

# Cycling in Northern Ireland 2017/18

Findings from Northern Ireland  
Continuous Household Survey 2017/18



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Requests, enquiries or feedback concerning this publication should be directed to:

### Analysis Statistics and Research Branch

Department for Infrastructure  
Clarence Court  
10-18 Adelaide Street  
Belfast  
BT2 8GB

☎ Tel: 028 9054 0865 (Text relay prefix 18001)

✉ E-mail: [ASRB@nisra.gov.uk](mailto:ASRB@nisra.gov.uk)



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# Cycling in Northern Ireland, 2017/18

## Key Findings

### Access to a Bicycle



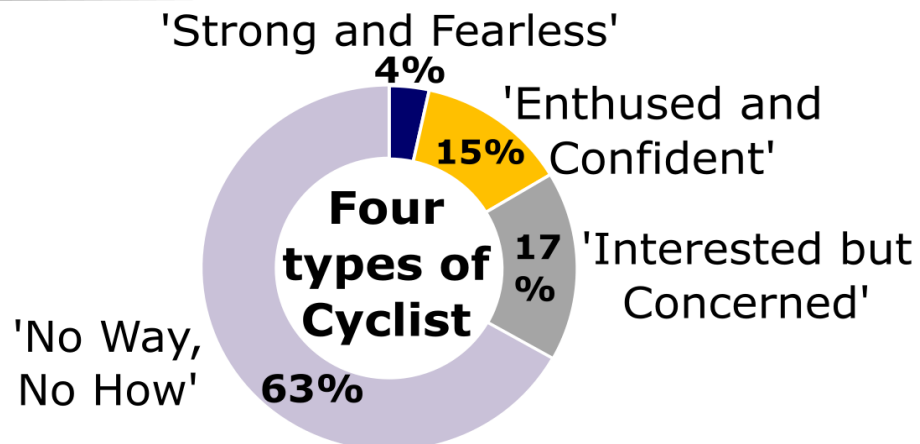
### Cycled in last 4 weeks?



### Gender of Cyclists



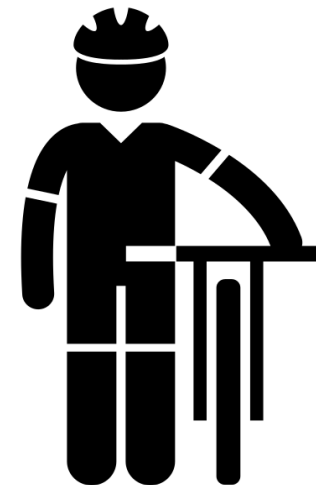
69% of those who had cycled were male, and 31% were female.



### Top reasons for Cycling



Exercise  
- 83%



Enjoyment  
- 74%

Other reasons given were that it's cheap; it's convenient; it's environmentally friendly; no car; and it saves time. Some respondents cycle to ensure their children are safe; because they cannot drive; or because they don't like public transport or there is none nearby.

## Introduction

The Department for Infrastructure's (DfI) Walking and Cycling Unit, which was established in November 2013, provides a focus and co-ordination role for cycling issues and cycling related activities. The Unit will work towards making cycling an integral part of network planning and development and ensure that cycling provision is a key element in both strategy and delivery. It will also promote active travel.

The Unit has a key role in delivering the Vision for Cycling set out in the Bicycle Strategy for Northern Ireland (August 2015): 'To establish a cycling culture in Northern Ireland to give people the freedom and confidence to travel by bicycle, and where all road users can safely share space with mutual respect.'

DfI commissioned questions in the Northern Ireland Continuous Household Survey (CHS) in 2017/18 to ascertain the extent of, and attitudes to, cycling in Northern Ireland. The findings are reported in this publication. This set of questions on cycling in Northern Ireland was first included in the 2016/17 Continuous Household Survey (CHS), and where applicable, comparisons are made between the two years. Proportions derived from a sample survey will suffer from uncertainty associated with sampling error. In effect, the estimates will have a lower and upper bound within which the "true" population value may lie. Where possible, these boundaries have been calculated and are displayed as a confidence range around the central estimate - represented by a black, bounded line on each bar in the charts. For further details, see Appendix B (page 17).

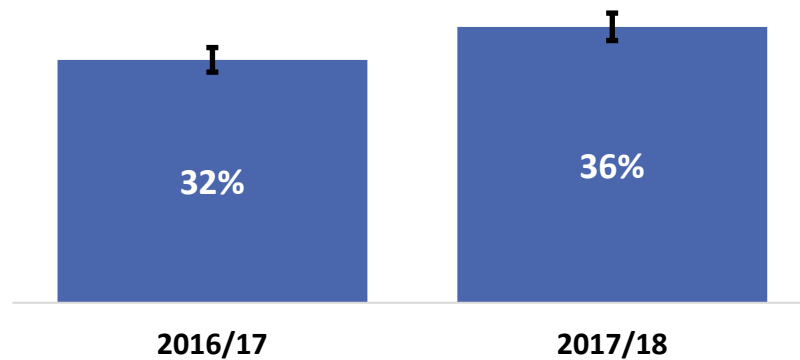
Statistics are presented on the proportion of people aged 16 and over in Northern Ireland: who own or have access to a bicycle; who have cycled and frequency of cycling in the last four weeks; why they cycle and their attitudes towards cycling.

## 1. Access to a bicycle

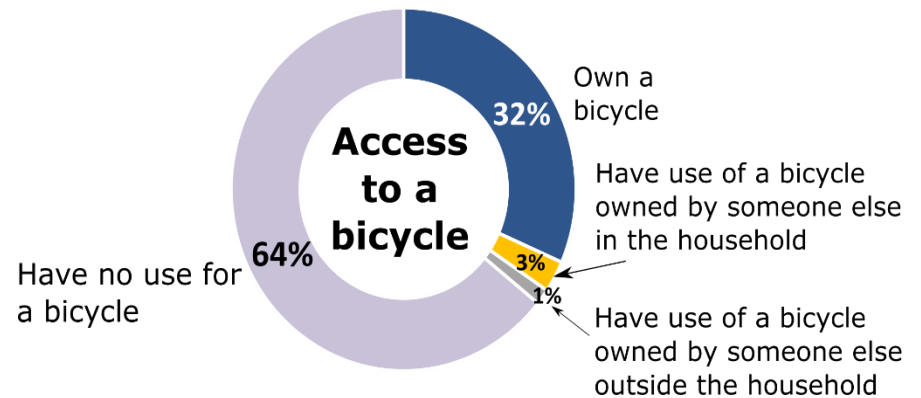
In the 2017/18 CHS, 2,785 respondents were asked if they had access to a bicycle.

- Approximately one-third (32%) of respondents reported that they own a bicycle. This is greater than the proportion who owned a bicycle in 2016/17 (27%).
- Approximately 3% of respondents have use of a bicycle owned by someone else in the household, while a further 1% have use of a bicycle owned by someone else outside the household. These proportions remain unchanged from 2016/17.
- Just under two-thirds (64%) of respondents said that they have no use of a bicycle. This is down from 68% in 2016/17.

**Figure 1: Percentage of respondents who have access to a bicycle, NI CHS, 2017/18**



**Figure 2: Access to a bicycle, NI CHS, 2017/18**

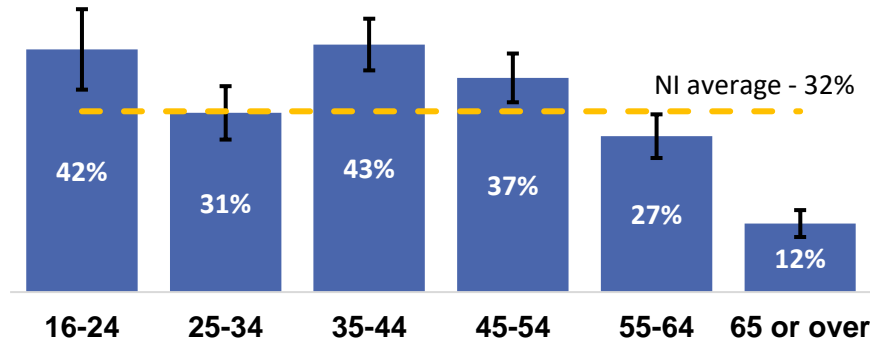


On the following pages, this question will be further analysed to determine if any differences are apparent by age, gender, and other Section 75 groups

## Bicycle Ownership

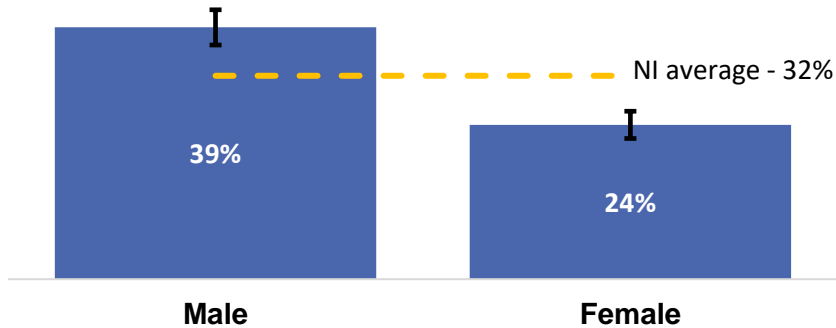
**Figure 3: By age group**

Respondents aged 16-24 and 35-54 were more likely to own a bicycle than the 25 to 34 age group and those aged 55 and over.



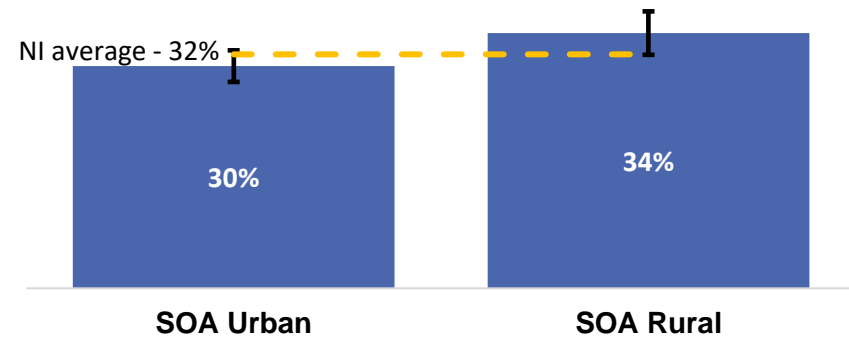
**Figure 4: By gender**

Male respondents (39%) were more likely to own a bicycle than female respondents (24%).



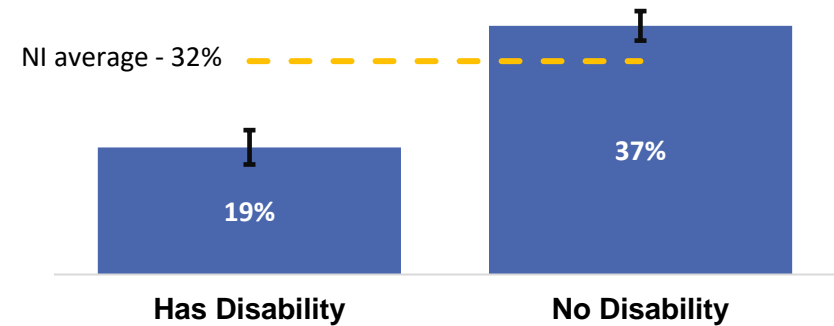
**Figure 5: By urban/rural**

Respondents from a rural area (34%) were more likely than those from an urban area (30%) to own a bicycle.



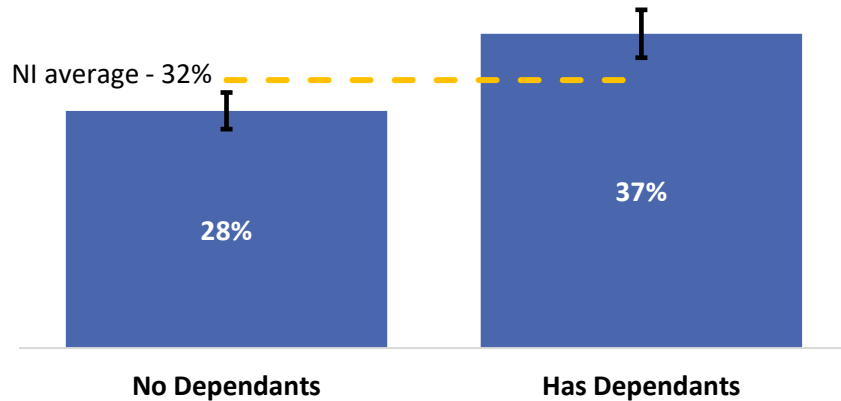
**Figure 5: By disability status**

Almost one-fifth (19%) of respondents with a disability reported owning a bicycle, compared to 37% of those with no disability.



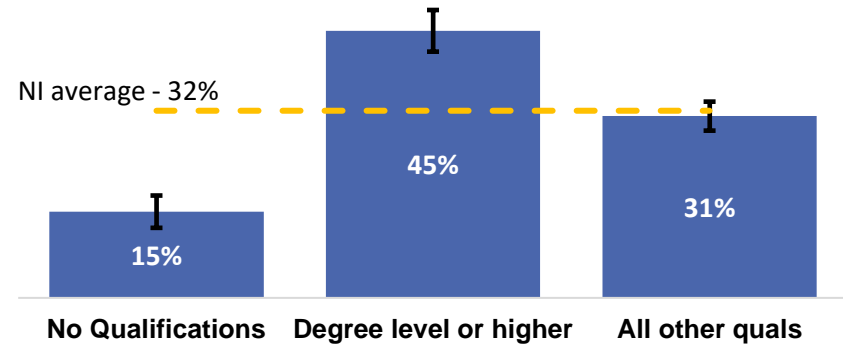
**Figure 7: By dependent status**

37% of respondents with dependants reported owning a bicycle, compared to 28% of those with no dependants.



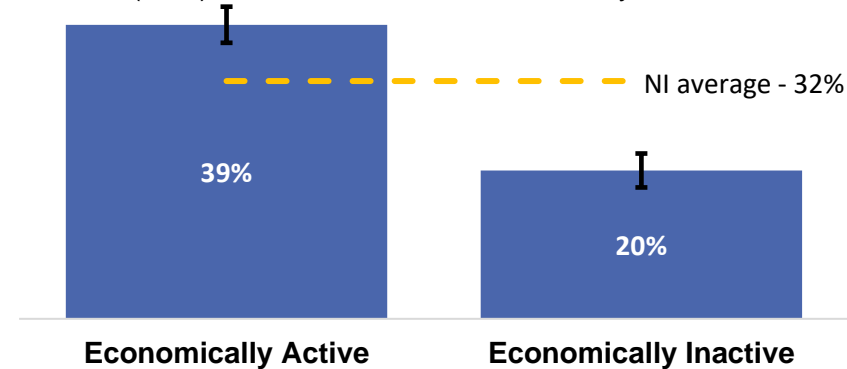
**Figure 9: By qualification level**

Respondents with a degree level or higher qualification were most likely to own a bicycle (45%), and those with no qualifications were least likely to own a bicycle (15%).



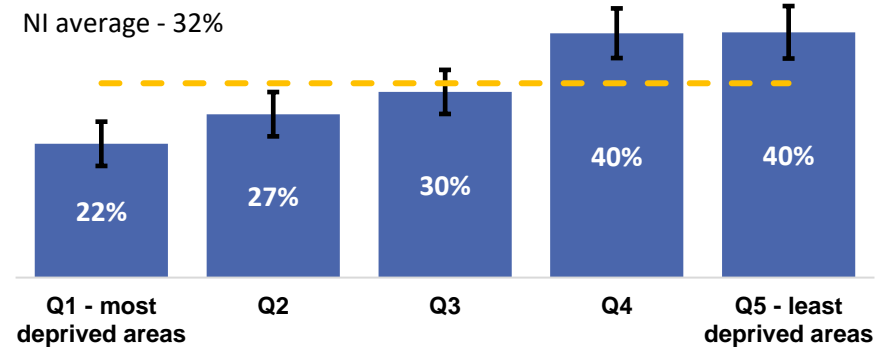
**Figure 8: By economic activity**

Just under two-fifths (39%) of respondents who were economically active reported owning a bicycle, compared with one-fifth (20%) of those who were economically inactive.



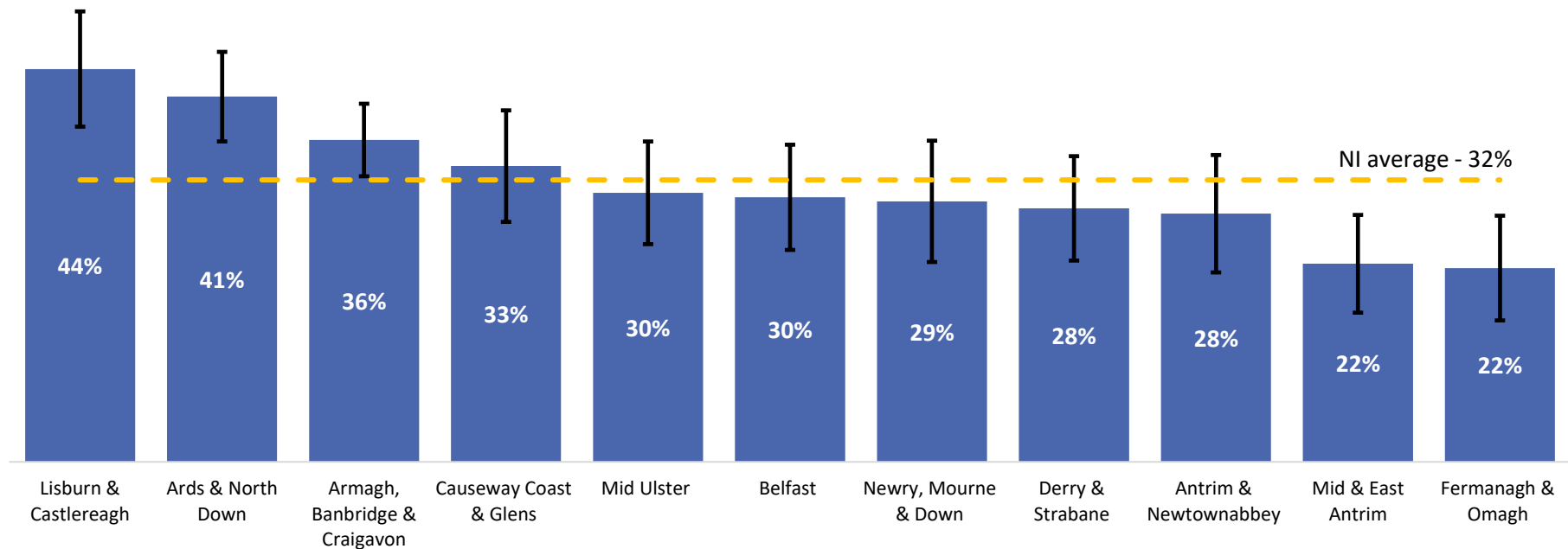
**Figure 10: By deprivation quintiles (NIMDM 2017)**

Respondents living in the two least-deprived quintiles were more likely to own a bicycle (both 40%) than those living in more deprived areas.



**Figure 11: By Local Government District**

Bicycle ownership in Lisburn & Castlereagh District Council (44%); Ards & North Down (41%); Armagh, Banbridge & Carrigavon (36%); and Causeway Coast and Glens (33%) was greater than in Mid & East Antrim (22%) and Fermanagh & Omagh (22%). The wide confidence intervals<sup>1</sup> around the central estimates make it impossible to note any other differences between the Districts.



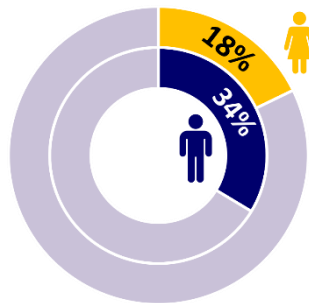
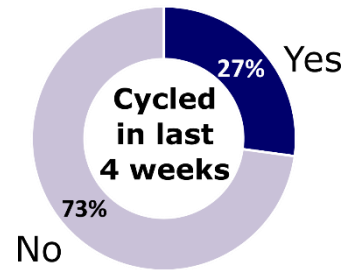
<sup>1</sup> See Appendix B (page 17) for more details on Confidence Intervals



## 2. Whether cycled in the last 4 weeks

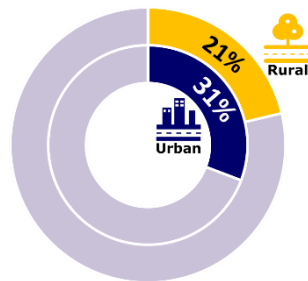
The 910 respondents who owned or had access to a bicycle were asked if they had cycled in the last 4 weeks.

Under three-in-ten (27%) respondents who owned or had access to a bicycle had cycled in the last four weeks. This is not significantly different to the 30% reported in 2016/17.



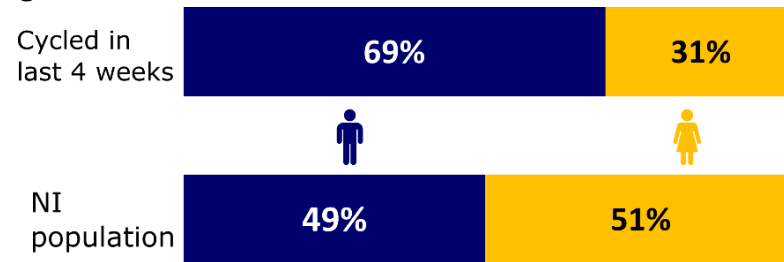
Male respondents (34%) were more likely than female respondents (18%) to have cycled in the last four weeks.

Those in urban areas (31%) were more likely than those in rural areas (21%) to have cycled in the last 4 weeks.



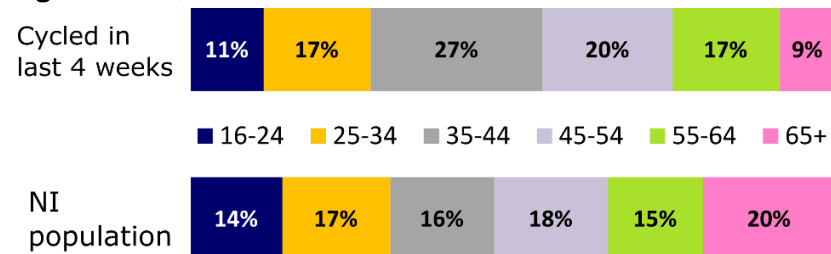
Focusing then on the 234 respondents that had cycled in the last four weeks, we see that cyclists are mostly male - 69% - and only 31% were female. This is despite females accounting for 51% of the NI population (source: [NISRA 2017 Mid-Year Population Estimates](#)).

**Figure 12: Those that have cycled in the last four weeks, by gender, NI CHS, 2017/18**



Just under half of cyclists (47%) were between the ages of 35-54, while this age group accounts for 34% of the general population.

**Figure 13: Those that have cycled in the last four weeks, by age NI CHS, 2017/18**



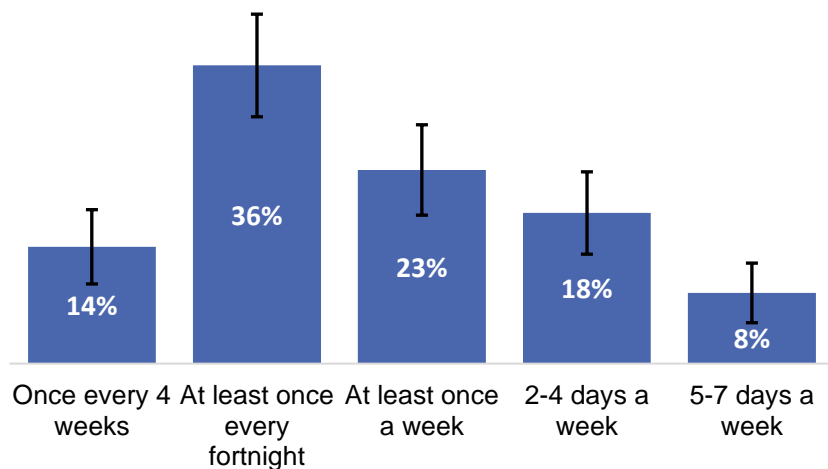
### 3. Frequency of cycling in the last 4 weeks

The 234 respondents who had cycled in the last 4 weeks were then asked how often they cycled.

Cyclists were most likely to indicate they cycle at least once every fortnight (36%); just under one-quarter (23%) cycle once a week, 18% cycle 2-4 days a week, 14% cycle once every month, and 8% cycle 5-7 days a week.

These proportions were not significantly different to 2016/17

**Figure 14: Frequency of cycling, NI CHS, 2017/18**



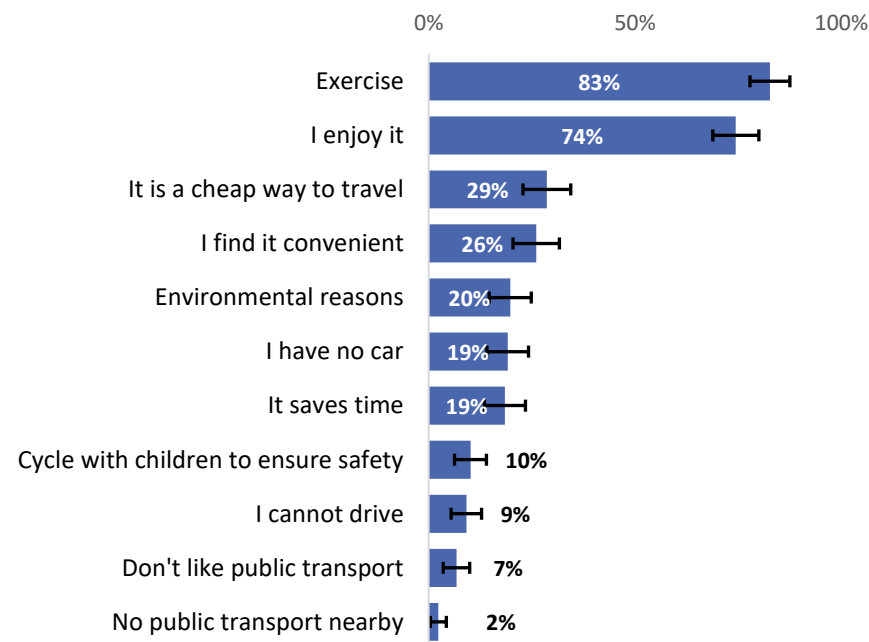
The number of respondents who had cycled in the last 4 weeks is too small to allow for any further breakdown/analysis.

### 4. Reasons for cycling

The 234 respondents who cycled in the last 4 weeks were asked why they cycled.

The most popular reasons stated by respondents for cycling were for exercise (83%) and for enjoyment (74%). Fewer than three-in-ten respondents chose any of the other options. A full list is shown in Figure 15 below. Proportions in 2017/18 were not significantly different to 2016/17 with the exception of having no car which increased from 13% in 2016/17 to 19% in 2017/18

**Figure 15: Reasons for cycling, NI CHS, 2017/18**



## 5. Attitudes to cycling

All respondents were shown four statements and asked which best describes their attitude to cycling. These statements are detailed below. Each of the statements can be associated to a general category of cyclists taken from the 'Four Types of Cyclists' typology developed by the Portland Office of Transportation.

**Four Types of Cyclist**  
(Portland, Oregon Office of Transportation)

**'The Strong and the Fearless'**  
I will ride my bicycle regardless of roadway conditions. I am a cyclist; cycling is a strong part of my identity and I am generally undeterred by road conditions.

**'The Enthused and the Confident'**  
I am comfortable riding my bicycle and sharing the roadway with other vehicles. I could be attracted to more regular cycling if the barrier on shorter trip distances continued to be addressed such as better bicycle facilities (more cycle lanes, cycle paths, cycle priority at junctions) and better end-of-trip facilities (such as showers at work, safe bicycle storage etc).

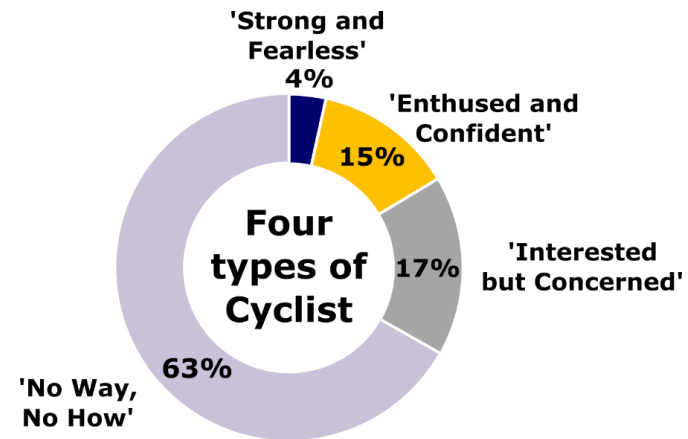
**'The Interested but Concerned'**  
I would like to use my bicycle more but I am afraid to cycle. I don't like the cars travelling at speed and I get nervous thinking about what would happen to me on a bicycle when a car passes too closely and/or too fast. I would cycle if I felt safer on the roads - if cars were slower and less frequent and if there were more quiet streets with few cars and paths without any cars at all.

**'No Way, No How'**  
I am not interested in cycling at all, as I am not able, or simply have no interest.

For conciseness, subsequent results will be reported using the four general categories; 'The Strong and the Fearless', 'The Enthused and the Confident', 'The Interested but Concerned' and 'No Way No How'.

Just under two thirds (63%) of all respondents were in the 'No Way No How' group. Under one-fifth (17%) were in 'The Interested but Concerned' group, 15% in 'The Enthused and the Confident' group and 4% in 'The Strong and the Fearless' group. This latter category was the only group to experience a change from the last survey, increasing from 3% in 2016/17 to 4% in 2017/18.

**Figure 16: Attitudes to cycling, NI CHS 2017/18**

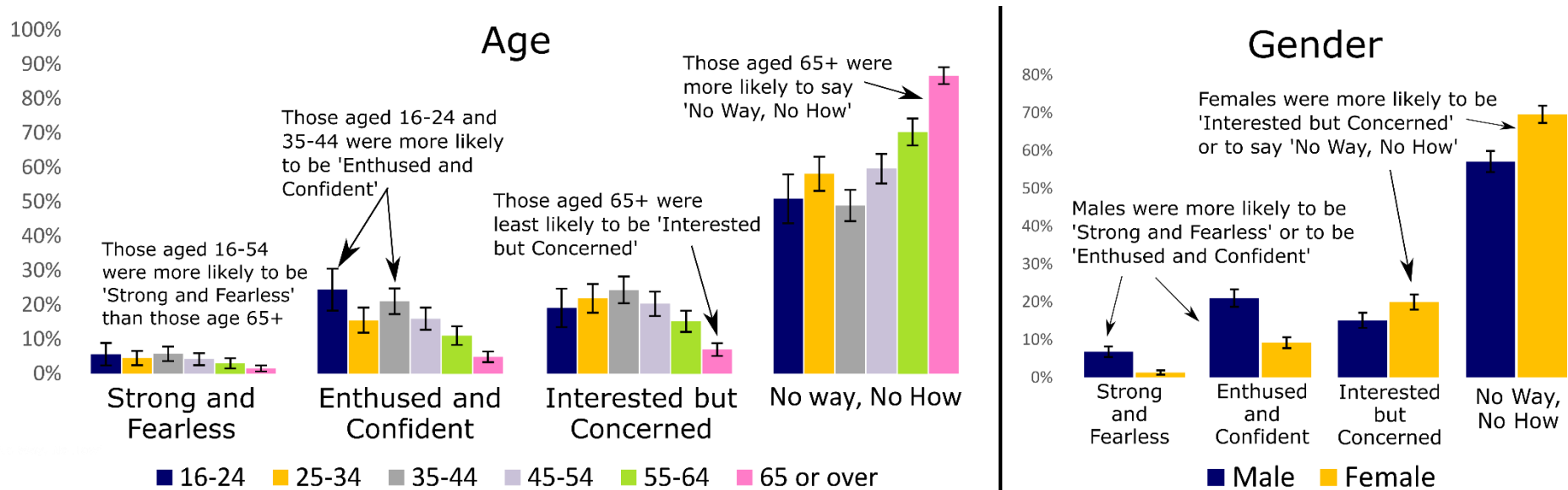


On the following page, this question will be further analysed to determine if any differences are apparent by age, gender, and other Section 75 groups.

Further information is available at:

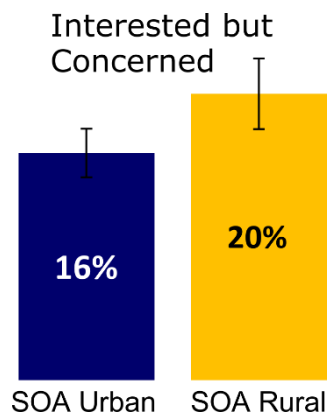
<https://www.portlandoregon.gov/transportation/article/158497>

**Figure 17: By Age group and Gender**



**Figure 18: By urban/rural**

When examining the types of cyclist by urban/rural location, only 'Interested but concerned' showed any significant difference. Respondents in rural areas were more likely to select this option than those in urban areas.



**By Other Section 75 groups**

Respondents that had no disabilities were more likely than those with disabilities to be 'Strong and Fearless', 'Enthusied and Confident', or 'Interested but Concerned'. Similarly, those respondents that hold a degree level qualification or higher; and those that are Economically Active are more likely than their counterparts to choose 'Strong and Fearless', 'Enthusied and Confident', or 'Interested but Concerned'. Respondents that have dependants are more likely than their counterparts to choose 'Enthusied and Confident', or 'Interested but Concerned'. See accompanying Excel document for full charts and tables.

## Appendix A: Technical Notes

### The Northern Ireland Continuous Household Survey

#### Data Collection

The information presented in this publication derives from the Northern Ireland Continuous Household Survey (CHS), a Northern Ireland wide household survey administered by Central Survey Unit (CSU), Northern Ireland Statistics and Research Agency (NISRA). It is based on a sample of the general population resident in private households and has been running since 1983. The Survey is designed to provide a regular source of information on a wide range of social and economic issues relevant to Northern Ireland. The nature and aims of CHS are similar to those of the General Household Survey (GHS), which is carried out by the Office for National Statistics (ONS) in Great Britain. The Cycling in Northern Ireland 2018 questions which were commissioned by DfI are included in Appendix C of this report.

#### Data Quality

Data were collected by CSU and various validation checks were carried out as part of the processing. CSU is the leading social survey research organisation in Northern Ireland and is one of the main business areas of NISRA, an Agency within the Department of Finance. CSU has a long track record and a wealth of experience in the design, management and analysis of behavioural and attitude surveys in the context of a wide range of social policy issues. CSU

procedures are consistent with the Official Statistics Code of Practice<sup>2</sup>.

The CHS sample was assessed and considered to be a representative sample of the Northern Ireland population at household level.

Whilst data quality is considered to be very good, note that all survey estimates are subject to a degree of error and this must be taken account of when considering results (see notes on Confidence Intervals on page 17). This error will be reasonably small for the majority of Northern Ireland level results but care should be taken when looking at results based on smaller breakdowns.

#### Weighting

Analysis of the Cycling in Northern Ireland module of the CHS has been weighted for non-response. A chi square goodness-of-fit test showed that the CHS sample was not representative of the population by age and sex when compared with the Population and Migration Estimates Northern Ireland 2015 (NISRA). As a result, three separate weights were produced for age, sex and age and sex combined.

Non-response weighting sometimes increases standard errors, although the impact tends to be fairly small, i.e. the adjustment may be less or greater than 1, but will generally be reasonably close to

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<sup>2</sup> <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/code-of-practice-for-official-statistics.pdf>

1. In the case of the Cycling in NI module of the CHS, the values of the adjustment for all three weighting systems are so close to one, it is not necessary to take account of this in the calculation of standard error and confidence intervals.

While weighting for non-response (also called post-stratification) should reduce bias, it must be acknowledged that it will not eliminate bias altogether. The reasons individuals choose to take part in surveys are complex and depend on lots of factors specific to the individual. As a result, the non-response biases in surveys are likely to be complex. Post-stratification works on the assumption that, by aligning the survey to the population along a small number of dimensions such as age and gender, many of these complex biases will reduce. However, it would be misleading to suggest that they will be eliminated.

### **Confidence Intervals**

No sample is likely to reflect precisely the characteristics of the population it is drawn from because of both sampling and non-sampling errors. An estimate of the amount of error due to the sampling process can be calculated. For a simple random sample design, in which every member of the sampled population has an equal and independent chance of inclusion in the sample, the sampling error of any percentage,  $p$ , can be calculated by the formula:

$$\text{s.e. (p)} = \sqrt{(p*(100 - p)/n)}$$

where  $n$  is the number of respondents on which the percentage is based. The sample for the NI Omnibus Survey is drawn as a random sample, and thus this formula can be used to calculate the sampling error of any percentage estimate from the survey.

### **Multiple response questions**

Multiple response questions are those for which respondents can give more than one response if they wish. For example, respondents who had cycled in the last 4 weeks, were asked 'Why do you cycle?' and they were able to list, from a showcard, one or more reasons. In such questions, when individual percentages are summed they may add to more than 100%.

### **Rounding Conventions**

Percentages have been rounded to whole numbers and as a consequence some percentages may not sum to 100. 0% may reflect rounding down of values under 0.5.

### **Significant difference**

Any statements in this report regarding differences between groups such as males and females, different age groups, religion, etc., are statistically significant at the 95% confidence level. This means that we can be 95% confident that the differences between groups are actual differences and have not just arisen by chance. Both the base numbers and the sizes of the percentages have an effect on statistical significance. Therefore on occasion, a difference between two groups may be statistically significant while the same difference in percentage points between two other groups may not be statistically significant. The reason for this is because the larger the base numbers or the closer the percentages are to 0 or 100, the smaller the standard errors. This leads to increased precision of the estimates which increases the likelihood that the difference between the proportions is actually significant and did not just arise by chance.

## Respondent groups

The following respondent groups were considered:

### Age group

The age of the respondent is grouped into the following age bands; 16-24, 25-34, 35-44, 45-54 55-64, 65 and over.

### Gender

Gender of respondent is defined as whether the respondent is male or female.

### Disability status

Disability status is defined as whether the respondent has a disability or not. The definition of disability is those answering yes to both of the following questions:

*'Do you have any physical or mental health conditions or illnesses lasting or expected to last for 12 months or more' - Yes/No*

*'Does your condition or illness/ (do any of your conditions or illnesses) reduce your ability to carry out day-to-day activities?' -*

*Yes, a lot/ Yes, a little/ Not at all*

### District Council (LGD14)

Northern Ireland is divided into 11 district councils.

### Urban and rural areas

Urban and rural areas have been classified using the statistical classification of settlements defined by the Inter-Departmental Urban-Rural Definition Group.

- Bands A to E are classified as Urban. This includes Belfast Metropolitan Urban Area (Band A), Derry Urban Area (Band

B) and large, medium and small towns (Bands C-E) with populations greater than or equal to 5,000 people.

- Bands F to H are classified as rural. This includes intermediate settlements (Band F), villages (Band G) and small villages, hamlets and open countryside (Band H) with populations of less than 5,000 and including open countryside.

### Dependant status

Dependant status is defined as whether the respondent has dependants or not.

### Economic Activity

Economic activity is defined as whether the respondent is currently economically active or not. This is automatically computed from other answers given. Those individuals who are temporarily away from work and those who are on a government training scheme are included as being economically active. Full-time students are excluded from these figures.

### Qualification level of respondent

The qualification of the respondent is grouped into the following categories:

Degree level or higher

All other qualifications

No qualifications

### Deprivation quintile

Each respondent was assigned a deprivation quintile based on the Northern Ireland Multiple Deprivation Measure 2017 (NIMDM2017),

these are the official measures of deprivation in Northern Ireland and replace the NIMDM2010. These measures were informed through public consultation and Steering Group agreement and provide a mechanism for ranking the 890 Super Output areas (SOAs) in Northern Ireland from the most deprived (rank 1 to the least deprived (rank 890). They include ranks of the areas for each of the 7 distinct types (or domains) of deprivation, which have been combined to produce an overall multiple deprivation measure (MDM) rank of the areas.

### **Question 5: Attitudes to cycling**

For conciseness, results were reported using the four general categories outlined in the 'Four Types of Cyclists' report <https://www.portlandoregon.gov/transportation/article/158497>; 'The Strong and the Fearless', 'The Enthused and the Confident', 'The Interested but Concerned' and 'No Way No How'.

#### **'Four Types of Cyclists'**

This report by Roger Geller, Bicycle Coordinator in Portland Office of Transportation describes how Portlanders can be placed into one of four groups based on their relationship to bicycle transportation: 'The Strong and the Fearless', 'The Enthused and the Confident', 'The Interested but Concerned'. The fourth group are non-riders, called the 'No Way No How' group. This 'Four Types' categorization was first developed in 2005 and addresses only willingness to use a bicycle as a main means of transportation.

The report concludes that the typology was developed using professional knowledge and experience in a field where data is woefully inadequate and vetted with many professionals in the field, representing hundreds of years of bicycle planning, policy and

operational experience. Since then, survey polling data continues to support the description of the categories. They are fundamental to understanding both the market for increasing bicycle transportation and what needs to be undertaken to cater to them. In the absence of evidence to the contrary, it is likely that continued survey and study will continue to support this typology.



## Appendix B: Confidence Intervals

A confidence interval represents the range of values in which the true population value is likely to lie. It is based on the sample estimate and the confidence level. As the percentages are calculated from a representative sample of the Northern Ireland population (aged 16 and over), a confidence interval can be calculated to estimate the level of uncertainty in the sample estimate.

Where possible, throughout this report, confidence intervals have been calculated and are displayed as a range around the central estimate – represented by a black, bounded line on each of the bar charts.

All the differences which have been highlighted in the commentary have been tested for statistical significance ( $p < 0.05$ ). This means that there is at least a 95% probability that there is a genuine difference between results and the difference is not simply explained by random chance or sample error. Where the term ‘similar’, ‘no real difference’, ‘no real change’ or ‘around the same’ has been used when comparing results, it means that there is no significant difference between the results being compared.

By means of illustration, the 95% confidence intervals for the headline figures are summarised in Table B1 below.

**Table B1: Confidence Intervals for Cycling in Northern Ireland**

	Estimate	95% Confidence Range +/-	Confidence Interval
Proportion of respondents who own or have access to a bicycle.	36%	2%	34%-38%
Proportion of respondents who cycled in the last four weeks.	27%	3%	24%-30%
Proportion of respondents who said they cycle for exercise.	83%	5%	78%-88%
Proportion of respondents who said they are not interested in cycling at all.	63%	2%	62%-65%

Note: Confidence Interval is calculated using unrounded percentages.

- The 95% confidence interval for respondents who own or have access to a bicycle is 36% +/- 2%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who own or have access to a bicycle lies between 34% and 38%.
- The 95% confidence interval for respondents who had cycled in the last 4 weeks is 27% +/- 3%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who cycled in the last 4 weeks lies between 24% and 30%.

- The 95% confidence interval for respondents who said they cycle for exercise is 83% +/-5%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who cycle for exercise lies between 78% and 88%.
- The 95% confidence interval for respondents who said they are not interested in cycling at all is 63% +/- 2%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who are not interested in cycling lies between 62% and 65%

## Appendix C: Cycling in Northern Ireland Questionnaire

### **ATTITUDES TO CYCLING**

[BIKE1] And now I have a few questions about your attitude to cycling.  
Excluding exercise bikes, do you . . .

#### ***RUNNING PROMPT***

1. own a bicycle yourself -> [BIKE2]
2. have use of a bicycle owned by someone else in the household -> [BIKE2]
3. have use of a bicycle owned by someone else outside the household -> [BIKE2]
4. or have no use of a bicycle?

[BIKE2] In the last 4 weeks, that is since \*\*\*\*\* have you done any cycling?

1. Yes -> [BIKE3]
2. No

[BIKE3] On how many days in the last 4 weeks have you cycled? 1..28

[BIKE4] SHOWCARD (Cycle reason)

Could you look at SHOWCARD \*\* and tell me the reasons why you cycle?

#### ***CODE ALL THAT APPLY***

1. I find it convenient (I live close to work/education/shops etc.)
2. It is a cheap way to travel (there are no costs for fuel/car parking/bus or train fares)
3. I enjoy it
4. Environmental reasons
5. Exercise
6. It saves time (for example to avoid traffic jams)
7. I have no car

8. I cannot drive

9. I don't like using public transport

10. There is no suitable public transport where I live

11. I cycle with my children to ensure they are safe

12. Other -> [BIKER4oth]

[BIKE4oth] Please specify the other reason for cycling

[BIKE5] SHOWCARD (Cycling attitude)

Could you look at the statements on SHOWCARD \*\* and tell me which statement best describes your attitude to cycling?

1. I will ride my bicycle regardless of road conditions. I am a cyclist; cycling is a strong part of my identity
2. I am comfortable riding my bicycle and sharing the roadway with other vehicles. I could be attracted to more regular cycling if the barriers on shorter trip distances continued to be addressed, for example, better bicycle facilities (more cycle lanes, cycle paths, cycle priority at junctions) and better end of trip facilities (showers at work, safe bike storage etc.)
3. I would like to use my bicycle more but I am afraid to cycle. I don't like the cars travelling at speed and I get nervous thinking about what would happen to me on a bicycle when a car passes too closely and/or too fast. I would cycle if I felt safer on the roads - if cars were slower and less frequent and if there were more quiet streets with few cars and paths without any cars at all
4. I am not interested in cycling at all as I am not or simply have no interest