

10th International Conference on Transport Survey Methods

Examining mobility behaviour among youth - a progress report

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Abstract

A novel approach is developed to survey mobility patterns and attitudes of young people and to test the effects of intervention on young people's mobility behaviour and on their attitudes. A "before-after" experiment is designed to conduct two surveys with an intervention phase in between. The paper focuses on the challenge in conducting two one-week mobility surveys with youths in the age group of 12 to 15 over a period of two years. The paper describes a unique survey approach and the specially designed questionnaire. It also reports salient points regarding the experience gained while administering the survey.

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Peer-review under responsibility of International Steering Committee for Transport Survey Conferences ISCTSC

Keywords: survey; mobility behaviour; young people; trip diary

1. Introduction

In recent years a worrying trend among young people has been a lack of physical activity which has led to an increase in health problems in this age group (e.g. Frauendienst and Redecker, 2011). This physical inactivity stems from a number of factors including a decline in independent mobility and a heavy reliance on cars as means of transport. Therefore the study of the mobility behaviour of young people should form an important topic for transport research. However, the extant transport literature has focused mainly on conducting surveys to better understand the behaviour and attitudes to mobility of adults and recently-licensed teenagers (those in the age group 16 and above). Similar surveys or studies have not been carried out on pre-licensed teenagers (those in the age group 12-15 years). Also, policies for raising awareness about active and sustainable mobility behaviour are mainly aimed

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at adults. This policy thrust is despite our assumption that it is more difficult to break adults out of their habits and change their attitudes compared to younger people. In other words, the willingness of teenagers to accept changes in habit is higher than the willingness of adults (Scholl and Sydow, 2002). Moreover, preferences for a certain mode of transport are usually developed by the age of 16. For example, a pro-car orientation seems to be acquired from the age of 12, and the higher the age, the stronger this car-orientation (Flade and Limbourg, 1997). Therefore policies aimed at raising awareness of young people towards more sustainable mobility behaviour can have a relatively stronger impact, although some of these effects become evident only after these teenagers reach adulthood and exercise their choice or preference for a certain mode of transport. Therefore it is important to gain information on the mobility behaviour of young people.

Data from young people (children and teenagers) is usually collected in two ways: (i) parents fill in the questionnaire reporting the mobility behaviour of their children; or (ii) teenagers (from a certain age) fill in a self-completion questionnaire by themselves. However, opinions differ regarding which of these two approaches is more reliable for collecting data from young people. It is well-known that the length, readability, language of the questionnaire, and the order of questions all influence the quality of survey data (Bryman, 2001; Fellendorf, 2011). Moreover, Strange et al. (2003) found that the social context in which questionnaires are used for teenagers may influence the quality of the data. Hence it is vital to develop an appropriate survey approach and a questionnaire specially designed for this target group.

This paper focuses on our experience of conducting two one-week mobility surveys with young people in the age group 12 to 15 over a period of two years. The main focus is on the development and content of a questionnaire about their actual travel behaviour (travel diary) as well as the survey approach; the attitude questionnaire is not part of this paper. Results of the survey on the data quality and information level of the children are also provided later in the paper. Nevertheless, it should be noted that the base data were not gathered solely for testing of the questionnaire design, but to elicit information about the actual travel behaviour (travel diary) of the survey respondents.

2. Objectives

2.1. Research project

The study is based on the “Unterwegs” project, a national research project funded by the Austrian Ministry of Science, Research and Economy. The main aim of the project was to develop a novel approach to (i) survey mobility patterns and attitudes of young people, and (ii) to test the effects of an intervention on young people’s mobility behaviour and their attitudes. As part of this project, we conducted two mobility and attitude surveys, one in 2013 and the other in 2014 with an intervention phase in between. Our study therefore had a before-after design. We also had a control group in the study for both periods.

We wanted to investigate the effect of spatial differences on the travel behaviour of young people. Therefore for our study we chose four schools in different locations representing different spatial characteristics and mobility cultures: (1) Vienna’s city centre, (2) Vienna city outskirts and two schools within a semi-rural catchment area: (3) Tulln in Lower Austria, and (4) Itzehoe in Northern Germany. In each school two classes took part in the project and completed the surveys. One class in each school participated in the intervention process while the other class was designated as the control group. The intervention consisted of an information phase and an activity phase. The information phase included workshops on the environmental and health effects of transport services and on traffic safety. In the activity phase students examined the results of their travel from the first survey and found alternative solutions to car travel. To put these ideas into practice the students conducted an “active day” and competed with each other in a one-week mobility challenge. Further activities such as slow bike races were also undertaken. Since only one class in each school participated in this program, the other class served as a control group to capture the counterfactual natural trend which would have occurred in the absence of the intervention.

A further focus of the project was on the disparities in mobility behaviour between girls and boys across all the four school locations. The project lasted for two years which included 16 months of constant communication with students by means of workshops, excursions and activities.

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