

The role of simulation in the assessment of older drivers

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Abstract

Within the project AGILE an assessment system for ageing drivers is developed. A multi-tier procedure including simulator-based diagnostic tests is will be created. Objective driver performance measurement, design of risky scenarios to test performance limits and high face validity are benefits of driving simulation. Older drivers might be, however, more susceptible to simulation sickness, side-effects of technological environments, and associated problems. The role of simulation within a test battery for older drivers has therefore to be considered carefully.

The situation of ageing drivers

Maintaining mobility is critical for an independent life-style in old age. Due to shorter walking distances and immediate availability, driving is in comparison to public transport a relatively user-friendly transport mode for older persons (Brouwer & Ponds, 1994). Decreased fitness to drive and weakened driving skills are, however, a frequent concomitant of old age. Self-reports of older drivers indicate an ageing-related increase in the prevalence of specific impairments potentially influencing driving performance. Figure 1 for example shows the percentage of older drivers reporting persistent troubles to react fast if necessary.

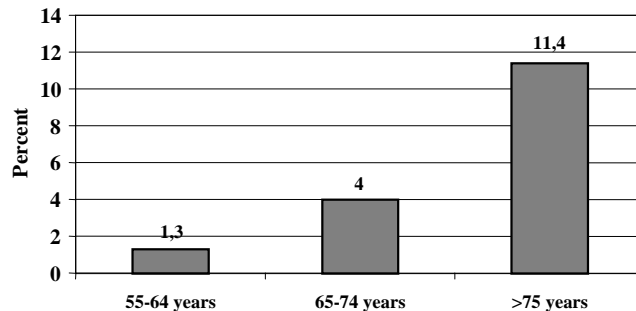


Figure 1. Percentage of older drivers reporting permanent troubles to react fast if necessary, self-report data.

In D. de Waard, K.A. Brookhuis, S.M. Sommer, and W.B. Verwey (2003), *Human Factors in the Age of Virtual Reality* (pp. 155 - 158). Maastricht, the Netherlands: Shaker Publishing.