Assessing the relationship between the Driver Behavior Questionnaire and the Driver Skill Inventory: Revealing sub-groups of drivers

The Driver Behavior Questionnaire and the Driver Skill Inventory are two of the most frequently used measures of self-reported driving style and driving skill. The motivation behind the present study was to identify sub-groups of drivers that potentially act dangerously in traffic (as measured by frequency of aberrant driving behaviors and level of driving skills), as well as to test whether the sub-groups differ in characteristics such as age, gender, annual mileage and accident involvement. Furthermore, the joint analysis of the two instruments was used to test drivers' assessment of their own self-reported driving skills and whether the reported skill level was reflected in the reported aberrant driving behaviors. 3908 drivers aged 18–84 participated in the survey. K-means cluster analysis revealed four distinct sub-groups that differed in driving skills and frequency of aberrant driving behavior. The sub-groups also differed in individual characteristics and driving related factors such as annual mileage, accident frequency and number of tickets and fines. The differences between the sub-groups suggest heterogeneity across the population, and since two of the sub-groups reported higher frequency of driving aberrations and lower skill level, they seem more unsafe than the two others. The results suggest that drivers' assessment of their driving skills is reflected in their aberrant driving behaviors, as drivers who report low levels of driving skills, also report high frequency of aberrant driving behaviors, and vice versa. The present findings highlight the need to look into driver’s attitudes towards safety, and to devise differential interventions targeting specific problematic groups of the population in the attempt to improve road safety nationwide.