

An exploratory study of professional driving instruction and encouraging the development of a self-regulated safety orientation in novice drivers

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Abstract

Novice drivers' greatest crash risk occurs in the months immediately following the supervised learner period. This research aimed to explore whether elements of professional driving instruction have potential to reduce this risk. Five hundred and forty-four eligible Queensland learner drivers aged 16-19 years completed a voluntary, on-line survey regarding their professional instruction experience, driving behaviour and a motivation inventory framed by self-determination theory. Analyses found professional higher-order instruction predicted self-regulated safety orientations which negatively predicted engagement in risky driving behaviours. Professional higher-order instruction, with strategies encouraging a self-regulated safety orientation, has potential to reduce young novice drivers' risky driving.

Background

Professional driving instruction provides an opportunity to teach, and to instil, safe driving practices pre-independent licensure, albeit there is a lack of evidence to suggest these outcomes typically occur (Beanland et al., 2013; Pressley et al., 2017). Alternatively, the development of higher-order skills has increasing support from research, showing a commensurate reduction in the crash risk of novice drivers (Isler et al., 2011; Senserrick & Williams, 2015).

Higher-order instruction teaches *why*, rather than *what*, to cement learning and higher-order skills to assist transfer of the learning to future driving scenarios (Goodwin et al., 2014; Scott-Parker et al., 2014). For example, rather than providing a limited in-the-moment instruction, such as "increase your following distance" during a night drive, it explains why night driving requires different driving strategies (e.g., "It's harder to see at night so increasing your following distance will allow you to react to other drivers' behaviour"). It is further reinforced by fostering self-regulation of these strategies (Bailey, 2006; Watson-Brown et al., 2018). Self-determination theory (SDT) suggests environments that support self-learning (learner-focused) nurture the development of internally-regulated, positive behaviours, whereas externally-regulated behaviours produce inconsistent driving practices (Deci & Ryan, 2012; Ryan & Deci, 2000).

Higher-order instruction has been examined within the context of parental supervision of learner drivers, however there are limited studies with professional driving instructors (Ehsani et al., 2017; Ehsani et al., 2015; Goodwin et al., 2014; Scott-Parker et al., 2014). This study aimed to investigate the relationships between higher-order instruction, a self-regulated safety orientation, and risky driving behaviours of young novice drivers.

Method

An on-line survey was conducted with 1,647 learner-licensed and P1-licensed drivers aged 16-19 across Queensland to examine their experiences of professional driving instruction, risky driving behaviours, driving confidence, safety orientation, and crashes and police-reported offences. The higher-order instruction measure comprised 16 items rated on how much time the driving instructor spent talking about aspects such as the effects of emotions (“angry or excited”) or physical state (“being tired”) on driving, and driving differently in different conditions (“at night” and “in wet weather”). The measure of self-regulated safety orientation comprised items rated on how true they were to the responder, including “Being a safe driver makes driving more enjoyable” and “Being a safe driver is boring.”

Advertising of the survey was disseminated by the Department of Transport and Main Roads, Queensland schools (via newsletters), and professional driving instructors. Participants were eligible to go into a draw to win an iPhone 7. Multiple regression analyses were employed to analyse the data.

Results

Eligible and complete results were provided by 544 participant learner drivers, of which 67.5% identified as female ($n = 367$, other $n = 3$). The length of learner licensure was, on average, 10 months; the median number of logbook hours was 50-59 hours. Professional driving lessons averaged 4-5 lessons.

The regression analyses revealed that a self-regulated safety orientation was a significant negative predictor of risky driving behaviours and was in fact the strongest predictor. This was particularly influenced by items relating to safe driving interest/enjoyment. Perceived competence as a good and safe driver also predicted less risky driving behaviours. Greater pressure and tension experienced by participants predicted more risky driving behaviours.

The strongest predictor of a self-regulated safety orientation was higher-order instruction. The only direct relationship between higher-order instruction and risky driving behaviours was in relation to *inattentive* risky driving behaviours. No significant observations were found regarding *deliberate* risky driving behaviours.

Conclusions

Higher-order instruction provided by professional driving instructors has the potential to assist young learner drivers to develop a self-regulated safety orientation, which in turn can reduce engagement in risky driving behaviours. SDT suggests a learning environment to support the provision of higher-order instruction. The environment is student-centric, autonomy-supportive and fosters perceived competence which encourages the development of a self-regulated safety-orientation (Deci & Ryan, 2012). The results support higher-order instruction - delivered as a complete concept - as a tool to reduce risky driving behaviours.

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