



Peer influence on speeding behaviour among male drivers aged 18 and 28



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ABSTRACT

Despite extensive research, preventive efforts and general improvements in road safety levels, the accident risk of young male drivers remains increased. Based on a standardized survey of a random sample of 2018 male drivers at the age of 18 and 28, this study looked into attitudes and behaviours related to traffic violations of male drivers. More specifically, the role of peer influence on speeding was examined in both age groups. In regression analyses it could be shown that the descriptive subjective norm, i.e., the perception of friends' speeding, was the most important predictor of speeding in both age groups. Other significant factors were: negative attitude towards speed limits, injunctive subjective norm, and the perceived risk of having an accident when speeding. In the older age group it was more common to drive faster than allowed and their speeding was largely in line with the perceived level of their friends' speeding. In the younger age group a higher discrepancy between own and friends' speeding was found indicating that young male drivers are socialized into increased speeding behaviour based on peer pressure. By contrast for the 28-year-olds peer pressure mainly seems to maintain or justify individual speeding behaviour. It is suggested that preventive measures should take these different influences of peer pressure into account by using a peer-based approach for the 18-year-olds and a more individual approach for the 28-year-olds.

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1. Introduction

Based on their persistence over time, some road safety problems appear to be more difficult to solve than others. As stated by Elvik (2010) the young driver problem is a clear case as the accident risk of young drivers, particularly young male drivers, remains increased despite extensive research and preventive efforts in the area as well as general improvements in road safety levels.

The large number of factors contributing to the young driver problem can be categorized in a number of different ways. A useful categorisation has been proposed by Gregersen and Bjurulf (1996) who distinguish between factors related to the process of learning to drive on the one side and motivational factors related to the individual preconditions and social influence on the other side.

Based on previous research it is clear that motivational factors are of particular relevance in relation to young male drivers as improvements in driving skills do not eliminate the gender difference in accident risk (Ferguson et al., 2007; Lam, 2003). In addition, it has been shown that the increased accident risk of young male drivers is partly a consequence of voluntary engagement in

high-risk behaviours and situations (Clarke et al., 2005; Özkan and Lajunen, 2006; Williams, 2003). Similarly, young male drivers have a more negative and less compliant attitude towards traffic rules and traffic safety compared to other drivers (Bergdahl, 2005; Laapotti et al., 2003; Kweon and Kockelman, 2006; Yagil, 1998), they perceive driving situations as less risky (Finn and Bragg, 1986; Tränkle et al., 1990), are more likely to disregard the speed limit (Cestac et al., 2011; Williams et al., 2006), and are influenced by a socialization process leading to stereotyped gender role identification which encourages risk-taking behaviour among male drivers (Özkan and Lajunen, 2006; Sibley and Harré, 2009). Finally, young male drivers have been shown to be involved in a proportionally higher number of accidents related to motivational factors compared to young female drivers (Laapotti and Keskinen, 2004).

According to Berkman (2000) social influence is a concept used to cover the effect others have on the attitudes and behaviour of individual persons and groups. In relation to driving behaviour the importance of motivational factors stemming from social influence was already identified many years ago (e.g., Zaidel, 1992). Since then results of a number of studies have highlighted the complex nature of social influence on young driver behaviour which can be categorized according to two interrelated dimensions: (1) direct versus indirect social influence, and (2) active versus passive social influence.

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The direct–indirect dimension regard social influence stemming from persons present in the car while driving versus social influence stemming from other road users present in the general traffic environment. Regarding passenger influence, results are ambiguous but indicate that the influence varies according to the relationship between the young driver and the passenger such as the passenger being the parent of the driver (e.g., Scott-Parker et al., 2012) or a peer (e.g., Simons-Morton et al., 2011; Johnson et al., 2012), as well as according to individual characteristics of the passenger such as age (e.g., Williams et al., 2007) and gender (e.g., Simons-Morton et al., 2005). Regarding social influence from road users present in the traffic environment, sources of influence include the perception of the actual behaviour of the other road users (e.g., Åberg et al., 1997; Haglund and Åberg, 2000) and perceived pressure to behave in a certain way such as keeping up with the traffic flow (e.g., Fleiter et al., 2010).

The active–passive dimension regard social influence stemming from verbal encouragement by passengers and passive influence such as perceived pressure or norms to behave in a certain way and anticipated punishments and rewards from parents and peers (e.g., Gregersen and Berg, 1994; Møller, 2004; Scott-Parker et al., 2009; Horvath et al., 2012). Previous research indicates that the influence from passive peer pressure is particularly strong (Sela-Shayovitz, 2008).

Due to the well-documented gender differences in road traffic accident risk and driving behaviour, exploring the influential factors separately for male and female drivers has been suggested as a relevant approach (e.g., Horvath et al., 2012; Møller and Haustein, 2013). Additional support for a gender specific approach is found in the fact that male drivers appear to be more susceptible to social influence than female drivers (e.g., Conner et al., 2003; Cestac et al., 2011). A possible explanation for this difference may be found in gender specific differences in peer group relationships with male relationships being more competitive and involving a higher level of risk compared to female relationships (Simon and Corbett, 1996).

The importance of peer influence on the behaviour of young drivers is generally acknowledged and integrated into preventive measures such as graduated licensing systems for instance through restrictions on number and age of passengers allowed (e.g., Williams and Shults, 2010; Fell et al., 2011; Williams et al., 2012). However, only limited knowledge on peer influence into early adulthood is available. On this basis the main purpose of the present study was to see if a similar relationship between driving behaviour and peer influence is present among male drivers at the age of 18 and 28. A particular focus is put on speeding as driving speed and speeding violations continue to be a major factor in relation to road safety (Aarts and van Schagen, 2006; Clarke et al., 2010; Elvik, 2010; Iversen and Rundmo, 2004).

The role of social influence on speeding has mostly been investigated within the framework of the Theory of Planned Behaviour (Ajzen, 1991), showing that self-reported speeding or the intention to speed can be successfully explained by attitude towards speeding, perceived social pressure to speed (=subjective norm) and perceived ability to speed (=perceived behavioural control) (e.g., Cestac et al., 2011; Conner et al., 2003; Elliott et al., 2005; Forward, 2009; Letirand and Delhomme, 2005; Warner and Åberg, 2006). Among other constructs, the inclusion of descriptive subjective norm, which measures beliefs about other people's speeding, significantly contributed to explaining variance in speeding intention (Cestac et al., 2011; Forward, 2009). In this study peer influence is measured by both injunctive and descriptive subjective norms and this study examined what role these factors play for speeding at the age of 18 and 28 besides other factors, such as socio-demographic, attitudinal and behavioural variables.

2. Method

2.1. Data collection

Data for the survey was collected by postal questionnaires using one reminder letter. The questionnaire consisted of a combination of questions used in a previous study on a related matter (see Møller and Gregersen, 2008) and questions developed specifically for this study based on a Danish study on social norms (see Balvig et al., 2005). The questionnaire included 51 questions. A stamped and addressed envelope was enclosed in all letters with the questionnaire. The sample consisted of 4000 male drivers randomly drawn from the Danish Driving Licence Register. The selection criteria ensured that all participants got their licence at the age of 18 and had the opportunity to achieve some driving experience after licensing. Thus half of the sample was 18-years-old with 6–12 months of driving experience. The other half was 28-years-old with between 10 years and 6 months and 11 years of driving experience. The overall response rate was 51% ($N=2018$). The response rate among the 18-year-olds was 53% ($N=1055$). The response rate among the 28-year-olds was 48% ($N=963$).

2.2. Measures

The questionnaire used included background information, driving behaviour including traffic violations, subjective norms and attitudes and beliefs towards traffic rules and behaviours as well as parts which are not relevant for this study.

Background information included education, occupation, having children, and residential area.

Driving behaviour: The frequency of driving was measured on a four point scale ranging from 1 = “4–7 days per week” to 4 = “less than 1 day per month”. Participants were further asked on a 5-point scale ranging from 1 = “always” to 5 = “never” how often they exceeded the speed limit, when there was a possibility to do so. The assessment was made separately for driving in built-up areas and on rural roads. On the same scale the frequency of driving without a safety belt was assessed both on highways and within built-up areas. Drivers were further asked how often they (ever and within the past 12 months) had driven under the influence of alcohol (1 = “never”; 2 = “one time”; 3 = “a few times”; 4 = “several times”). Finally, they were asked if they had (ever and within the past 6 months) been involved in an accident and if they had (ever and within the past 6 months) been ticketed for different violations of the traffic rules (speeding, driving without a safety belt, drunk driving).

Peer influence: Peer influence was measured by two constructs: descriptive and injunctive subjective norm (SN). Participants were asked how often they expected their best friends to drive at excessive speed in built-up areas and on rural roads (from 1 = “always” to 5 = “never”), which is referred to as *descriptive SN*. In addition they were asked how they expected their best friends to react in five different situations, violating the traffic rules (see Fig. 2 for a list of items), which is referred to as *injunctive SN*. The drivers could answer that friends would either “approve” (1) of the participant's behaviour, would “not care” (2) or would “try to prevent” (3) the respective behaviour.

Attitudes towards traffic rules and behaviours. Participants were asked to assess 12 statements expressing different attitudes about speeding, the use of safety belts, drunk driving, and general behaviour in traffic (see Fig. 1 for a list of all items). A factor analysis with varimax rotation was conducted based on the 12 items and revealed a four-factor solution explaining 53.3% of the variance. Based on a factor related to attitudes towards speed limits a mean scale was constructed (Cronbach's alpha = .63), which was

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