

Car Drivers

Technology

Needs

Ergonomics

Attitudes

Prolonging Safe Driving through Technology

Dr Charles Musselwhite, Gill Taylor, Chris Vincent

Institute of Health and Community Studies, Bournemouth University

Introduction

The number and percentage of older people in the UK population is increasing (ONS, 2004b), and it is this group of older people who report most difficulty in accessing local amenities such as shops, banks and hospitals (ONS, 2004a). It is therefore important that the travel needs of older people are investigated to ensure that this sector is able to achieve maximum mobility. Owning and using a motor vehicle fulfils this function and in turn is reported to increase feelings of self-confidence, self-esteem, autonomy, and prestige (Ellaway et al, 2003). However, many older individuals become anxious about the driving task and give up (Monterde i Bort, 2004). Their concern may be justified; when mileage is taken into account they are more likely to be involved in accidents than the middle-aged (DfT, 2001). Reasons for this include physiological barriers, increased cognitive error and mental workload (DfT, 2001; Lee et al 2003). Recent technological advances in Advanced Control and Safety Systems, could help overcome such barriers, but to date research into such technologies has largely ignored the older driver (Musselwhite, 2004; Rumar 1986).

The Investigation

Aim

To critically examine the extent to which new technological advances in Advanced Control and Safety Systems have the capacity to aid driver safety and prolong driving for older drivers in the UK.



Potential Benefits

For older people

Technological advances resulting from this project could enable older people to continue driving safely for longer, whilst retaining confidence in their ability. In addition, the methodology provides an opportunity for older people to become involved in research in a participatory manner and maximise the benefits of the research outcomes for their age group.

For society

The project will increase the depth of knowledge about older drivers' needs regarding driving and technology, which would be a useful anchor to underpin future studies that may develop and prototype such technologies. It could also serve as an important platform for future research addressing social and attitudinal issues that may mediate or enhance the effect of technology in overcoming barriers to continued safe driving.

Plan

Participants: This project will work in a participatory manner with 20 older individuals.

Procedure

An ongoing literature review will underpin two stages of work:

- Eliciting needs: semi-structured interviews will be carried out using abstraction, apprenticing and scenario modelling.
- Introducing new technologies
 - Focus groups with all participants will introduce new technologies and develop the technologies further,
 - Electronic Delphi Task will be used to judge the generalisability and feasibility of the technologies developed through the focus groups, these can be presented to a panel of experts for their judgments of the desirability, feasibility and cost effectiveness of adopting each proposal

Key References

- DfT (2001). Older Drivers: A literature review. London: Department for Transport
- Lee, H. C., et al. (2003). Using a driving simulator to identify older drivers at inflated risk of motor vehicle crashes. *Journal of Safety Research*. 34(4): 453-459
- Monterde i Bort, H. (2004). Factorial structure of recklessness: To what extent are older drivers different? *Journal of Safety Research*. 35(3): 329-335

Contact Details

Principal Investigator

Dr. Charles Musselwhite

Institute of Health and Community Studies,
Bournemouth University, Royal London House,
Christchurch Road, Bournemouth,
Dorset BH1 3LT. Telephone: 01202 962787
cmusselwhite@bournemouth.ac.uk

