

Preliminary results of a retrospective and prospective study of bicycle accidents in adolescents.

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ABSTRACT

Physical active commuting to school (PAS) might reduce the sedentary lifestyle of adolescents [1]. Analysing route choice, built environment & exposure of cycling adolescents is needed in order to improve bicycle infrastructure, cycling frequency [2] and safety. This study aims to identify adolescents bicycle usage, correlates with environment and the accident rate (taking into account exposure) using a retrospective and prospective study within the same study population.

1672 adolescents (15-18 years) volunteered to participate through randomly selected schools. 1100 filled out a general questionnaire (GQ) and 790 of them filled out the retrospective questionnaire (RQ). 7 adolescents were involved in an accident and filled out the Prospective Questionnaire (PQ). Through an web-based survey, students could fill out a cycling diary allowing us to follow and analyse their cycling exposure and accident occurrence.

The preliminary results of this study indicate that 25% of the adolescents reported never using their bicycle. Up to now, no environmental correlates were found. There was no discrepancy between boys and girls for descriptive parameters. The RQ revealed 55 accidents over the past 12 months. The prospective study resulted in one accident every 7150 km.

In an adolescent population, commuting by bicycle is high and less related to the environment compared with adults [3]. These findings might be useful to improve cycling infrastructure for safer bicycle commuting of adolescents.

Keywords: bicycle usage, exposure, adolescents, accidents, prospective, retrospective.

REFERENCES

1. Tudor-Locke, C., B.E. Ainsworth, and B.M. Popkin, *Active commuting to school: an overlooked source of childrens' physical activity?* Sports Med, 2001. **31**(5): p. 309-13.
2. Carver, A., et al., *Are safety-related features of the road environment associated with smaller declines in physical activity among youth?* J Urban Health, 2010. **87**(1): p. 29-43.
3. de Geus, B., et al., *Utilitarian Cycling in Belgium: A Cross-Sectional Study in a Sample of Regular Cyclists.* J Phys Act Health, 2013.