







Physical Activity for Health HRI Research Cluster University of Limerick

Travelling in a Woman's Shoes

Kathleen Jacobi / Transport Infrastructure Ireland







Understanding Women's Travel Patterns in Ireland to inform the Future of **Sustainable Transport Policy and** Design



Travelling In A Woman's Shoes

UNDERSTANDING WOMEN'S TRAVEL PATTERNS IN IRELAND TO INFORM THE FUTURE OF SUSTAINABLE TRANSPORT DESIGN

JUNE 2020





Behaviour Change - The COM-B Model





The COM-B model (Michie et al., 2011)

Why is this research important?



- Transport is not gender-neutral
- Gender in transport
- Understanding the gender dimension of travel behaviour
- Difference in travel patterns



EQUALITY EQUITY

Source: https://interactioninstitute.org/illustrating-equality-vs-equity/

Source: https://www.sutp.org/publications/5-principles-for-women-in-transport-poster/

Travelling in a Woman's Shoes



MODES OF TRANSPORT

How can sustainable transport modes compete with the car?

FAMILY ROLES

How can an understanding of the family unit influence sustainable mode choices?

FEELING SAFE

How can transport feel and be safe for women?

BEING INCLUSIVE

How can transport consider the diverse needs and contexts of all women?

DRIVING CHANGE

How can we accelerate sustainable behavioural change?



International Transport Forum (ITF)

Travelling in a Woman's Shoes

IRISH PHYSICAL ACTIVITY RESEARCH COLLABORATION

Key findings:

- High car dependency amongst women in Ireland
- Women consider the car to be the most pleasant and least stressful mode of transport.
- Safety as a profound impact on women's mobility.
- Cycling and public transport have the ability to compete directly with cars, but currently fail to meet many women's needs.



The changing role of women in Ireland



Mobility and Car Dependence Education Employment In 2019 In 2014 Women spend In 2016 females were more likely than 51% males to travel by car as driver -304,800 71.2% of those who Women were employed participated in thirdin part-time work of journeys taken by females compared with (compared to **145,400** level education were 67.4% women. men) of journeys by males.

Car dependency in Ireland is extremely high in comparison to other countries.

75%

of all trips were made by private vehicle, and the share of journeys made by public transport had fallen since 2014.

Caregiving Roles

21.3 hours per week on average

providing care (compared to 10.6 hours for men)

55.1%

of women aged 25-34 have a third-level qualification degree (compared to 42.9% of men)

18.1%

married women work 40+ hours per week (compared to 50.7% of married men)

45[%]

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Of women in Ireland provide care for others on a daily basis (compared to 29% of men)

Women's Modal Choice



- Safety

- Access
- Reliability
- Convenience

– Comfort

"I used to take the bus everywhere... but it is not reliable anymore. The bus sometimes decides to change direction and you don't know when that is happening until it is happening [even with the app]. If the bus was accurate and reliable, I would definitely use it more as it is so expensive to park in the city" Gillian (65+, Cork)

"There's no fear [among the perpetrators] anymore, crime and harassment is too widespread. I'd rather wait to go out until it quietens down" *"I really don't like driving, I never have, but I just have to do it" Natalie (35-44, Dublin)*

"I love cycling—it is independence—you can go anywhere and it doesn't cost you anything" Josie (45-54, Dublin)

Survey Findings



Women rely heavily on the car

Women in Dublin on average use public transportation at the highest rate, for

27% all trips while all other groups use public transportation

 $12\text{-}15^{\%}\,_{\text{of the time.}}$

Men in Dublin were most likely to cycle, for

 $10^{\%}$ trips, while all other groups cycle at a lower rate of $6-8^{\%}$ of the time.



Women in Dublin are eager to drive less compared to men $47^{\%}\ women\ vs\ 34^{\%}\ men$



79[%] of women consider the car to be a necessity compared to 88[%] of men

Women shoulder more caregiving responsibilities

30%

of women surveyed provide primary care to another adult, either in a professional or personal setting. Amongst women with children,



women consider themselves to have the sole or lion's share of responsibility for childcare (compared to 48% men).



Journey Purpose

Comparing men and women with families, on a daily basis, men's largest reason for traveling is work, whereas for women it is to drop off and collect children/other family members.



% of men and women making these trips daily	Women with family	Men with family
Drop and Collect Children/Family	21.4%	14.0%
To and From Work	20.5%	26.4%

Survey Findings



Women are impacted by safety issues

Safety is an issue for all people.

1 in 3 public transport users have seen or experienced some form of harassment or violence while using public transport.

7%

of women in Dublin report having experienced sexual harassment on public transport.



of women stated that they would not use public transport at night.



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34[%] of women stated that feelings of insecurity have prevented them from travelling.

Women cycle 2.5 – three times less in most countries. The Netherlands, known for high quality cycling infrastructure, is a notable exception with women accounting for 55% of cycling trips. Globally, women are deterred from cycling, due to the risks, as well as sexual harassment.



Walking & Cycling



- 11% of women in Dublin and 13% in the rest of Ireland feel it's safe to cycle.
- 62% of women in Dublin and 72% in the rest of Ireland feel it's safe to walk.
- 36% felt unsafe walking in their local area at night (compared to 13% of men).
- 47% of women will choose a longer walking route if they perceive it as safer.

ON AVERAGE	FEMALE					
HOW MANY TRIPS A WEEK DO YOU COMPLETE FOR EACH OF THE FOLLOWING?	18-24 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65+ Years
Car	7	7	10	10	7	4
Walking	8	5	5	6	5	4
Public Transport	4	3	2	1	0	1
Bicycle	1	2	1	1	0	0
Тахі	1	1	0	0	0	0

ON AVERAGE HOW MANY TRIPS A WEEK DO YOU COMPLETE FOR EACH OF THE FOLLOWING	DUBLIN	REST OF IRELAND
Car	5	8
Walking	7	5
Public Transport	4	1
Ciyclng	1	1
Тахі	1	0

Results and Findings



- Transportation habits are socialised from an early age.
- Across regions, cities, and neighbourhoods, women have different relationships with mobility and public transport.

Siobhán (45-54, Cork) has a daughter aged 21 and a son aged 24. ... Siobhán and her husband both encouraged their daughter to learn to drive from a young age while they didn't encourage this as much for their son. "It's very important for a girl if you're ever in an awkward situation that you aren't happy with that you get your car keys and leave."

"No one taught me how to cycle on the road - I wish someone would teach me now... I hope my son grows up to be confident enough to cycle on the road." Amanda (25-34, Dublin)



Applying a Gender Lens to TII Public Transport Projects

(11111)

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Luas Finglas













Survey

Dates: Friday 25th and Saturday 26th of March, 2022 10am-1pm

Weather – 12°C to 14°C, light weather

8 teams (gender 8 female 1 male)

Issues - communication, interpretation, different ways of filling in form.



Population Context - Gender



Demographics 2016



■ F ■ M

- 1. Southern Entrance to Tolka Valley Park
- 2. Northern Entrance to Tolka Valley Park
- 3. St. Helena's
- 4. Southern Entrance to Farnham Park open space
- 5. Northern Entrance to Farnham Park open space
- 6. Mellowes Park
- 7. Pedestrian overpass near Casement Rd.





IRISH PHYSICAL ACTIVITY RESEARCH COLLABORATION

Population Context - Age



AGE CLASSES (YEAR 2016) 10 15 0 - 2 age 3 - 5 age 6.8 % 6 - 11 age 12 - 17 age 18 - 24 age 25 - 34 age 15.4 % 35 - 44 age 45 - 54 age 55 - 64 age 65 - 74 age 75 e più



Inhabitants 🔜 Males 📰 Females

Activities





- 1. Southern Entrance to Tolka Valley Park
- 2. Northern Entrance to Tolka Valley Park
- 3. St. Helena's
- 4. Southern Entrance to Farnham Park open space
- 5. Northern Entrance to Farnham Park open space
- 6. Mellowes Park
- 7. Pedestrian overpass near Casement Rd.

25th and 26th of March, 2022 10am-1pm



Design Challenges





Biodiversity planting

Grass track

Proposed path

Public Life Survey

- Added value to design process
- Evidence based focus on specific design challenges
- Co-creation project with local women to address design challenges (under development)
- Repeat surveys post implementation of infrastructure to measure success







Public Life Tools- Jan Gehl's Survey Report



TII Research Projects



- Social Sustainability in the context of TII Active Travel Schemes and Greenways - Empowering Women to Cycle
- A Review of Appropriate Facilities for Age Friendly
 Active Travel



Thank you!

Kathleen.Jacobi@tii.ie

https://www.tii.ie/technical-services/research/TII-Travelling-in-a-Womans-Shoes-Report_Issue.pdf

https://www.tiipublications.ie/library/GE-GEN-01007-01.pdf











Physical Activity for Health HRI Research Cluster University of Limerick

Safe Routes to School

Beyond Encouragement - How to Help Children to Travel Actively to School

Cynthia O'Mahony











- Background of Safe Routes to School (SRTS)
- Networking, Data Gathering and Analysis
- Developing Interventions for Front of School and Routes to School
- Progress to Date



Launched in March 2021

Expression of Interest to all schools nationwide (4,000+)

931 schools expressed an interest in the programme

SRTS Programme is operated in partnership with the NTA, Green Schools and the Local Authorities





- Improve safety at the school gate by providing 'front of school' treatments to alleviate congestion and improve access
- Improve access routes to school by improving walking and cycling infrastructure
- Increase the number of students who cycle to school by expanding the amount of cycle parking



Mode Share

According to the CSO, 60% of primary school children are driven to school, almost triple what it was a generation ago.

Inactivity and Obesity

1 in 5 primary school children in Ireland are considered overweight or obese.

81% of primary and 88% of post-primary children do not meet the national physical activity guidelines Figure 5.1 Modes of travel for primary students, 1986 - 2016





More Active – Better Learning

Numerous studies have shown a significant positive relationship between physical activity and cognitive functioning in children

Impact of School Streets in Ireland

Teachers and staff from Scoil lognáid (Galway City) reported positive impacts from the School Streets pilot on the children's mood, behaviour, readiness to learn and physical activity levels.

Staff at St. Oliver Plunket's School (Malahide) reported children were more alert and ready to learn after the introduction of the School Street.







ॐ ≶ SAFE ROUTES ♂ ∞ TO SCHOOL

Road Safety

In Ireland, road traffic collisions are the main cause of accidental death (33%) for children under the age of 15.





Why do we need Safe Routes to School?

Image: Solution of the sector of the sec

Children's Independent Mobility

- Independent mobility (i.e. walking or cycling in the neighbourhood without adult supervision) is important for a child's physical, social, cognitive and emotional development.
- Restrictions on children's independent mobility are mainly due to parental concern about road safety and about social dangers.
- An Australian study a parent's perception of road safety was associated with an increase in children's independent mobility over the two-year study period.
 - In particular, the importance of physical infrastructure designed to calm traffic (e.g. speed humps) and to aid pedestrians (e.g. crossings) was highlighted in relation to increases in children's independent mobility.



Air Quality

Air pollution is considered the single largest environmental health risk in Europe, and is responsible for 400,000 premature deaths in Europe every year. In Ireland, the number of premature deaths attributable to air pollution is estimated at 1,300 people annually.

Children are more susceptible than adults to the adverse effects of air pollution as their lungs are not fully developed and they are generally closer than adults to vehicle exhaust due to their height. Children often have to pass queuing traffic on the route to school or idling cars at the school gate.





AFE KOUTES



Climate Action

In Ireland, the transport sector is the largest source of energy-related CO2 emissions, accounting for 41% of all such emissions in 2019. Within that sector, the private car contributed to the largest proportion of CO2 emissions at 48%.



What the SRTS Programme has to offer?



The SRTS Team provides local authorities with a **delivery plan** for each school – set of proposals and rich background information that will help to inform designs and which is focused on highlighting the needs of the students





Engaging and meeting with selected schools early and throughout the key stages of the programme

Data Collection and Analysis



- Parent Survey
- Mapping of Student Catchment Area
- Front of School Assessment(s)
- Walkability Audit
SRTS Parent Survey





Q1. How many of your children attend this

w

Q2. Where does the journey to school

To help improve routes to school, we want to get an idea of the locations from where students are travelling to

Please indicate where your school journey begins on the It does not have to be directly on your home. It can be a

If you are using a mobile device, tap on the map below and move to the location where your school journey begins. Tap on the map and a blue location tag will appear. Tap "OK" on the top left of the screen to return to

If you are using a computer, click on the map and move to the location where your school journey begins. Click on the map and a blue location tag will appear.



SRTS Parent Survey Questions



Q1. How many of your children attend this school?

• Select a number (from 1 – 8) from a drop down

Q2. Where does the journey to school begin? (Parents selected a location on a map)

• To help improve routes to school, we want to get an idea of the locations from where students are travelling to school. Please indicate where your school journey begins on the map. It does not have to be directly on your home. It can be a point nearby, such as your estate entrance.

Q3. For each child, choose their gender:

Select Male, Female or Prefer not to say

Q4. For each child, choose their class:

- · Primary: Junior Infants, Senior Infants, 1st Class, 2nd Class, 3rd Class, 4th Class, 5th Class, 6th Class
- Secondary: 1st Year, 2nd Year, 3rd Year, 4th Year, 5th Year, 6th Year

Q5. For each child, choose how they usually travel to school:

· Walk, Cycle, Scoot, Park 'n' Stride, Car, School Bus, Public Transport

Q6. Do you think road safety is a problem around your school?

• Select either Yes or No

Q7. Would you support works at the front of school that improve student safety, putting pedestrians and cyclists first?

• Select either Yes or No

Q8. Would you support works that improve the walking and cycling routes to your school?

Select either Yes or No

Q9. What improvements would support you to walk, cycle or scoot to school?

- New or improved footpaths
- New or improved cycle paths
- Safer crossing points
- Reduced traffic speed
- Fewer cars at the school gate
- Cycle parking at the school
- Other
- None of these

Comments box (optional) up to 500 characters.



Dangerous Roads 3.3%

96.6%

Other 3.3%

SRTS Parent Survey Responses

37.6%

Car

0.6%

School Bus Public Transport

0.0%

GIS Analysis: 1km & 2km radii with Student Density

gh

Thomastown

107 m

Shirsheen



SAFE ROUTES

Reachable streets: Walking 15 minutes



%



Reachable streets: Cycling 10 minutes





Walkability Audit









Walkability Audit Tool



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Junctions and Crossings Signage an Markings	d Road
Road User Behaviour Front of Sch	loor
Accessibility Opportunit	ies
Cycle Infrastructure	
Select your issue: *	
Notes:	
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Desire line		oor connectivity/ ermeability	
Overgrow vegetation		ebris - leaves, ones, mud, etc.	
Obstruction furniture	ons / street	arking on footpath	
Poor lighti	ng		
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Walkability Audit Issues

Item ID: B-3921

Item Category: Footpaths and Verges - No footpath

Notes:



Location: www.google.com/maps/place/52.79784,-6.1694083

Item ID: A-3916

Item Category: Junctions and Crossings - Junction width

Notes:



Location: www.google.com/maps/place/52.79761654560313,-6.168541426521668



Item ID: A-5660

Item Category: Signage and Road Markings - Inadequate/missing signage or markings

Notes:



Location: www.google.com/maps/place/52.79778107660801,-6.167944250832155

Front of School Assessment









Example of a Delivery Plan

SAFE ROUTES TO SCHOOL

Front of School Improvements

A proposed School Zone on Coolgreaney Road will provide students a safe space to access school and includes traffic calming measures and colourful elements highlighting the presence of children. The map below outlines potential measures as suggested by the SRTS Infrastructure Officer.



a. School Zone

- Carriageway narrowed to 6m
 Widening of footpaths along School
- Zone • Change in pavement surfacing along
- School Zone (SZ-116) • Replacement of guard rails with narrow
- planters or coloured themed railings
- Pencil bollards and/or narrow planters in footpath verge to prevent parking on footpaths (SZ-109)
- Micro art on footpaths

b. School Zone Gateway Elements

- Gateway to School Zone with raised platform
- School road markings at school zone gateway
- School Zone Banners and gateway totem banners hung from existing streetlights (avoid excessive poles) (SZ-133)

c. Crossing Facilities

 Upgrade current pedestrian crossing to raised crossing

d. Speed Ramps

- Current ramps are faded and ramp depth is inadequate
- Consider horizontal deflections and widening of footpaths in place of ourrent ramps by Coolgreaney Park to slow vehicle speeds on approach to school
- Remove current ramp within School Zone and replace with raised platform at either end of School Zone

e. Junction Tightening

 Junction tightening with continuous footpath/raised crossings to be provided across all entrances/junctions within school zone extents and along pedestrian routes to school (SZ-105)

Example of a Delivery Plan

SAFE ROUTES TO SCHOOL

SCHOOL ABC

Routes to School Improvements

The creation of a permeability link from Heatherside Estate provides an additional pedestrian link to the school and may reduce vehicle congestion at the front of school. Pedestrian links can be further enhanced by widening footpaths and through improved access and pedestrian crossing facilities. The LidI carpark on Wexford Road is a potential Park N Stride location. Cycle links to the proposed wider cycling network can provide cycle access to the front of school. The map below outlines potential measures as suggested by the SRTS Infrastructure Officer.



a. Proposed Park N Stride Location

Possible Park N Stride from LidI carpark

b. Crossing Facilities

- Traffic calming measures on approach to pedestrian crossing on Vale Road (at School Lane)
- Consider installation of new crossing or relocation of existing pedestrian crossing on Vale Road to entrance of Heatherside estate
- Consider pedestrian crossing facilities on all four arms of Arklow roundabout
- Consider new pedestrian crossing on Coolgreaney Road at permeability link entrance
- Consider upgrading pedestrian crossing on Coolgreaney Road at pedestrian entrance to Woodlands Estate

c. Footpath Upgrades

- Upgrade and widen footpath along Coolgreaney Road – consider removal of central island near Coolgreaney Park
- Upgrade and widen footpaths along Lamberton Road, dish kerbs as necessary
- Consider widening footpaths along Vale Road
 Widen footpaths along Coolgreaney Road from
- Woodlands pedestrian crossing to Oaklands entrance

d. Accessibility

- Removal of metal barrier at permeability link to Park N Stride location
 Provide access ramp to Woodlands estate from
- Lamberton Laneway

e. Junction Tightening

 Junction tightening with continuous footpath/raised crossings to be provided across all entrances/junctions within school zone extents and along pedestrian routes to school (sz-105)

f. Permeability Link Upgrades

- Surface upgrades of laneway to Woodlands Estate from Lamberton
- Provide pedestrian access link from Heatherside Estate to connect with Lamberton Laneway
- Surface upgrades and fix drainage issues along School Lane
- Way finding elements and lighting on pedestrian facilities

g. Cycling Links

 Consider cycle facilities on Coolgreaney Road to connect to the proposed Dublin Road to Wexford Road Cycle Scheme

Elements of Proposed Scheme







Communication Toolkit for Schools





GUIDE APPROACH

The aim of the Safe Routes to School (SRTS) Design Guide is to provide technical guidance on design principles and considerations that will enable local authorities and Green-Schools to create safer, calmer, more attractive routes to school and front of school environments. Taking the key ideas from the guidance document, this brochure explains:

 Infrastructural design elements · A visual example of a SRTS design concept for



WHO BENEFITS?

Schools Zones benefit your children as

they provide a safe and healthy public

space for them to access school. By providing space for walking and cycling, our

communities can enjoy cleaner air quality.

safer streets and roads, and more vibrant

1

There are many actions which parents

and quardians can take to support

the new School Zone infrastructure

which is being developed at schools

tifiable features, which are designed

to increase the awareness of drivers

when they are entering a School

Zone. These School Zones support

students to walk and cycle safely to

school. School Zones aim to create

A School Zone has common and iden-

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and inclusive public spaces.

SCHOOL ZONE DESIGN

objective is to reduce congestion and increase safety at the front of school. The infrastructure uses common and identifiable design features, which aim to create a safer, calmer, and more attractive

HAT DO I DO WITH ?

Pencil Bollards act as a protection

barrier for walkers &

cyclists within the

nool Zone. Cars mu

ZON

Signage

nners & road sign

dentify the gateway o

slow down & not bstruct the

CRIOS SCOILE

SCHOOL

Surfacing ised textured o coloured surfacing dentify the School Zor Don't park on these

rfaces & drivers mu low down if passi through

Road Markings

Painted signage is

oad surfaces. This is to

dentify that you are in a

School Zone and

ith caution

must approach

marked on asphalt

SCOILE

S: @SRTS In W: www.oreenschopisireland.org E: srts@eeu.antaisce.org T: +3531 400 2222 A: EEU An Taisce Unit Sa Swift's Alley Francis Street

dedicated SRTS Infrastructure Officer works with schools and local authorities during the process

AFE ROUTES TO SCHOOL

The SRTS Programme launched in March 2021 and was open to all schools in Ireland to apply fo front of school upgrades which provide walking, supported by the Department of Education. It is partnership with the NTA and local authorities. A







'School Zones' are being developed at the front of schools across Ireland and there are many ways in which parents or guardians can support their School Zone so that children can access schools safely. New infrastructure and School Zone features are designed to reduce traffic at school gates and to improve access. This brochure aims to answer questions on how parents or guardians can support their School Zone.

THE EFFECTS OF HOW WE TRAVEL TO SCHOOL -ACTIVE TRAVEL VS. THE CAR





children are using active ways to travel to school, with more being driven than ever before. More cars at the front of school creates a safety hazard for children and the emissions created from car engines are harmful to your children's health. This Safe Routes to School (SRTS) brochure explains:

Progress on Round 1

- Engaged 170 schools, 31 Local Authorities and developed over 100 Delivery Plans
- Works carried out at 18 schools
- Cycle parking delivered to 436 SRTS schools across 2021 & 2022
 - For 2022, SRTS delivered a total of 9,230 cycle parking spaces & 324 scooter spaces
- Air quality monitoring at schools around the country to track the changes in the air quality at the schools caused by the infrastructure works under the program. Collaborating with I-Change (UCD) and <u>Smart Dublin</u>.





SAFE ROUTES

SCHOOL STREET AN MHODHSCOIL, LIMERICK

SCHOOL STREET GLÓR NA MARA, TRAMORE, WATERFORD



Minister of State at the Department of Transport, Hildegarde Naughton TD launched the Scoil Phadraig Naofa School Zone in Bandon



School Zone Bunscoil Rinn an Chabhlaigh





Bike Parking Before and After Holy Child NS, Naas



Bike Parking Before and After St. Kevin's NS, Greystones



Any Questions?

