

Personal and situational variables in relation to traffic noise annoyance and its effects on personal and behavioral variables: Results of a representative survey

M. Fischer¹, S. Moser², E. Lauper² & I. Schlachter¹

¹ *Federal Office for the Environment, Bern, Switzerland*

² *Interdisciplinary Centre for General Ecology, University of Bern, Bern, Switzerland*

Introduction

A significant portion of the Swiss population is annoyed by environmental noise, which originates mostly from road traffic. Significant measures have been undertaken to reduce the number of people exposed to noise exceeding the threshold limits. The most effective form of noise abatement is located at the source of the noise. Apart from technical improvements this means that people are asked to perform low-noise behavior. Examples of low-noise behavior in the traffic domain are buying low-noise car tires, driving in an eco-friendly way or using public or slow means of transport instead of one's own car. Because the processes behind low-noise behavior are not well understood, we are developing an explanatory process model of individual behavior change regarding traffic noise producing activities. This model aims to explain the steps required when proceeding from no problem awareness to established and repeated low-noise behavior. In the study presented here, part of this model was tested.

The explanatory process model includes noise annoyance as a possible predictor for low-noise behavior. Noise annoyance is the subjective feeling of being disturbed by noise. However, the features of the acoustic sound can only explain noise annoyance to a limited degree. Further predictors may be demographic, personal and behavioral variables. In designing appropriate interventions to promote low-noise behavior it is also important to know the effects noise annoyance has on behavioral and personal variables. In this study several predictors and effects of noise annoyance were examined.

Method

Data from the "Umweltsurvey", which is a representative Swiss survey on environmental topics, were analyzed. Relations between demographic, personal and behavioral variables and noise annoyance were statistically tested. Demographic variables are, for instance, age, gender and income. Personal variables are, for instance, the estimation of dangers due to car traffic, the estimation of environmental problems, attitude towards the environment, satisfaction with one's flat and health problems due to noise. Behavioral variables are, for instance, mobility behavior, commitment to environmental topics, actions taken against noise and time spent in the flat. Noise annoyance was measured with the question of how much someone feels annoyed in his flat with open windows due to different noise sources on a scale from one to ten.

Results

The data evaluation is still in progress. The results will be presented at the conference. The presentation will focus on factors that were found to impact noise annoyance and the effects noise annoyance has on personal and behavioral variables.

Implications for the design of interventions to promote low-noise behavior will be discussed and ideas for further research will be proposed.

Acknowledgments

This study is funded by the Swiss Federal Office for the Environment.