

Understanding Perceptions of Cycling Infrastructure Provision and its Role in Cycling Equity

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Introduction

Cycling is a mode of transport that provides various health, environmental, and societal benefits. However, different population groups and communities can face unique barriers to cycling related to individual identities. While socioeconomic status is an important factor concerning equitable access to cycling infrastructure, these factors are largely ignored in cycling equity planning.

Factors influencing how people value cycling infrastructure, including demographic characteristics and access to bicycle lanes, are used in this study to identify the factors influencing perceptions of cycling infrastructure. Investigating perceptions of cycling infrastructure across respondents in Auckland, the research confirms that bicycle user type, ethnicity, and education influence bicycle users' and nonusers' perceptions of cycling infrastructure. The research also shows the extent to which objective factors (in this case, the availability of bicycle lanes) do not significantly influence perceptions of cycling infrastructure.

Aims

- To contribute to understanding how people value cycling infrastructure provision, their relationships to the physical infrastructure provided, and how sociodemographic characteristics influence those perceptions
- To understand how these perceptions are influenced by individual experiences of using cycling infrastructure

Key Points

- The value that people place on cycling infrastructure is more affected by factors such as ethnicity, education, and bicycle user type (whether a regular cyclist, a potential cyclist, or a non-cyclist) than the objective level of bicycle infrastructure provided
- Regular cyclists' age, education level, and cycling injury experiences affect value perceptions
- Income, bicycle user type, and ethnicity increase the value people have for cycling infrastructure in areas where there is excellent infrastructure, while in areas where this is poor, ethnicity is the only significant factor
- Māori had the highest percentage of potential cyclists among all ethnicities



Findings

The highest proportion of regular cyclists, defined as anyone who cycled over the last month for any purpose, were aged between 21 to 30 years old. **Potential cyclists**, defined as those who cycled one or more times over the previous 12 months, were most likely to be between 18 to 20 years old, and were **more likely to be male rather than female.**

Pacific ethnicities had the lowest number of regular cyclists, while **Māori had the highest proportion of potential cyclists** compared to the other ethnicities, followed closely by MEELA ethnicities.

A high proportion of **noncyclists had bicycle access**, and almost a third of the people with access to bicycles were potential cyclists. There was no significant relationship between cyclist user type and income levels. However, those who were **not employed or employed part-time had the highest proportion of potential cyclists**.

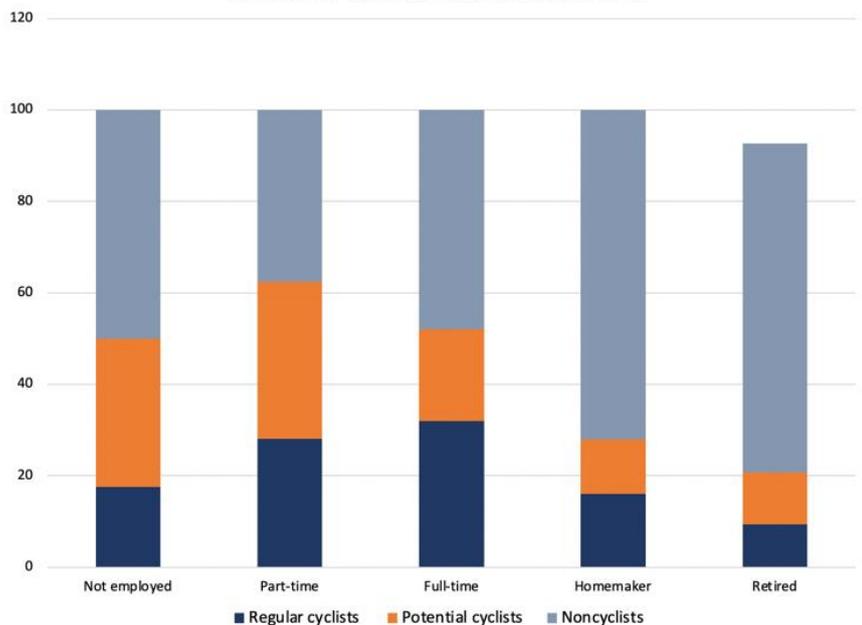
The overall **strongest predictor** of a higher value of cycling infrastructure provision was **bicycle user type**, with regular cyclists more likely to value this over non-cyclists and potential cyclists.

As the **cycling infrastructure quality** in an area increased, the percentage of regular cyclists also increased. For regular cyclists, younger people placed a higher value on cycling infrastructure.

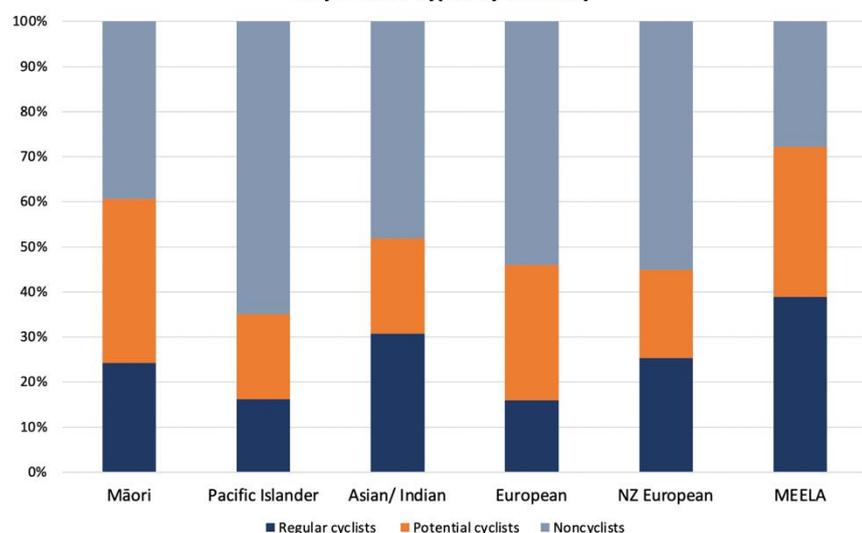
Ethnicity was the most significant factor in predicting higher value placed on cycling infrastructure provision for both non-cyclists and potential cyclists. **Māori and Pacific Island ethnicities had the highest perceived value** toward cycling infrastructure.

There was no difference in perception across sociodemographic groups where there were poor levels of cycling infrastructure. In contrast, ethnicity and access to a bicycle influenced perceptions around cycling infrastructure, with Māori, Pacific Island ethnicities and NZ Europeans, as well as those with access to a bicycle, valuing cycling infrastructure more than others. For areas with excellent bicycle infrastructure, ethnicity, income, and bicycle user type influenced the perceived value of infrastructure, with Māori and Pacific Island ethnicities and regular cyclists of all ethnicities placing the highest value on cycling infrastructure.

Bicycle User Types by employment situation



Bicycle User Types by ethnicity



Key Policy Implications

- Include cyclists' perceptions in decision-making processes to ensure infrastructure and initiatives respond to multiple different cycle users', and potential cycle users', expectations and needs, and to ensure **equitable access to cycling**.
- As cycling infrastructure does not always influence cycle use levels as much as other **sociodemographic factors**, a range of **cycling initiatives** need to be implemented.
- Further research is required to understand the extent to which the **low level of bicycle usage among Māori and Pacific people** is linked to sociocultural factors, despite their higher perceptions (more value) of bicycle infrastructure provision.
- Prioritize, under the realities of constrained budgets, the provision of different cycling initiatives to **address differing needs, attitudes, and preferences**.

To find out more about this research, please visit: <https://doi.org/10.1177/036119812211178>

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