Self-assessment and Road Behaviour

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Introduction

- One of the factors affecting driving behavior, not sufficiently investigated in the scientific field of transport research, is driver self-assessment.

- Inaccurate self-assessment of driving skills has been associated to unsafe driving behaviour and road accidents (Nakai, and Usui 2012).

- Assessing driving behaviour can be achieved through self-report questionnaires, focus groups, interviews and driving diaries.
Objective and Methodology

- The objective of the present research is to correlate self-assessment and other characteristics of drivers with parameters of their road behavior and questionnaire indicators.

- A simulator experiment was conducted, and a questionnaire was filled in for a sample of 125 drivers.

- The collected data (both from the questionnaires and the simulator) were grouped using the factor analysis method and three linear regression models were developed.
1. What are your weak and strong points in driving?

17 Variables

Factor Analysis

Factors

1) Driving skills
2) Driving behaviour towards the other road users
3) Safe driving

2. How often do you perform the following while driving?

9 Variables

Factor Analysis

Factor

4) Driving impairments
Results – Linear Regression models

- **Dependent variables:**
  - Mean driving speed
  - Average Headway
  - Reaction Time

- **Independent variables:**
  - Standard deviation of lateral position, Factor 1 (Driving skills), Participant’s age, Driving experience
  - Mean driving speed, Factor 3 (Safe driving), Age group (35-60)
  - Mean driving speed, Factor 4 (Driving impairments), Participant’s gender
Conclusions

- Results indicate that the more efficient a driver considers themselves, the more they increase their mean driving speed.

- Regarding reaction time, it is found that drivers' perception of driving impairments is associated with increase of reaction time at an unexpected event.

- Overall, drivers evaluated realistically their driving skills with an exception when it came to the safety driving measures which were: keeping an adequate headway from the vehicle in front, accurately adjusting their speed on different driving conditions, maintaining speed limits.
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9th INTERNATIONAL CONGRESS ON TRANSPORTATION RESEARCH
ICTR 2019
October 24-25
Athens, Greece

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