

Using environmental audits and photo-journeys to compare objective attributes and cyclists' perceptions along cycling routes

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Abstract

Background: Cycling is known to have many health benefits. For this reason, transport planners and public health officials in Canada increasingly aim to encourage cycling for transport. On- and off-street infrastructure is often implemented to facilitate cycling and planners rely on a range of tools for informing the design of the network of facilities. This mixed methods study compares objectively measured attributes and cyclists' perceptions of the built environment along inferred cycling routes in Hamilton, Ontario.

Methods: Environmental audits were conducted along six cycling routes in Hamilton to document the attributes that might support or hinder cycling. The routes were inferred based on the output of a model of cycling flows. Cyclists, 9 male and 5 female, then participated in semi-structured interviews where a form of photo elicitation, which we call photo-journeys, was used to explore their perceptions and preferences. Interview data were analyzed using both inductive and deductive thematic analysis based on the categories of the audit instrument.

Results: Cyclists prefer routes that have dedicated cycling infrastructure, or residential streets with low volumes of traffic even if they lack infrastructure. They dislike routes with busy arterial roads or that lack cycling infrastructure. Their experience and knowledge of cycling in a city transitioning to be more bicycle-friendly revealed preferences that can help to improve existing infrastructure and cycling routes, which may also help to reduce barriers for non-cyclists.

Conclusions: Photo-journeys are an innovative and practical approach to explore perceptions of regular cyclists, which can be leveraged to inform policies and interventions to make cycling routes and infrastructure safer and more

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attractive. Transport planners in developing cycling cities should pay attention to both the objective attributes of the built environment and how it is perceived by the public.