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# How Usable is the City for Older Bicyclists?

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Abstract The aim of this paper was to examine how useable and inclusive the city is from the perspective of older bicyclists. Methods used were quantitative questionnaires and qualitative focus group interviews. Participants were people aged 65 years or older. The results showed that respondents were fairly satisfied with the transport infrastructure design. However, other road users seemed to complicate cycling, e.g. as communication and interaction between other road users was perceived as difficult and poor.

Keywords Bicycle, planning, older people, usability, public outdoor environments

#### Introduction

The number and proportion of older people are increasing [1], the average life expectancy has increased during the 20<sup>th</sup> century and health has improved [2]. Older people estimate their own physical capacity as good and they want to stay active [3]. An active life can slow down the weakening aspects of the ageing-process. To cycle outdoors is the third most popular activity among people aged 60 to 70 [4]. Many older people in Sweden bicycle once or a few times a week for recreation and everyday errands [5]. Previous research mainly has focused on travel habits of older cyclists. Still, a pre-requisite for being able to use a bike in public outdoor environments in the city is that the design of the environments is inclusive and usable. In this paper some results from a research project<sup>2</sup> will be presented. The overall aim of the project was to study older people's perspectives on cycling, safety and use of helmet. In this short paper we have focused on urban inclusiveness and usability from the perspectives of older cyclists.

#### 1. Method

The study was conducted in Malmö, a city in the south of Sweden with some 300 000 residents, of whom 16% are aged 65 or older. Methods used were quantitative questionnaire and qualitative focus group interviews. Both active cyclists and non-cyclists were contacted. In all 766 questionnaires were sent to a sample of people aged

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65 years or older. After one reminder, 456 complete questionnaires were returned (~60% response rate). Two focus group interviews were performed (eleven and nine participants respectively).

## 2. Results

The results from the questionnaire showed that the respondents judged the transport infrastructure as suitable for cycling. For example, more than half of the cyclists stated that the bicycle paths are wide enough, that the coating is flat and that there are no objects or hindrances on the bicycle path that can catch the bicycle wheels or cause slipperiness. On the other hand, other road users seemed to cause conflicts: cyclists giving indistinct signs, both cyclists and car-drivers drive too fast and bicycle paths used by pedestrians.

Similarly, focus group interview results indicated that the physical environment was judged as suitable for cycling. Nevertheless there were some comments on bicycle path and infrastructure design: traffic-signs hiding the view and too narrow bicycle parking. The most problematic aspect was the behavior of other road users: interaction, communication and perceived traffic rule incompliance. The respondents stated that behavior of other bicyclists and pedestrians were too unpredictable, making it difficult to act and react properly as cyclists. They also expressed that young people, being muted while using technologies and listening to music via earphones could be a source of conflict.

#### 3. Conclusion

This study has gained insight on older cyclists' views on inclusive and useable public environments in cities. It has shown that the group of people aged 65 or older wishes to be active by using bicycle. Older cyclists seemed fairly satisfied with the physical design of the environment in the city; however other road users made cycling more complicated. From the perspective of a planner, the designing of the physical environment – in this case the whole infrastructure for pedestrians and cyclists – needs to include issues of how the particular design is interpreted and used by different user categories. Design influences behavior; improved and more universal design would foster better interplay and communication between users.

### References

- [1] Statistiska Centralbyrån (SCB). *Sveriges framtida befolkning 2012–2060* [The Future Population of Sweden 2012-2060] *Demografiska rapporter* 2012:2. 2012.
- [2] Socialstyrelsen & Statens folkhälsoinstitut. *Folkhälsan i Sverige årsrapport 2012*. [Health status in Sweden 2012] 2012.
- [3] Socialstyrelsen. Folkhälsorapport 2009 [Report on Health Status 2009] 2009.
- [4] Riksidrottsförbundet. Idrott och motion +60. Fakta och argument samt goda exempel för fysisk aktivitet upp i åldrarna [Sport and exercise +60. Facts and arguments and good examples to improve physical activities in the older ages] 2007.
- [5] M. Towliat & H. Svensson. *Tillgängligare, säkrare och tryggare i trafiken för äldre i Malmö* [More accessible, safe and secure traffic environments for older people in Malmö] Malmö, Vägverket Konsult, Rapport 2008:1. 2008.