survey respondents disagree that cycling is safe for children where they live.

However, cycling is utilised not only as a form of transport, but also provides opportunities to exercise and for social interaction. Over a third (39%) of women surveyed agreed that cycling is for sport and exercise rather than transport, and 47% agree that cycling is a good way to socialise and meet people.

Figure 5: How much do you agree/disagree with the following statements?



[Full data on page 82](#)

Image of ‘the cyclist’

A gendered perception of the cyclist emerged in the study

Most women in the ethnographic research, despite cycling regularly, did not perceive themselves as ‘cyclists’. The women perceived a ‘cyclist’ as someone who cycles fast, often and for long distances, wears Lycra, cycles for fitness rather than function and was frequently described as male. In the workshop this type of cyclist was observed as being vilified and creating a negative image of cycling among other road users.

Ethnographic Study

35-44 year old woman, living in a rural location

"I wouldn't consider myself a proper cyclist if that makes sense. I see those guys going out in groups on a Sunday, and they are probably cycling for a long, long time. I see that, and I could never picture myself doing that."

In the ethnographic study, a number of women described how the 'group riding' side of cycling did not appeal to them. Most liked the freedom and flexibility of cycling - not needing to be in a certain place at a certain time or adapt to others' needs or interests. Some women did not consider themselves 'good enough' to keep pace with a group and travel a long distance.

Ethnographic Study

55-64 year old woman, living in a rural location

"I wouldn't really want to be with the group and struggle to keep up. You can possibly do it at your own pace, I've never investigated that, but it just doesn't appeal to me. I prefer just to do it on my own or with friends or family or whatever."

Group cycling in particular was perceived to be a 'male activity', and none of the participants could recall seeing female cycling clubs or groups cycling in their local area.

Ethnographic Study

25-34 year old woman, living in an urban location

“This morning, I was doing a brief drop-off and there was a group of men, basically like Tour de France on the road. You never see women do that. Like, you would never see a group of women actually cycling.”

A lack of visible female cyclist role models participating in ‘everyday’ cycling was seen as an issue by workshop participants. They suggested that increased visibility coupled with a broadened image of cyclists could encourage more women to cycle.

Stories from the saddle

Tara (aged 18-25)

Tara works full time and lives on her own close to the centre of Dublin. Since moving a bit further out from the city centre, her workplace and other amenities are no longer in walking distance which has prompted her to undertake more functional journeys by cycle, as it is quick and convenient compared to public transport.



Tara does not own a car; she typically travels by public transport or shared/rental bike. She has cycled her whole life and owns a bike, but it is not currently in working order.

Tara uses shared/rented bikes for short trips in the city (to the shops, or to the train station and leaves the bike there) but she does not cycle to work because she does not want to arrive sweaty. Commuting by bus can take a long time and the bus is often delayed, so she leaves home earlier than she would if she were able to cycle to work.

“On the way to work, I’m like, ‘I don’t want to feel sweaty going into the office.’ Some offices are lucky with having changing rooms and showers and stuff, but usually that’s not the case. So, yes, some sort of changing facilities and showers would be really great.”

The shared/rented bikes can be convenient and cheap but also unreliable; Tara sometimes finds that the bikes are out of action, in the wrong place, or the lights are not working. She prefers to use her own bike when she can and would love it if she could take this on the DART or Luas or other public transport to do longer journeys across the city.

Tara is generally confident cycling in the city traffic and feels that the infrastructure for cycling is improving. She intensely dislikes the combined cycle/bus lanes because she feels very unsafe and tries to avoid these routes when cycling. Roadworks can also be problematic as they can obstruct routes.

Tara likes the fitness benefits of cycling and would like to join a female cycling group but is not aware of any near her – she always sees groups of men out riding at the weekend but has not seen any groups of women. She also wishes that it was more ‘socially acceptable’ for women to cycle to meet up for an evening out; she would like to do this but does not think that any of her friends would.

“I spent some time in the Scandinavian countries and everyone’s cycling there. Dublin is so far away from that ... I think, if it was more of a norm and everyone was doing it [cycling], I definitely would do it more.”

Infrastructure requirements

The following section discusses research findings relating to route safety, lighting, and quality routes and networks.

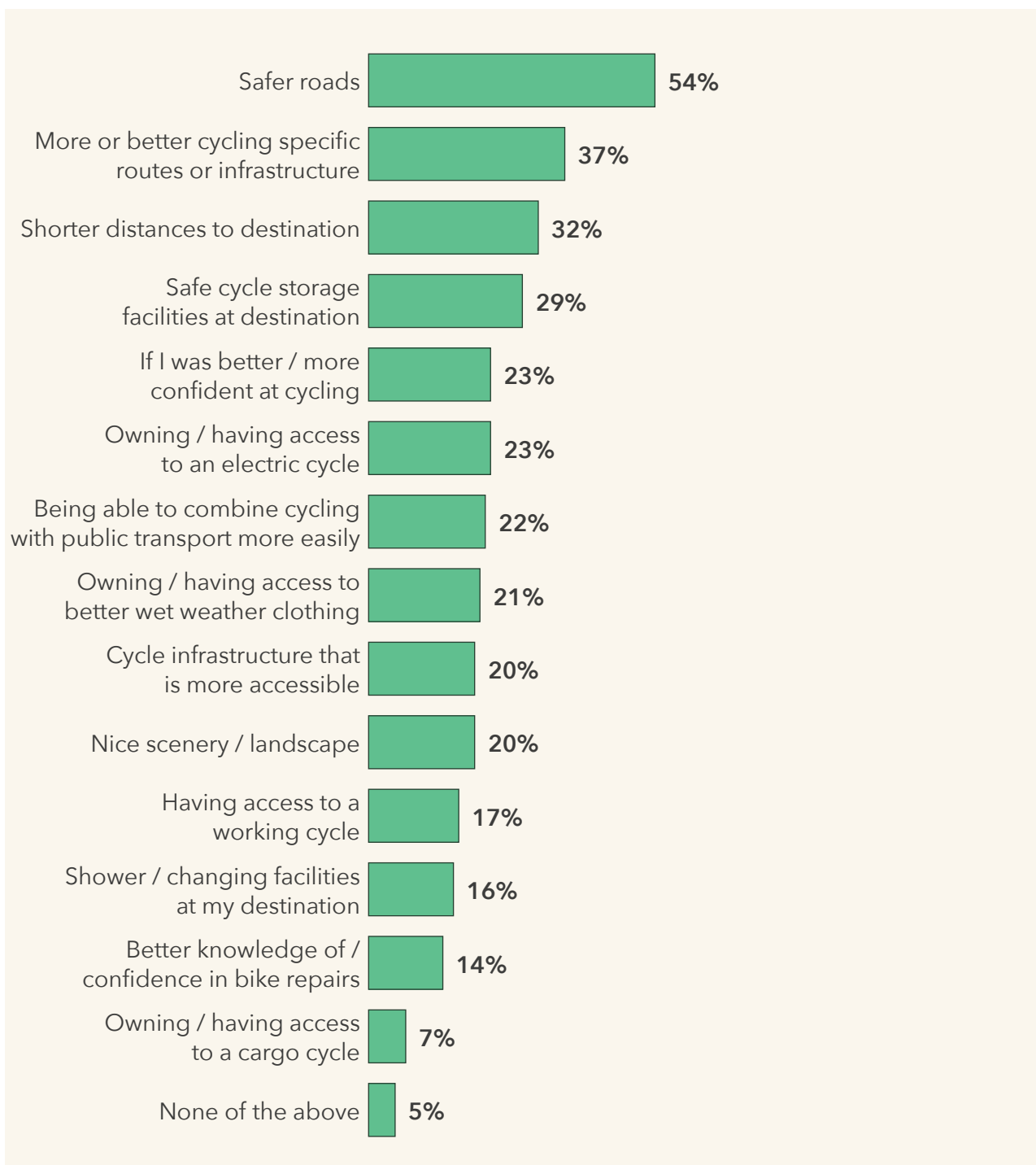
Route safety

Safer cycle routes are the most common motivator to cycle more

When cycling in traffic, women are typically more concerned about safety than men. Women have a stronger preference for segregated cycling infrastructure such as off-road routes and Greenways. However, both men and women prefer to be separated from traffic when cycling with children.^[39]

Our survey results corresponded with these findings, as the most commonly reported factor that would encourage women to start or do more cycling was safer roads, particularly among those living in rural areas (61%, compared with 44% of those living in urban areas and 54% of respondents overall). Concerns about safety increase with age. Those over 55 years old were more likely to state that traffic volume and speed, and unsafe roads were a deterrent to cycling.

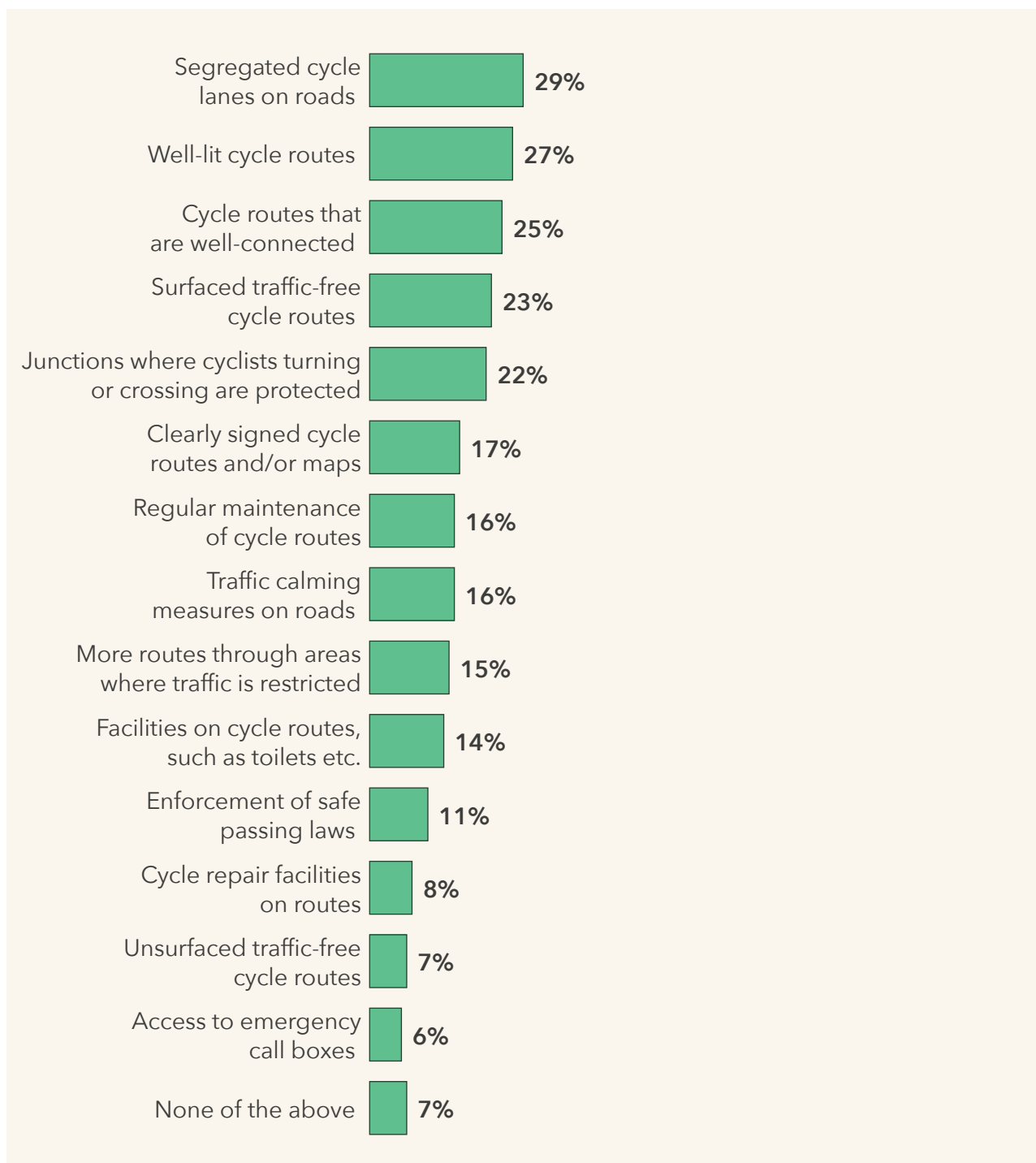
Figure 6: What things would encourage you to start making (more) journeys by cycle?



Full data on page 83

The survey respondents provided clarity about specific interventions that could encourage them to cycle more. Respondents favoured segregated cycle lanes (29%), well-lit routes (27%), well-connected routes (25%), surfaced traffic free routes (23%), and junctions where cyclists turning or crossing are protected (22%).

Figure 7: Thinking about cycling infrastructure in particular, which of the following things would encourage you to do more journeys by cycle?



Full data on page 84

Wayfinding, maintenance, traffic management and enforcement of traffic rules should also be addressed.

The ethnographic research corroborated the survey findings. Research participants expressed a strong preference for segregation of cyclists from other road users. This was seen as particularly important when travelling with children.

The size of the road, the speed of the traffic and the volume and type of vehicles using the road were all factors that contributed to safety concerns. Workshop participants observed that ever increasing volume, speed and size of vehicles on the road is detrimental to cycling.

Some women in the ethnographic research considered themselves confident cyclists but still felt unsafe cycling in traffic at times. However, this did not deter them from cycling.

Other participants with similar concerns were reluctant to undertake journeys that involved travelling for all or most of the journey alongside motor vehicles. Some of the women were put off cycling journeys that took them along main roads with a high volume of traffic, including buses and large trucks.

Ethnographic Study

55-64 year old woman, living in a rural location

"I live about a mile from town but it's off a main road, and there is a huge volume of traffic on it. It's only one lane each way so you'd have to cycle on the hard shoulder and it's not a pleasant experience ...The cars just fly along ... and people pull into the hard shoulder to let somebody overtake them. So it's not safe, really."

When considering a cycling journey, participants expressed safety concerns at junctions. Some women described interrupting their cycling journey by dismounting and using the footpath to negotiate junctions.

Ethnographic Study

25-34 year old woman, living in a suburban location

"I don't know what it is about the drivers in that section, they just seem to want to make the turn as quick as possible when they see a cyclist. I've been in so many dangerous situations in that particular spot. I just get off and cross the road."



The ethnographic research revealed that women were concerned about a lack of space to safely pass cyclists on rural roads. This is exacerbated by the fact that often there are no footpaths. The women shared that if footpaths were available they would divert onto them in order to enable cars to pass them more safely. While some women still felt confident and safe to cycle on rural roads due to lower volumes of traffic, the lack of cycle paths was a deterrent for others.

Ethnographic Study

35-44 year old woman, living in a rural location

"If there was cycle lanes I think I would be more inclined to go and do the 5km cycling stuff. But those roads are quite windy. I wouldn't walk those roads either, it's just too dangerous."



Findings from the ethnographic research highlighted issues with disconnected routes. The women also observed that the misuse of cycling infrastructure is problematic, for example, vehicles often park on cycle lanes, or members of the public obstruct cycle lanes adjacent to amenities such as shops.

Ethnographic Study

35-44 year old woman living in an urban location

“Cycling, even this area, is just not safe. We have lanes that are supposed to be for cyclists and instead people park their car there.”



Some women also observed that cycling infrastructure is sometimes misused, including people on scooters and cyclists travelling in the wrong direction, or pedestrians and joggers using the space intended for cyclists.

Lighting

Our survey found that 27% of women consider well-lit routes a factor that could encourage them to cycle.

Both the literature review and survey responses show that lighting as part of cycling infrastructure is a factor that impacts women’s propensity to cycle.

The ethnographic research also emphasised the importance of lighting, with some women stating they were reluctant to cycle after dark and in poor lighting conditions because of concerns for their personal safety. For some this stems from previously experienced assault or harassment while cycling. Notwithstanding this risk participants expressed a general perception that it is unsafe for females to be out after dark, even on Greenways and cycle paths they feel comfortable cycling on during the day.

Ethnographic Study

25-34 year old woman, living in a rural location

"There is no light and, like, it's pitch black so it's scary and you worry for your safety. No woman is going to go down a pitch dark road with no cycle lane. Like, it's just not going to happen. A man might do it, yes, but a woman, she's not going to do it."

Stories from the saddle

Ciara (aged 55-64)

Ciara grew up on a farm and has fond memories of cycling everywhere as a child. She stopped cycling when she moved to a town and did not cycle much as an adult until the COVID-19 pandemic, when she moved back to a rural area. The quieter roads encouraged her to start cycling again. Ciara was recovering from a serious illness and had gained weight due to being less active. She took up cycling to help her get back to her pre-illness weight, and because it is low impact compared to other exercise options.



"I have trouble with my knees as well actually, and I think that cycling helps... it's not forced or anything, I just enjoy it, rather than feel like I have to go to the gym, that's how I feel about the gym, but I don't feel like that when I'm getting on my bike just to go to the shop."

Ciara lives 2km from her workplace and now cycles there and back most days. There is somewhere safe to store her bike so she doesn't have to worry about it being stolen. She rides in everyday active wear rather than cycling-specific clothing and leaves early so she has time to get changed and put her make-up on when she gets to work.

Ciara can cycle to her closest small shop and café and will do this regularly to get out and do some exercise. A bigger town is around 10km away and though the traffic is relatively light, cars travel at speed and there is no cycle lane so Ciara does not feel safe on that route, plus she is not sure she would be happy leaving her bike locked up in the town centre. The road surface on the rural roads and lanes is poor in places. Ciara has been considering an e-bike to enable her to ride further with more confidence but she is worried that the potholes would damage it.

Although she commutes by bike, Ciara sees herself as a 'leisure cyclist' and gets most enjoyment from cycling along quiet country lanes surrounded by nature. Now that she is getting more confident at cycling, Ciara would like to join a cycling group of like-minded women who cycle for enjoyment and the social aspect, rather than to race or to cover long distances at speed.

"I'm a very anxious person, I just think that I wouldn't fit into that ... If it [cycling group] was going down to a beach area where there is a boardwalk or something that you can cycle on, definitely something like that I'd be interested in. It's just the ones that I usually see, they are all flying ahead of each other, faster than half of the cars on the road. Definitely, if there was something more relaxed, I would be into getting involved with that."

Quality routes and networks

37% of survey respondents stated that more cycling specific routes would encourage them to start making more cycling journeys. While discrete aspects of infrastructure such as junctions or segregation, discussed above, are important, the workshop highlighted that inclusive, connected and convenient routes were network level characteristics that could impact women's propensity to cycle.

Ethnographic research participants expressed frustration about the quality of routes they cycled. To illustrate these they submitted images of pictures of potholes, blocked routes, and vehicles parked in cycle lanes.

When considering the quality of a cycle network ethnographic research participants expressed negative views of routes that included sections where cyclists have to share the bus lane by design. The quality of the network is also impacted when rules for cycle lanes are not enforced, for example when they are misused as discussed above.

The requirements for cycling infrastructure and networks that ensure suitability for women's everyday cycling journeys are varied and interconnected. The levels of route safety and lighting as well as the quality of cycle routes and networks impact on women's propensity to cycle.

Useful reading

Cycle Design Manual

The Cycle Design Manual 2023 (CDM) prepared by the National Transport Authority replaced the National Cycle Manual. It focusses on the importance of segregating cyclists, pedestrians, and traffic where possible. "The CDM includes a number of new types of infrastructure such as protected junctions, Dutch style cycle-friendly roundabouts, and parallel crossings which are commonly used in other countries".

Useful reading

Cycling for Everyone Guide

Cycling for Everyone: A guide for inclusive cycling in cities and towns co-authored by Walk Wheel Cycle Trust and Arup in 2020 contains many recommendations to make cycling a more inclusive activity for everyone. The document covers three key themes:

1. Improving governance, planning and decision making
2. Creating better places for everyone to cycle in
3. Welcoming and supporting all people to cycle



Photo: Andy McCandlish

Network support infrastructure

This section discusses research findings relating to network supporting elements such as signage, cycle storage, cycling and public transport, bike sharing schemes, and e-bikes.

Signage

17% of survey respondents stated that clearly signed routes would encourage more journeys by cycle. Unlike safety concerns that are more prevalent in the older age cohort, this aspect of cycling networks was more important (23%) to the younger 18-34 age cohort.

While keen to see more continuous cycle routes ethnographic research participants also expressed a desire for better signage on existing routes. This includes warnings about where lanes might end or start, and wayfinding information to negotiate available cycling routes. In the absence of signage or wayfinding participants expressed a reluctance to cycle on unfamiliar routes due to fears around cycle lanes ending or being interrupted.

Ethnographic Study

25-34 year old woman, living in an urban location

"There are a couple of points where you're on a cycle lane, you turn, and the cycle lane is gone and you're suddenly on the road with the cars. There's not a lot of clear signage if you're not aware of it. This particular cycle lane then reappears, but it's on the other side of the road, across four lanes of traffic."

Cycle storage

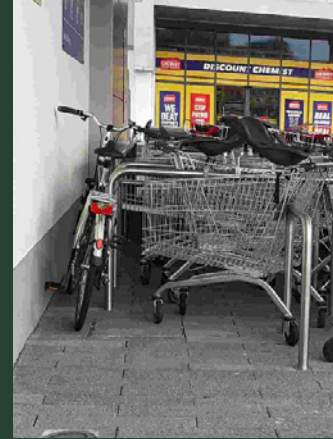
While the availability of cycle parking is important to cyclists, the perceived safety of cycle parking facilities is also important to women.

29% of survey respondents, reported that cycle storage facilities at destinations would encourage more cycling.

Ethnographic Study

45-54 year old woman living in a suburban location

"I took a photo of a big new supermarket which doesn't have proper bike parking. Most people lock bikes onto trolley area. It's a pity it wasn't a condition of planning permission."



Workshop participants and ethnographic research participants described how a lack of secure cycle storage was a deterrent to choosing to cycle in urban areas to access services.

Workshop participant

"I actually think the whole issue of bike security and fear of bike theft, especially given the cost of a bicycle, is a deterrent for all kinds of cycling... if I wanted to go in and do some errands around town, I'm just not likely to bring my bike because I'm afraid it won't be there when I come back."

Cycling and public transport

22% of survey respondents stated that being able to combine cycling with public transport more easily would encourage them to start making more journeys by cycle.

Similar to signage, integration with public transport was slightly more favoured by the younger age group (18-34). Where survey respondents live is also a factor with women living in urban (26%) and suburban (25%) areas being more interested in combining cycling with public transport than those in rural areas (15%).

Ethnographic research participants described difficulties combining cycling and public transport journeys. Specifically, women who needed to transport their cycle on the train found it more difficult at rush hour. They expressed a desire for more capacity to accommodate cycles on trains at peak times. Very few of the women had experience of combining cycling and public transport, though most acknowledged that

it would be beneficial and might encourage more people to use a cycle and/or public transport more.

Ethnographic Study

35-44 year old woman living in an urban location

"It would make life easier, you don't have to use the car anymore, if you could use the DART and then stop there and then go wherever you have to go by bike. But it doesn't look like it is possible."

Bike sharing schemes

The ethnographic research revealed that cost is a factor in women's decision to cycle. Workshop participants suggested cycle hubs and bike libraries that facilitate cycle loans and trials of various cycle types would encourage women to try cycling. In particular adapted or e-bikes, and/or providing the option to 'have a go' on different types of bike (including e-bikes) before committing to purchasing one would be beneficial.

Another low-cost option to try cycling are bike sharing schemes. In the ethnographic research the use of these schemes are favoured by some women, but they noted that they are not always reliable. The participants recommended improvements such as regular maintenance and repairs to damaged bikes and ensure availability to women who rely on using them.

Participants also recognised that expanding bike sharing schemes to ensure cycles are available in close proximity to bus stops and railway stations would encourage more women to cycle. This echoes the survey results where 22% of women stated that they would be encouraged to cycle more if they could combine cycling with public transport more easily.

E-bikes

Based on survey responses health / fitness levels is a barrier for some women cycling. This barrier is more prevalent among older women.

In the survey 23% of women stated that owning/having access to an electric cycle would encourage them to cycle more. This figure was highest in the over 55 age bracket (31%).

Moreover, disabled women were more likely to report that having access to an e-bike would potentially motivate them to cycle (30% compared to 21% of respondents without a disability).

Having access to an e-bike can address concerns and issues regarding health / fitness levels.

Workshop insights

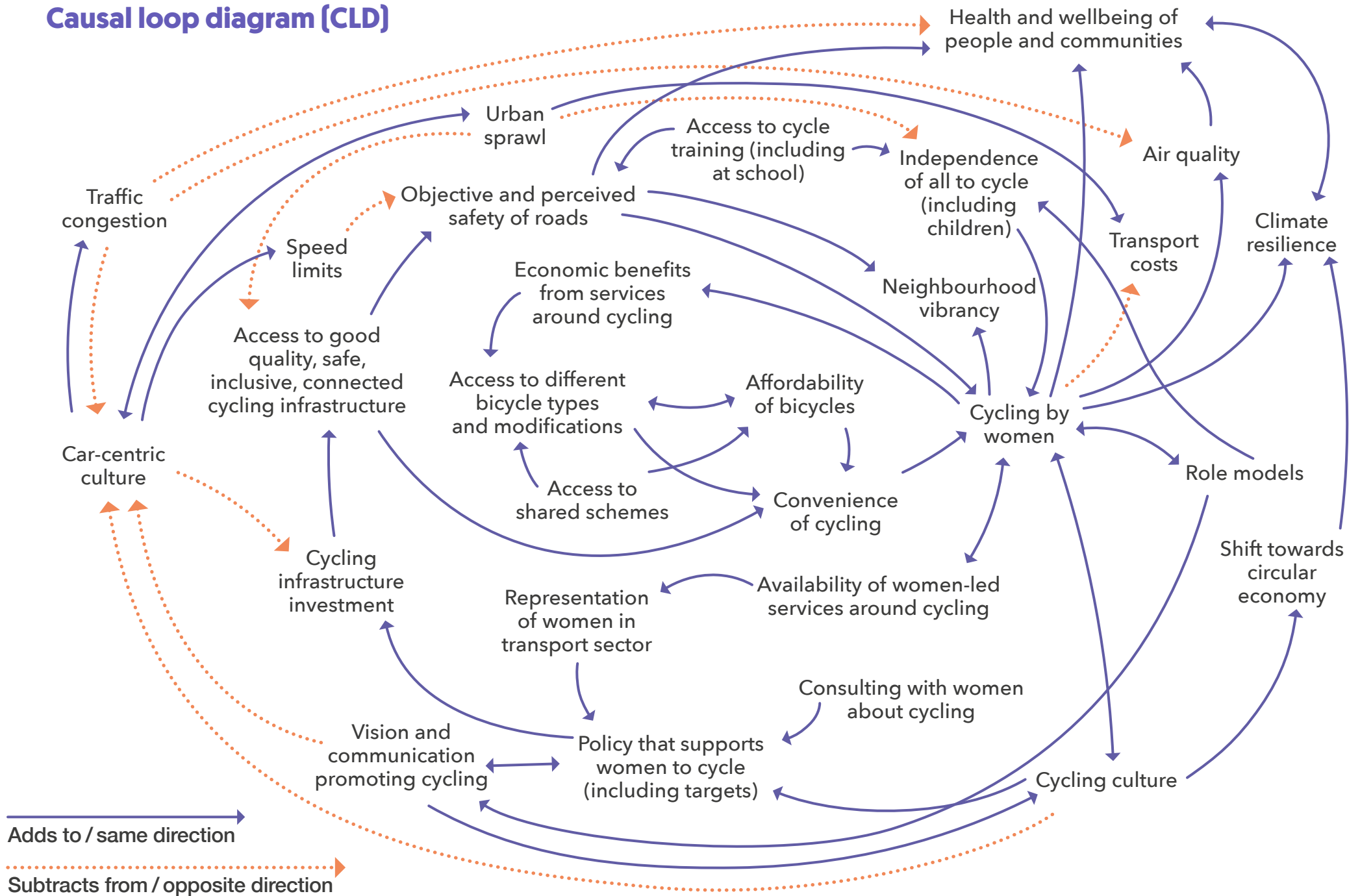
The workshop highlighted that the factors influencing women's decisions to cycle are a complicated interwoven system of infrastructure, personal and cultural factors.

The results from the workshop illustrated not only the points which have been raised above, but also the complexity of the relationship between them.

The problem being examined in the workshop was "What does make or would make cycling attractive and easy for women in Ireland, for all trip purposes?" The **Causal loop diagram (CLD)** below shows the relationship between cause and consequences as perceived by the workshop participants.

The CLD provides a visual representation of the complex problems and opportunities explored and discussed in the workshop. The interrelationships and interdependencies of factors that influence women to cycle to a greater or lesser extent are indicated by arrows leading to or from a factor.

Causal loop diagram (CLD)



—————> Adds to / same direction

.....> Subtracts from / opposite direction

In the diagram mutually positive relationships are represented by purple arrows (with solid lines). For example, "Cycling by Women" has a myriad of positive interdependent factors and this illustrates two things, first that changing only one factor will only have a partial impact, and second that there are many opportunities to increase cycling among women and a more holistic and broad ranging approach targeting many positive factors would be more effective. Interestingly, infrastructure is not a main factor, but it is associated with "convenience of cycling" which is noteworthy considering the emphasis that is often placed on the provision of infrastructure alone.

Although infrastructure considerations ranked high among the types of barriers women observed to cycling, as discussed in earlier sections, the CLD clearly illustrates a much more complex interplay of factors. Aside from infrastructure the workshop revealed that the convenience of cycling, attractive neighbourhoods, associated cycling services, objective and subjective safety, cycling culture, the independence of children to travel, women in decision making roles, and positive role models have the potential to impact significantly on women's cycling levels.

Training and cycle support services, a visible and positive cycle culture with female role models and practitioners, interventions in early years and support tailored to women's different life stages were just some of the many opportunities to make a positive impact highlighted by participants.

The far reaching and longer-term positive effects of an established cycling culture were also discussed in the workshop, including the potential to have a positive impact on air quality and health beyond the immediate individual benefit, and cycling as a precursor to more vibrant and resilient communities built around people rather than cars.

Conversely, factors that have orange arrows (with dotted lines) illustrate negative influences on women's choice to cycle. Of note is the number of negative red arrows associated with "Car centric culture" and in particular its interrelationship with "Cycling culture", which is seen as one of the positive factors that would increase cycling among women.

While the concept of the CLD is relatively straightforward, its major benefit lies in the ability to capture and communicate the intricate dynamics and complex system described and examined during the workshop.

The CLD provides a visual aid for decision makers and policy makers to plan and elaborate better interventions.



Photo: Jon Bewley

Recommendations and opportunities

Our research findings are broad and cover many topical areas. The sections below discuss women's propensity to cycle, the cycle network, providing a supporting framework for cycling, impact of cycling culture, and recommendations on how to close the cycling gender gap to empower women to cycle in Ireland.

A positive propensity for cycling

This research study shows that most women can cycle and have access to a cycle. The women who consider themselves less confident to cycle are interested in improving their cycling skills. This desire was particularly evident in the younger age cohort, who would like to be able to cycle more functional trips. However, our interviews and workshops also showed that older women value cycling for the health and social aspects.

Women with children consider cycling a valuable life skill for their children to learn. For the women interviewed it is common to transport their children by car to safe off-road cycling routes, such as Greenways and parks, to teach them cycling skills. Therefore, the car is still seen as necessary to access safe cycling routes.

The majority of women in our research had fond memories of cycling as a child. However, many of them later stopped cycling when they had access to, or learnt to drive, a car.

Many women in the study spoke positively of the health and wellbeing benefits associated with cycling. They particularly appreciate being able to build physical exercise into their busy daily schedules by travelling actively rather than having to find additional time for other forms of physical exercise. Many also mentioned the enjoyment and energising effects of being outside in nature and fresh air.

The literature review highlighted that care giving responsibilities impact women's propensity to cycle. This research reveals evidence that while women could and wanted to cycle, currently roads and streets are not designed for children cycling safely and independently. As a result women's choice to cycle is indirectly impacted by their caregiving responsibilities. This is compounded by the fact that women often undertake more complex journeys than people without caregiving responsibilities.

Women in our research recognised the health benefit of cycling. Cycling offers a less stressful alternative to the car due to avoiding traffic and car parking or issues with public transport.

Women also acknowledged cost and time savings pertaining to traffic and finding parking that switching car journeys for cycle journeys offers. Even if a cycle journey took

slightly longer than the equivalent journey by car or public transport, it was seen as attractive from a health and environmental perspective.

Many of the women in the research also see cycling as an integral part of developing their local areas with a focus on people rather than cars to create vibrant and economically robust neighbourhoods.

Opportunities

Promote

- the benefits of cycling to health and wellbeing
- the use of cycling networks as a transport option for everyday journeys, accompanying trips and independent travel for children
- the flexibility and time savings that cycling can provide for women

Provide

- cycle networks and cycling infrastructure designed for accompanying trips and children's level of ability
- safe routes for everyday cycling
- cycle training tailored to women's needs at different life stages

The cycling network

Safety

Safety, both road and personal, was most important to women who would like to or do already cycle.

- **Separated cycle lanes** – segregation from cars and other road users was of primary importance to women. This included separation from buses - shared bus/cycle lanes were not favoured by the women in the study. The size, volume, speed and proximity of motor vehicles puts women off cycling, and they are potentially more risk averse to traffic proximity than men. When accompanying children this concern is amplified.
- **Well-lit routes** – personal safety is of higher concern to women, and they are more likely to favour better lighting on cycle routes, than men. Even routes familiar to women in the daylight are avoided after dark by the women in the study. Unobstructed views of the route, and increased passive surveillance (from other users, nearby businesses and residences) have also been shown to improve women's sense of personal safety.
- **Better maintenance** – poorly maintained route surfaces were seen as a safety hazard, off putting to users and were frequently mentioned negatively by women in the study.

- **Priority at junctions** – junctions were often mentioned in the survey and in the ethnographic study with some women describing the cycle lane suddenly ending at a junction leaving them vulnerable to the traffic, resulting in some dismounting and using the pedestrian crossings to negotiate the junction.

Connectivity

Better connectivity featured highly (third behind route segregation and lighting) in the survey response to interventions that would encourage women to cycle more. Some women in the study described cycling to shops further away from home than others because there was better cycle infrastructure to get to them and going ‘the long way round’ to a destination if the cycle route was better. While this may appeal to the already active cyclist it will most likely be off-putting to the women we aim to encourage to start cycling. Women’s daily journeys are frequently more complex and multi-stage than men’s, as women still carry out the majority of caring journeys in Ireland. For example, a journey may involve a drop off at school before work and/or additional stops at shops/ services and other family members in one trip to and from home. This phenomenon is known as ‘trip chaining’. In order to encourage more women to cycle for everyday (functional) journeys it is important that route planning does not only focus on moving people to and from residence to workplaces but considers all the complex trips that a woman might need.

- **Connectivity and convenience** – arterial or super-highway cycle routes (such as the NCN) should connect with services and destinations that women need to access on a daily basis.
- **Public transport connections** – many women expressed a desire to link cycle trips to public transport with better connections, safe storage, or carriage available at or on public transport hubs and modes.
- **Barrier removal or adaptation** – allow for all cycle user types and adapted cycles such as cargo bikes and child carriers. Women’s need for trip chaining and/ or transporting dependants could make these types of cycles appealing, making routes and connecting access ramps accessible by this type of cycle makes them not just more equitable for women but other users of adapted cycles as well.

Opportunities

Prioritise

- personal safety, including perceived safety, at different times of day and night in cycle route planning
- segregation of cycle routes and cycle networks to make cycling more attractive to women

Provide

- well-lit cycle networks in urban areas
- frequent cycle parking in convenient, safe places
- dense cycle networks that prioritise connections to local destinations and services
- cycle junctions and crossings that are segregated from vehicular traffic

Connect

- currently isolated or unconnected cycling routes because these do not cater for everyday cycling

Remove

- physical barriers that prevent the use of adapted cycles and cargo bikes on existing routes and adapt design guidance and standards to include many cycle forms (see above)

Recommendation:

Evaluate existing infrastructure to map the network and qualify the current quality of the route, taking into consideration factors such as safety, connectivity, and accessibility – particularly through the lens of female users to increase the number of women cycling.

Creating a supportive framework for cycling

This study demonstrates that many factors influence a woman's decision to cycle. Therefore, the planning and implementation of active travel infrastructure would benefit from a cross departmental approach. This will have greater potential to increase women's cycling levels if there is coordination to prioritise connections with other urban/suburban cycling routes as well as public transport routes and services under the remit of other authorities and organisations. Ensuring easy access on and off cycle networks to homes, services and destinations in cities, towns and villages will increase its appeal for multi-faceted everyday journeys which this research shows women require.

There was a strong indication from research participants that they were interested in better connections with public transport to facilitate multi-modal active travel journeys. This includes the facility to transport cycles on public transport and to store cycles safely at public transport hubs with clear connections from hubs to safe cycling infrastructure.

Women in the study observed an apparent lack of planning relating to active travel options in new housing developments and cited urban sprawl as a cause of reliance on car transport. They stated that more consideration to the proximity/provision of services to new housing and the option to cycle to those services on safe infrastructure would be an important factor in encouraging more women to cycle.

It was also noted that there is a lack of women involved in the transport sector which exacerbates the absence of the female voice in decision making and design practices. More women should be encouraged into the sector, and women should be involved in the consultation phase of route planning whether professionally or in public consultations.

Women in the study who cycled expressed frustration at the misuse of cycle infrastructure by other road users, such as cars driving or parking in cycle lanes, people walking in cycle lanes, and clutter in cycle lanes causing an obstruction. These factors can cause cyclists to have to exit the safety of the cycle lanes and cycle on the road in traffic.

- **Strength in Policy integration** – while some of the policy areas are within transport, decision making in other areas such as housing, education, provision of local services impact on the ability to provide cycling networks that meet women's needs.
- **Build the skills, development and leadership of women within the transport sector** – ensure women's voices are heard in decision making, planning and implementation stages of cycle infrastructure planning.
- **Accessibility training and guidance for practitioners** – plan for the needs of women and all users when planning transport routes and that guidance is adhered to.
- **Policing of misuse of cycle infrastructure and driver training around other road users** – greater public awareness of other road users and enforcement of infringement of traffic laws would provide a safer environment for cyclists and all road users.

Opportunities

Prioritise

- short distances to local destinations and services in planning decisions to ensure that cycling is a feasible alternative to the car for women and their families
- strengthening of national and local enforcement of rules and regulations to prevent parking or travelling in cycle lanes by other vehicles
- development and fostering of understanding of accessibility needs of all users either through training or continual professional development for decision makers and practitioners
- integration of cycling with public transport in policies and decision making to facilitate door to door cycle journeys

Develop

- cycle wayfinding and cycle maps both local and national to facilitate planning and navigation for everyday journeys

Update

- national driver training to ensure drivers understand how to interact safely with cyclists while driving in mixed traffic and how to use and behave around new cycling infrastructure

Recommendation:

Ensure women's perspectives are applied to the planning and delivery of cycling infrastructure by increasing women employees in the transport sector and engagement and co-design with female users.

Cycling culture in Ireland from women's perspectives

Car culture

Getting a driver's licence and owning a car have long been seen as a desirable rite of passage for most young people. Car advertising consistently markets cars as a desirable status symbol representing wealth, freedom and power, with often overtly masculine imagery. Public transport and active travel, including cycling, on the other hand have entered our consciousness as a second-rate option, and are seen as much less desirable. To make active, more sustainable, travel options more desirable than, or on an even footing as, car travel, we must not only provide better infrastructure and services in these areas, but also change their image in our collective subconscious. With increasing pressures on health and environment driving change, we need to reimagine what desirable transport looks like.

Cycling identity

Women in this study, particularly in the workshop, highlighted the lack of visibility of female role models in cycling. Interestingly many of the women in the study who were frequent cyclists did not see themselves as 'cyclists'. The term 'cyclist' was seen to apply to sport cyclists, weekend recreational cyclists, and frequently described as male. There were also negative associations, with this type of cyclist often seen as being in conflict with drivers and sometimes pedestrians, thereby creating a bad image of cyclists amongst other road and route users. While the women in the study enjoyed recreational cycling particularly in quiet, natural environments they were less interested in road cycling or sport cycling. The emphasis instead was on the usefulness of everyday cycling, integrating daily tasks with the bonus of daily exercise. This type of cycling has a distinct lack of visibility in Ireland and workshop participants suggested that marketing, promotions and events to encourage and increase visibility of this type of (female) cyclist would be beneficial in empowering other women to 'have a go'. It was also noted that

more women in cycling services and associated professions would raise the profile of cycling with female users.

- **Better visibility of women cyclist role models** – promote female cyclist ambassadors in the everyday, community setting. Create fun, engaging events which provide information and opportunities to try cycling in a safe and social way, to demystify everyday cycling.
- **Emphasise the everyday user** – normalise the use of a cycle for everyday journeys in normal clothing and make cycling straightforward and achievable.
- **Accessibility training and equipment** – ensure that cost and skills/confidence are not a barrier to cycling. Cycle training for women and children should be free. Improve access to public share bikes and create grants for cycle purchases (not everyone can access a cycle to work scheme).
- **Manage car culture** – while cars will always be useful and at times necessary, the way that we use and access cars has to change. The image of the car as an aspirational status symbol and rite of passage should be challenged.

Opportunities

Promote

- a positive image and visible presence of women participating in everyday cycling while carrying out their caregiving responsibilities
- woman champions and role models promoting everyday cycling at all stages of life

Develop and foster

- a more positive image of cycling in Ireland that is more inclusive of women
- a stronger cycle culture in Ireland to balance Ireland's strong car culture

Recommendation:

Tell the story of women cyclists in everyday scenarios and inspire other women to try the same approach. Look for women champions/ambassadors in each community and make them everyday heroes. Create a communication strategy around new routes indicating how they are useful for everyday journeys, with additional benefits to health and wellbeing.

Closing the cycling gap

The importance of including robust monitoring and evaluation as a core aspect of new cycle routes and networks cannot be over emphasised. Given the findings of this research infrastructure planning and design must integrate women's complex daily journey needs.

This research provides robust evidence that there is a need for a gender lens and gender balanced engagement needed to maximise uptake of cycling in Ireland. It is therefore imperative to not only include women's voices at key stages of the planning and design process, but also to engage local women in co-design for cycle routes they are expected to use.

Traditionally, the approach to transport infrastructure evaluation is quantitative and typically measures an overall number, for example number of pedestrians, cyclists, vehicles etc. This quantitative approach provides a limited overall picture of performance. Based on this research more qualitative performance indicators are required to capture nuances between user groups. The views and transport requirements elaborated in this research should form the basis of evaluation metrics for example when measuring the use of a piece of infrastructure also capture the proportion of women cycling, and user satisfaction surveys to monitor all users' needs are met should also be carried out regularly.

The research also suggests that increasing women's participation in current planning design practices will lead to better outcomes for women cycling. The feedback received from the research and workshops clearly illustrates that there are many aspects of the current system for delivering cycling infrastructure that can be changed to better meet the needs of women at a level that empowers them to cycle.

Opportunities

Ensure

- that women have proportional representation in key leadership and decision making roles in transport planning and design to balance power and influence, and capture women's perspectives
- that engagement processes incorporate co-creation as a framework for proactive engagement with women to capture their local insights and mobility needs

Evaluate

- new cycling infrastructure or networks against their ability to achieve parity between men and women cyclists. Outcomes should also include proportionate levels of children cycling, and a mix of trip purposes

Adopt a gender lens

- on existing processes and practices and apply it to the whole life cycle of cycle routes and networks to better identify and address potential gaps

This research clearly shows a strong link between cycling infrastructure and levels of cycling by women. Cycling infrastructure that is suited to women's specific needs is required.

Additionally, adopting a broad ranging approach targeting factors other than infrastructure is required to create more favourable conditions will empower women to cycle.



Photo: Don Moloney

Appendix – graph data

Data for figure 1: Commuter/School cycling rates by population subgroup and gender (216)

| Subgroup | Male | Female |
|---|------|--------|
| All persons | 3.9% | 1.6% |
| Population aged 15+ years at work | 4.1% | 1.8% |
| Schoolgoers aged 5-12 years | 1.8% | 1% |
| Students at school/college aged 13-18 years | 3.8% | 0.4% |
| Students at school/college aged 19+ years | 8.2% | 3.5% |

[Go back to Figure 1 on page 24](#)

Data for figure 2: Percentage distribution of trips by purpose and gender (all modes) (221)

| Purpose | Male | Female |
|----------------------------------|-------|--------|
| Work | 26.2% | 21.3% |
| Education | 5.3% | 3% |
| Shopping | 23.4% | 26.1% |
| To eat or drink | 3.2% | 2.7% |
| Visit family / friends | 5.7% | 7.1% |
| Entertainment / leisure / sports | 9.5% | 6.2% |
| Personal business | 3.4% | 3.3% |
| Companion / escort journey | 15.3% | 26.1% |
| Other | 8% | 4.3% |

[Go back to Figure 2 on page 25](#)

Data for figure 3: How often do you do the following types of cycling in Ireland?

| Type | Once a week or more | A few times a month | Less than monthly | Never |
|--|---------------------|---------------------|-------------------|-------|
| Just for exercise | 27% | 31% | 3% | 11% |
| For leisure or recreation on bike paths or Greenways | 21% | 26% | 36% | 17% |
| To visit family or friends | 14% | 23% | 23% | 4% |
| For running personal errands or using services | 18% | 19% | 21% | 42% |
| To go shopping | 14% | 18% | 21% | 47% |
| Commuting to work | 19% | 16% | 18% | 47% |
| To travel to entertainment or leisure venues | 13% | 16% | 2% | 51% |
| To eat or drink | 1% | 15% | 18% | 57% |
| Commuting to place of education | 11% | 12% | 14% | 64% |
| Accompanying or transporting dependents | 9% | 13% | 12% | 66% |
| Training for or taking part in competitive or club cycling | 9% | 1% | 9% | 72% |

[Go back to Figure 3 on page 28](#)

Data for figure 4: What factors influence your decision to do these (functional) journeys by cycle?

| Factor | Percentage |
|---|-------------------|
| It helps me keep fit and healthy | 66% |
| I enjoy cycling | 61% |
| If my journey is a short one | 44% |
| To save money / it's cheap | 43% |
| It helps improve the environment | 35% |
| It gives me greater freedom | 35% |
| It is quicker than alternatives | 27% |
| It is more convenient than alternatives | 23% |
| More reliable journey times | 17% |
| I have no alternative | 7% |

[Go back to Figure 4 on page 40](#)

Data for figure 5: How much do you agree/disagree with the following statements?

| Statement | Agree | Neutral | Disagree |
|--|-------|---------|----------|
| Cycling is enjoyable | 76% | 17% | 7% |
| Cycling is a good way to socialise / meet people | 47% | 34% | 19% |
| Cycling is dangerous | 47% | 28% | 25% |
| I see people like me cycling for transport | 47% | 2% | 33% |
| Cyclists have a negative image | 45% | 25% | 3% |
| I don't have the time in my day to do journeys by cycle | 44% | 24% | 32% |
| Cycling is for sport and exercise rather than transport | 39% | 25% | 36% |
| Children can cycle safely where I live | 3% | 21% | 49% |
| Doing journeys by cycle is the norm where I live | 22% | 26% | 52% |
| It is less acceptable for women to cycle compared to men | 2% | 24% | 56% |

[Go back to Figure 5 on page 47](#)

Data for figure 6: What things would encourage you to start making (more) journeys by cycle?

| Factor | Percentage |
|---|-------------------|
| Safer roads | 54% |
| More or better cycling specific routes or infrastructure | 37% |
| Shorter distances to destination | 32% |
| Safe cycle storage facilities at destination | 29% |
| If I was better / more confident at cycling | 23% |
| Owning / having access to an electric cycle | 23% |
| Being able to combine cycling with public transport more easily | 22% |
| Owning / having access to better wet weather clothing | 21% |
| Cycle infrastructure that is more accessible | 2% |
| Nice scenery / landscape | 2% |
| Having access to a working cycle | 17% |
| Shower / changing facilities at my destination | 16% |
| Better knowledge of / confidence in bike repairs | 14% |
| Owning / having access to a cargo cycle | 7% |
| None of the above | 5% |

[Go back to Figure 6 on page 52](#)

Data for figure 7: Thinking about cycling infrastructure in particular, which of the following things would encourage you to do more journeys by cycle?

| Factor | Percentage |
|--|------------|
| Segregated cycle lanes on roads | 29% |
| Well-lit cycle routes | 27% |
| Cycle routes that are well-connected | 25% |
| Surfaced traffic-free cycle routes | 23% |
| Junctions where cyclists turning or crossing are protected | 22% |
| Clearly signed cycle routes and/or maps | 17% |
| Regular maintenance of cycle routes | 16% |
| Traffic calming measures on roads | 16% |
| More routes through areas where traffic is restricted | 15% |
| Facilities on cycle routes, such as toilets etc. | 14% |
| Enforcement of safe passing laws | 11% |
| Cycle repair facilities on routes | 8% |
| Unsurfaced traffic-free cycle routes | 7% |
| Access to emergency call boxes | 6% |
| None of the above | 7% |

[Go back to Figure 7 on page 53](#)



Photo: Brian Sweeney

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