

Psychosocial factors, goals for driver education and perceptions of driver education

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Abstract

While previous research has identified benefits from certain types of driver education, there has been little research undertaken regarding how psychosocial factors affect this intervention. This research begins to address this gap by examining how four psychosocial characteristics: thrill-seeking, normlessness, attitudes relating to traffic flow and rule obedience as well as attitudes towards speeding, affect perceptions of what should be taught in driver education courses. An online survey was completed by 114 participants aged 17 to 19 years that had completed a driver education course. A series of regression analyses identified that psychosocial factors have an effect.

Background

Young novice drivers experience higher levels of crash rates when compared with older more experienced drivers (Curry, Pfeiffer, Durbin, & Elliott, 2015; Elvik, 2010). Additionally, the crash risk of young drivers is affected by a range of factors including socio-demographic, attitudes and personality (Bates, Davey, Watson, King, & Armstrong, 2014). One countermeasure that is used to increase road safety is driver education (Bates, Filtness, & Watson, 2018). However, there is an extensive range of driver education programs offered around the world (Beanland, Goode, Salmon, & Lenne, 2013). Thus, it is useful to use a framework to guide the development and evaluation of education programs.

The Goals for Driver Education (GDE) framework organises information about driver behaviour, training and skills development to inform driver education and training practitioners (Berg, 2006). It contains four levels and three categories (see Table 1) and is useful to capture the wide range of information that can be taught in courses.

This study examines if psychosocial factors such as thrill seeking and normlessness as well as young driver attitudes towards traffic flow and rule obedience affect perceptions of what would be beneficial for learner drivers and pre-learner drivers to be taught in driver education courses.

Method

Individuals aged 17 to 19 years that had completed a young driver education course in the past three years were approached to complete a survey regarding their perceptions of driver education. Of those approached, 114 participants completed an anonymous online survey between February and March 2016. There was a response rate of 18.01%. The survey collected information regarding socio-demographic factors as well as using scales to measure their perceptions of the benefits of driver education at each of the four levels of the GDE framework. The psychosocial characteristics measured were driver thrill seeking (Matthews, Desmond, Joyner, Carcary, & Gilliland, 1997), normlessness, attitudes towards traffic flow versus rule obedience and attitudes towards speeding (Ulleberg & Rundmo, 2003). Multivariate regression analyses were used to identify the effect of these psychosocial factors on perceptions of the importance of learning various aspects of driving at each level of the GDE framework.

Table 1. Goals for Driver Education Framework including examples for each cell

	Knowledge and skills	Risk-increasing factors	Self-evaluation and awareness skills
Level 4: goals for life/ skills for living	Knowledge of personal tendencies that affect driving	Non-acceptance of social norms regarding drug use	Ability to recognise and control impulses
Level 3: goals and context for driving	Trip planning knowledge	Risks associated with driver condition	Personal planning skills
Level 2: mastery of traffic situations	Safety margins	Driving skill in relation to weather conditions	Awareness of personal driving style
Level 1: vehicle manoeuvring	Non-declarative knowledge of how to operate a car	Insufficient automatised psychomotor skills for operating the vehicle	Realistic self-evaluation of ability to reverse park

Adapted from Peraaho, Keskinen, and Hatakka (2003)

Results

The results suggest that psychosocial factors affect what young people believe would be beneficial for learner drivers or pre-learner drivers to acquire while on a driver education course (GDE Level 1: $R^2 = .11$; GDE Level 2: $R^2 = .17$; GDE Level 3: $R^2 = .29$; GDE Level 4: $R^2 = .78$). Thrill seeking had more of an impact on the lower three levels of the GDE where there was a clearer link to driving (GDE Level 1: $\beta = .29$; GDE Level 2: $\beta = .29$; GDE Level 3: $\beta = .23$; GDE Level 4: not significant). In contrast, those with more positive attitudes to speeding indicated that it was less beneficial for learner drivers or pre-learners to undertake driver education at the lower levels of the GDE (GDE Level 1: $\beta = -.31$; GDE Level 2: $\beta = -.32$; GDE Level 3: $\beta = -.29$; GDE Level 4: not significant).

Conclusions

Previous research has identified that certain types of driver education can improve driving intentions (Anderson, Bates, & Madon, 2018), hazard perception skills (Poulsen, Horswill, Wetton, Hill, & Lim, 2010) and driving skills (Beanland et al., 2013). However, there is little work that examines how psychosocial factors affect perceptions of driver education. This study suggests that these factors are important with those who have more positive attitudes to speeding believing it is less beneficial to learn about vehicle maneuvering, mastery of traffic situations and the goals and context for driving. Although further research is required, particularly given the low number of participants and response rate, this suggests that psychosocial factors may affect the efficacy of driver education and need to be considered in the design or delivery of relevant programs. It is possible that the driver education could be designed so that participation increased favourable perceptions. Additionally, there is a need to identify if participation in education has benefits regardless of the perceptions held.

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