

The impact of pedelec purchase on mobility choices and safety

I. INTRODUCTION

During the past few years, the pedelec is gaining in

channels like cycling forums and bike shops among the Flemish and Dutch population. At this moment, 171 participants already completed the questionnaire, including 20 persons who were involved in an accident.

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popularity. A pedelec is a bike with electric pedal assistance which, in contrast to e-bikes, can be turned off by its users without losing the capability to continue cycling. In comparison with traditional bikes, pedelecs enable its users to travel greater distances with the same level of physical activity. The pedelec also provides an attractive alternative for the car for short trips, resulting in less environmental pollution caused by exhaust gasses and an increase in personal health. Pedelecs may also provide an important tool to improve mobility needs of the elderly and avoid their social isolation. However, safety issues have also been recognized. The increase in weight and speed might cause balance problems and make turning movements more difficult. It is also suggested that the design of the pedelecs, which resemble traditional bikes, leads to underestimation of approaching speeds by oncoming vehicle drivers. Finally, the elderly seem to be overrepresented in accident statistics. Elderly road users are more vulnerable and previous research indicates that it is mainly this age group that uses the pedelec. Safety research so far has mainly focused on accident statistics and the amount of kilometres travelled, but increasing the understanding of purchase motivation and subjective safety effects should the development of improved approaches for encouraging pedelec use. Therefore, this paper sets out to investigate underlying motivations of purchasing a pedelec and the effects it has on individuals' travel behaviour and their subjective and objective safety.

The data collection and analysis processes are still ongoing. Therefore, it is not yet possible to communicate results and conclusions.

Key words *Mobility choice, pedelec, physical activity, purchase motivation, questionnaire, traffic safety*

A questionnaire was developed, based on a combination of existing questionnaires already available in scientific literature. Integration of multiple designs was necessary, since no questionnaire currently exists that examines all our research objectives. The different sections of the questionnaire target purchase motivation, changes in mode choice, subjective safety and, in case that a participant had experienced an accident with the pedelec, objective safety. The questionnaires were distributed in both paper and online form through various

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