

**Abstract – CIECA 50<sup>th</sup> General Assembly and Congress, Belfast May 29 – June 1, 2018.**

## **Title**

**The impact of pre-driver education courses on risk perception in Irish adolescents.**

## **Authors**

Dr Margaret Ryan<sup>1,2</sup> Email: [margaretryan@rcpi.ie](mailto:margaretryan@rcpi.ie). Mobile: +353 87 2818090 **PRESENTER**

Dr Michael Gormley<sup>3</sup> Email: [Michael.gormley@tcd.ie](mailto:Michael.gormley@tcd.ie). Tel: +353 1896 3903

## **Background**

Accumulated empirical evidence demonstrates clearly that the ‘young, novice driver’ problem is not merely the result of inadequate driving skill, but rather is also contingent on inappropriate driving practices. Motivational models of driving behaviour (e.g. Fuller’s Task-Capability Interface model, 2005) propose that driver decision-making is motivated primarily by a desire to keep driving workload within limits that are acceptable to the individual driver. Motorists achieve this by balancing the demands of the driving task with their driving capabilities; a process termed calibration (Kuiken & Twisk, 2001). The concept of calibration is particularly interesting in the context of driver education because evidence suggests that faulty calibration (i.e. the inaccurate perception of task difficulty and/or driver capability) is widely cited as a root cause for the ‘young novice driver’ problem (Arnett, 1996; Deery, 1999; McNight & McKnight, 2003). This suggests that the development of content and processes that can identify and remediate mis-calibration should be a key objective of good driver education interventions. The specific aspect of calibration that we were interested in this study was risk perception.

## **Aim and study design**

This study formed part of a broader research project that sought to assess the impact of a range of pre-driver education courses designed for Transition Year students in Irish schools. Key safety indicators in the project including the driving-related knowledge, risk perception skills and attitudes towards speeding. The current study assessed the participants’ risk-perception skills using self-report questionnaires which were administered on three

---

<sup>1</sup> National Office for Traffic Medicine (RSA/RCPI), Frederick House, Dublin 2.

<sup>2</sup> Visiting Research Fellow Centre for Innovative Human Systems, School of Psychology, Trinity College Dublin, Dublin 2.

<sup>3</sup> Assistant Professor, School of Psychology, Trinity College Dublin, Dublin 2.

occasions; baseline, post-intervention and post-intervention + 9 months. Advanced data analysis techniques were deployed e.g. Hierarchical Multi-level modelling.

### **Sample characteristics and research measures**

Adolescents from 34 participating schools were classified according to their pre-driver education status (5 active groups and a control group). Low levels of attrition were recorded over the three phases of the study; Baseline (1,880), Time 2 (n = 1,324) and Time 3 (n = 1,412). The active groups attended one of five different types of pre-driver education programmes. Risk perception was measured using four self-report scales and a vignette. The scales measured students' a) perceived risk for adolescent drivers, b) crash risk likelihood estimates, c) perceived controllability of risk and d) willingness to take risk in traffic.

### **Results**

Small, statistically significant increases in short- and long-term willingness to take risk in traffic generally were recorded in the sample as a whole. Small changes in risk perception, in the desired direction, were observed in students who took a pre-driver education course, over the short- and the longer term. Whereas greater improvements were seen in the active groups compared with the controls, these differences were not statistically significant.

A number of factors influenced risk perception in the baseline test including gender, exposure to aberrant driving, experience with using vehicles and trait impulsiveness and sensation seeking. In general, males perceived less risk and were more willing to take risks than females. Higher exposure to aberrant driving predicted poorer risk perception in the baseline test and attendance at a pre-learner driver education course did little to reverse this trend.

### **Conclusions and recommendations**

These findings suggest that attendance at the pre-learner driver education courses did not result in significant improvements in students' perception of risk on the roads. This does not accord with findings in previous studies, including the UK "Drive" initiative and New Zealand's "Risk Management and Road Safety" programme. Most likely this is because the current study was more wide ranging and more sophisticated methodologically than the earlier ones. Given the apparent pervasive influence of aberrant driving behaviour on the perception of risk in this group, it was recommended that a more systematic approach to road safety education should be adopted and that education should be delivered over a longer period of time. Parents and other influential role models should also be alerted to the effects that their aberrant driving behaviour can have on adolescent pre-drivers.