



# The effect of age, gender and attitudes on self-regulation in driving

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## ABSTRACT

Self-regulation in driving has primarily been studied as a precursor to driving cessation in older people, who minimise driving risk and compensate for physical and cognitive decline by avoiding driving in challenging circumstances, e.g. poor weather conditions, in the dark and at busy times. This research explores whether other demographic groups of drivers adopt self-regulatory behaviours and examines the effects of affective and instrumental attitudes on self-regulation across the lifespan. Quantitative data were collected from 395 drivers. Women were significantly more likely than men to engage in self-regulation, and to be negatively influenced by their emotions (affective attitude). A quadratic effect of age on self-regulation was determined such that younger and older drivers reported higher scores for self-regulation than middle-years' drivers. However, this effect was affected by experience such that when experience was controlled for, self-regulation increased with age. Nevertheless, anxious driving style and negative affective attitude were independent predictors of self-regulation behaviours. Results suggest that self-regulation behaviours are present across the driving lifespan and may occur as a result of driving anxiety or low confidence rather than as an effect of ageing.

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## 1. Introduction

Self-regulation has been widely researched in 'older' drivers as a mechanism for safely extending driving mobility and independence in an ageing population. The definition of 'older' varies between studies with inclusion criteria ranging from 50 to over 70 years of age. Although self-regulation may be a precursor to driving cessation, it can be considered on a continuum (Lyman et al., 2001). The spectrum runs from complete driving independence through voluntary reduction of driving exposure, e.g. trips and reduced distances (Marottoli and Richardson, 1998; Charlton et al., 2006) as well as avoidance of challenging driving circumstances, e.g. unfamiliar routes, poor weather, heavy traffic (Ball et al., 1998; Stalvey and Owsley, 2003; Baldock et al., 2006; Charlton et al., 2006) to complete driving cessation.

Self-regulation has generally been thought of as a compensatory coping strategy for older drivers who, recognising some physical, cognitive or functional impairment, purposely limit or restrict their driving, in order to maintain independence but reduce accident risk (e.g. Ball et al., 1998; Hakamies-Blomqvist and Wahlström, 1998; Baldock et al., 2006). However, it may also reflect lifestyle changes, be used as a coping mechanism following a traumatic experience such as a crash (Blanchard et al., 1994) or as a sensible general risk

reduction strategy (Charlton et al., 2006). It is this latter process which is of most interest to this research.

If self-regulation is thought of on a continuum and as a risk reduction strategy, then it is possible that a wider population could use self-regulatory behaviours to manage driving risk. Certainly, since self-regulation incorporates a wide range of driving behaviours, from driving avoidance through active planning and preparation including route planning and trial runs, pre-arranging rest stops and making vehicle adaptations (Molnar et al., 2009), it is likely that all drivers are to some extent 'self-regulators'. If self-regulation is used to manage driving risk, then the theoretical models that have been applied to decision making about risky health behaviours can also be applied to self-regulatory driving practices.

The theory of planned behaviour assumes that behaviours are chosen and rational, specifically that behaviours are determined by intentions which are based, in part, on an individual's attitudes towards that behaviour (Ajzen, 1985, 1991). The theory has been used extensively to understand and predict people's attitudes towards their health (e.g. exercise, dieting, smoking habits, binge drinking), as well as travel choices and driving behaviour (e.g. seat belt usage, drink driving and intention to violate traffic laws). For example, behaviours such as speeding in urban areas and overtaking have been linked to attitude in terms of beliefs about getting to a destination faster (Parker et al., 1992; Wallén Warner and Aberg, 2008). In the case of self-regulation, it is possible that an individual's beliefs and attitudes about driving risk may affect their intention to drive and ultimately alter their driving behaviour, and

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