ABSTRACT BOOK

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Oral Abstracts 30th

Violations’ (DBQ) was also found as a predictor of accident involvement (together with subjective functional deficiency). It was also found that reported violations in the past distinguish between drivers involved and not involved in accidents. This pattern may indicate that compliance to the law in older age plays an important role in safe driving.

The results were reviewed with regard to application possibilities and further research.

Baby boomers’ mobility patterns and preferences. What are the implications for future transport?

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The demographic grand challenge of population ageing will be reflected on most of the areas of society, and to a great extent also on the area of transportation. The large post-lll world war cohorts, the so called baby boomers, will comprise a large share of tomorrows older population, and it is expected that they will differ from their parents’ generation when growing old. In order to understand how the aging boomers may impact the future travel demand, their travel behaviour and expectations were analysed based on 1772 standardized telephone interviews. Baby boomers reported in general being healthy, independent and highly (auto)mobile. They also showed optimism regarding the level of mobility, use of different transport modes, and leading an independent life in the future. However, there were significant gender differences in terms of present and expected car use in old age somewhat similar to those observed in the older cohorts. In addition, using cluster analysis, three segments of baby boomers could be differentiated. The segments showed significant differences in current travel behaviour and living circumstances and some similarities to former segmentations of older road users. Results indicate that the differences between boomers and their parents might be smaller than expected.

Experienced cognitive problems, self-rated changes in driving skills, driving-related discomfort and self-regulation of driving in old drivers

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Many older drivers self-regulate their driving, which may enable them to continue driving safely despite functional decline. The process of self-monitoring of driving ability and awareness of functional decline, and its association with self-regulation of driving is, however, not fully understood. The aim of the study was to examine perceived changes in driving skills, driving-related discomfort, and self-regulation of driving by older drivers with different levels of self-rated cognitive problems. 840 Danish drivers aged 75–95 completed a structured telephone interview. The results showed that the experience of cognitive problems were associated with perceived improvement in higher level driving skills but also decline in lower level driving skills. Moreover, cognitive problems were associated with discomfort in, and avoidance of, driving situations. Finally, a linear relationship between discomfort in driving and avoidance was found and this tended to be stronger for drivers experiencing cognitive problems. The results indicate that older drivers who experience problems with cognitive functions display good self-assessment of changes in their driving skills; that driving-related discomfort is an important factor affecting self-regulation of driving; that driving-related discomfort functions as an indirect self-monitoring of driving ability and may contribute to the safe driving performance of older drivers.

Symposium - Driver attention and distraction: Eyes on the road
Thursday 30th of August, 13:30 - 15:30 - Ronde zaal

Eyes wide shut: Distraction having the eyes on the road
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Since the 100-car study, it has been generally recognized that a driver, having the eyes-off-the-road for 2 seconds or more is unacceptable in terms of traffic safety. Since driving is primarily a visual task, having no relevant driving information fall on the driver’s retina is a safety factor with high face validity since it disables a driver to respond to visual cues of running off the road or a lead vehicle braking. However, the opposite is not true either: A driver having his eyes on the road does not mean that all relevant information falling on the retina will actually be processed. In this process, selection and attention play an important role. What safety consequences does it have when a driver is looking outside, but is focusing on distracting elements along the side of the road (e.g. billboards), or maybe even looking on the road but not paying much attention to the driving task.

What sort of risk do we run when we are daydreaming, talking on the phone, looking at our HUD or looking for 2 seconds to a billboard that still allows us to see the onset of braking lights of or lead vehicle?

Seven Myths about Cognitive Distraction and Driving
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Little published research has considered how human cognition relates to driver performance. Indeed, while it is generally recognized that the human mind can only focus on so many tasks at one time, there is no empirical data that clearly connects “cognitive distraction” to crash events. As a result, many myths about cognitive distraction have arisen in the driving safety literature and popular media. We here provide a critical analysis of seven such myths:

1) Cell phone conversations increase crash risk four times relative to baseline driving.
2) Cell phone conversations decrease crash risk relative to baseline driving.
3) Emotional conversations always produce more cognitive distraction than neutral conversations.
4) Cognitive distraction from cell phone conversations is a property of the mind, and cannot be directly measured in the brain.
5) Cognitive distraction increases response time to visual events in the periphery more than in central vision, thereby reducing the “useful field of view.”
6) Drivers with increased gaze time to the forward roadway during a cognitively loading task are engaged in unsafe driving behavior.
7) Short visual-manual tasks do not have as much cognitive distraction as long visual-manual tasks with high subjective workload and lane and speed deviations.

Enhanced Lane Keeping during Verbal Distraction: the Effect of Lead Car Presence
Mera, N. & Boer, E.
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Previous simulator studies on driver distraction suggest that the effect of distracting in-vehicle tasks on driver performance may depend on the nature of the task itself. Whilst tasks that divert drivers’ visual attention away from the road impair lateral control of the car and may increase reaction time to a sudden event in the road, non-visual tasks which allow drivers’ eyes to remain on