

Chapter 16

Young drivers' attitudes towards risks arising from hazardous driving behaviours

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Abstract

Young drivers' attitudes towards, and perceptions of, selected driving risks were explored. Nineteen males and twenty-five females aged 17-24 years, all Australian citizens holding a current driving licence, participated in six focus groups to discuss: speeding, drink-driving (and other drug use while driving), fatigue/tiredness, and seatbelt use. Group discussions were audio taped and data analysis proceeded by grounded theory. Themes and sub-themes were extracted from information provided by participants.

Introduction

The topics of risk perception, risk taking and crash involvement among young novice car drivers, particularly males, including developmental and control aspects, have received and continue to receive research attention (e.g., Arnett, 2002; Brown and Groeger, 1988; Deery, 1999; Deery and Fildes, 1999; Delhomme and Meyer, 1998; Farrand and McKenna, 2001; Glendon *et al.*, 1996; Gregersen and Berg, 1994; Harré, 2000; Harré *et al.*, 1996; Hattakka *et al.*, 2002, 2003; Jonah, 1990; Lam, 2003; Laapotti *et al.*, 2001; Matthews and Moran, 1986; McKnight and McKnight, 2003; Sharpley, 2003; Vavrik, 1997; Williams, 2003). While all developed nations have some interest in seeking ways to reduce road casualties, evidence from other disciplines indicates a gap between legislation that can impose severe penalties upon young drivers involved in crashes (e.g., in Switzerland¹), and recent developmental evidence for respective rates of maturation of the amygdala, which may be regarded as the seat of emotions, and higher cortical functions that control impulsive behaviour, in adolescents (e.g., Baird and Fugelsang, 2004; Durston *et al.*, 2001), as well as gender differences in brain development (e.g., Killgore, Oki and Yurgelun-Todd, 2001). Addressing this important topic from a grounded psychological approach might help to bridge the gap between these respective positions and also provide a framework that could help to guide policy and training in this field.

Method

Participants were nineteen males and twenty-five females aged 17-24 years, all Australian citizens holding a current driving licence. Six focus groups were run with facilitators imposing minimal direction on discussions, guiding conversation to incorporate themes of: speeding, alcohol and other drugs, fatigue, seatbelts, inexperience and inattention, and intersections. Selection of these themes was based upon recent data concerning vehicle crashes in Queensland, Australia. Only material from the four hazardous behaviour categories are considered in this chapter. Group discussions, which were audio taped, continued until little additional information was being extracted.

The methodology of focus groups is well known (e.g., Kitzinger, 1994), and the success of using qualitative accounts of driving incidents has been established (Dorn and Brown, 2003). Grounded theory provided the basis for data analysis (see for example, Pidgeon and Henwood, 1996). Each group discussion was first analysed individually before the data were collated to summarise all discussions. Themes and sub-themes were extracted from the information provided by participants under the above headings (see for example: Berg, 2001; Coffey and Atkinson, 1990; Glesne, 1999). Additional categories emerged from the data and quotes representing emergent themes were recorded verbatim. Table X.1 summarises the terminological hierarchy used to describe study findings.

Table X.1 Terminology

<i>Term</i>	<i>Description/derivation</i>
Domains	Areas for investigation: Behavioural hazards, External influencing factors, Personal factors, Counter strategies
Themes	Behavioural hazards selected for study: Speeding, Alcohol/other drugs, Fatigue/tiredness, Seatbelts
Sub-themes	Emerged from discussion
Components/ Topics	Perceptions, opinions, expressed thoughts, cognitions, attitudes and emotions, comments, suggestions, reported behaviours, examples, ideas, experiences, views, values, perspectives, illustrations, notions, arguments

Material from the discussions could be coded within four major linked domains: behavioural hazards – the focus of this study, external influencing factors, personal factors, and counter strategies. This chapter reports findings from the behavioural hazards domain. As a purely qualitative study, no reference is made to the number of times that a particular view was expressed or behaviour described, but merely records that the material emerged from one or more of the discussions. The results

section provides a framework for describing the findings, and participants' expressed thoughts are presented as directly as possible. To facilitate appreciation of these views, material drawn directly from the discussions is in italic text and verbatim speech is within quote marks.

Results

Speeding

The sub-themes that emerged provide a framework for describing views expressed. The range and variety of comments elicited on this topic reflected the complexity of motivations with respect to speeding behaviour, which are summarised in Figure X.1. Figure X.1 represents the sub-themes under this heading as a force field analysis, in which the two main groups of factors are juxtaposed to represent two sets of forces, one deemed to increase the likelihood that young drivers will speed and the other that might be expected to act in the counter direction. Cognitive and environmental limitations ensure that only a small number of factors operate under any given set of circumstances, and thus Figure X.1 and the descriptions that follow, represent an overview of multiple factors, only a few of which will operate within any driving context.

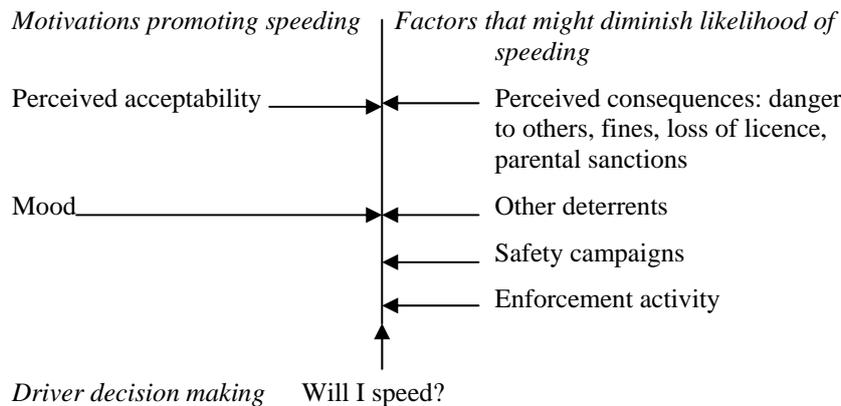


Figure X.1 Sub-themes within the Speeding theme

The 'perceived acceptability' sub-theme could be divided into expressions of internalised views, feelings or actions on the one hand, and on the other, externally derived perceptions of acceptability. The repertoire of internalised motivations related mainly to cognition and driving. This included views expressing an ability to select for occasions when speeding was more or less acceptable. One distinction drawn was between '*sensible*' and '*crazy*' speeding, for example that driving at 10% over the signed limit was acceptable, or that speeding was acceptable at different times, for example late at night when there was perceived to be less risk to other road users, when you were late for an appointment, or when you know that there

are no speed cameras around. Some areas were seen to be *acceptable for speeding* and there was a view that *being fined in these locations was unfair – for example driving down steep slopes or coming off a motorway and being required to reduce speed from 110 kph to 60 kph*. There was also a view that *speeding was ‘just something you do’, knowing that sometimes you can, and sometimes you can’t get away with it*.

Value for risk also featured as a potential component in respect of the decision to speed. For example one view was that *speeding was not seen as a risk when you were doing it*, while a rather different thought was that *it did not matter if you were doing it (speeding) because someone else could be speeding and kill you anyway*. This externally oriented risk perception was countered by others indicating that it was *ok if you were in control and were confident with your driving and within yourself and the road conditions were ok (not wet)*, while another participant said *that you speed more as you become more confident (as a driver)*. Another view was that *speeding became automated so you ‘forget you’re doing it’*.

Externally derived motivations included the view that *everyone does it (speed)*, (*‘... pretty much everyone I know speeds ...’*), *that speeding was ok if you were driving at the same pace as others who were speeding (for example in a stream of traffic)*, or *that your own speeding was not as bad when seen in the context of other drivers’ speeding*. A more specific comparison was with parents’ driving behaviours and the *values adopted from parents and their influence on your driving, such that if they speed then this is considered to be acceptable driving behaviour*.

Statements reflecting ‘mood states’ as a motivation for speeding could be divided into those characterising positive and negative moods. Positive mood was reported to be induced by affective states such as: *feels good, or because it’s ‘fun’, or from mood induced by music being played. Really wanting to get home and the feeling of driving a powerful car* also figured. Ways in which mood could be affected, perhaps resulting in a tendency to reduce speed included *soothing adverts that can bring down your mood, and classical music to reduce ‘road rage’*. Negative moods reported to influence speeding behaviour included: *speeding more when angry, and traffic frustrations, which included being stuck behind a ‘slow driver’, someone trying to overtake you, ‘bad drivers’, traffic delays, and daily circumstances such as having a fight with your boy/girlfriend* (of losing a friend in a car accident, one respondent remarked that *‘... he’d had a fight with his girlfriend that night’*). *Being impatient as a personality characteristic* was also mentioned. O’Brien *et al* (2004) consider situational factors contributing to the expression of driving aggression. Garrity and Demick (2001) found that while young adults’ personality traits were unrelated to driving, certain mood states were related to driving cautiousness.

Four different types of ‘consequences’ found expression within the perceived consequences of speeding sub-theme. The first alluded to danger in some way, for example that *danger became more apparent after some personal experience, or a level of consciousness that it would be possible to kill someone before making the decision to speed*, or that sometimes an effort was made to remind oneself that *you can kill before speeding – ‘... if you*

think about what could happen when you're speeding, you wouldn't do it ...'. An example was *following too close when speeding so that one can't stop in time*. Glendon and Sutton (2005) consider the complex relationship between speeding and close following in motorway traffic. One participant indicated *that they would be more likely to speed if they thought that they would be no danger to others as a result*, while another suggested *that speeding per se was not dangerous, but that other drivers were*.

The second type of consequence was the possibility of being fined, which was reported on one hand to be *the biggest motivator to stop speeding*, while an alternative perspective was that *'... fines are a minimal consequence compared to death'*. Another view was *that the importance of this consequence varied with the amount of money that one had – the driver not caring if they can afford it, but that it was a big deterrent if they had things that they wanted to spend money on*. Possible gender differences in a young driver's ability to talk their way out of being fined for speeding were referred to. The third potential consequence was loss of licence, which was considered to be the *most important* by at least one participant. Also referred to was the *inconvenience of losing your licence, and becoming more aware of speeding once you start to lose points*. Another view was that *it didn't matter, as there was not much chance of being caught*. The final consequence was a more generalised *threat from parents*, one participant noting that they *didn't speed any more because '... my family got me up for speeding'*.

Other 'deterrents' related again to the value for risk, for example expressed as *a risk to self and others, such that having a near miss will make you slow down* (a finding reflected in Deery, 1999), or as an *awareness of how quickly accidents happen and how dangerous you can be on the road, especially just after you have done something stupid in traffic*. More specific environmental deterrents referred to included: *not speeding in heavy traffic, when school children were around* (on children involved in car accidents, one respondent remarked, *'... they're so small; they can't possibly survive ...'*), or *in the vicinity of elderly drivers or 'bad' drivers because of the need for awareness and for 'good reaction times'*. Vehicle-related deterrents included *limitations of the car being driven ('I don't speed because I know the limits of my car')*, and *cars that 'beeped' when a pre-set speed limit was reached*.

Comments under the 'safety campaigns' sub-theme could be divided into those considering particular aspects of road safety campaigns (perceived as advertising) or campaigns in general, to be effective and those taking a contrary position. *Adverts showing differences in stopping time were considered to be effective for people who can't visualise it otherwise, and the impact of ads with children in them* was acknowledged, with a participant commenting that *this would make them/drivers slow down on suburban streets*. One participant considered that *campaigns worked initially but then drivers became desensitised*, implying that continual novelty was required for road safety campaigns to be effective.

Negatively oriented comments included that such *campaigns were not effective and a waste of time, that it was not possible to change speeding behaviour through ads ('... they can't stop you speeding ...')*, that *ads were*

'gruesome' but the reaction was that this would not happen to me, or else they would make the viewer switch off and not watch. Other views expressed were that campaigns would have more impact if they left more to the imagination rather than being so graphic, and that they could be upsetting for people to watch if they had had personal experience with road death (several participants had known friends who had been killed in road crashes).

Comments under the 'enforcement' sub-theme related mainly to 'speed traps' in the form of roadside cameras and police presence, although some more imaginative thoughts were also expressed. It was acknowledged that one would slow down if one knew where the speed traps/cameras were located, for example from local radio warnings. Signed warnings of speed traps were considered to be effective and it was judged that they should be put in hazardous locations. The view was also expressed that warnings of speed cameras should be more frequent and that the speed cameras would not then be needed (a version of the intermittent reinforcement principle, although presumably extinction could be expected to occur eventually). One view was that a police presence was a 'huge deterrent', more so than knowing where fixed speed cameras were ('... you don't risk speeding 'cause there's such a strong police presence ...'). Victoria was used as an example where increased use of speed cameras had not reduced speeding, despite more drivers being caught. This was seen as little more than a revenue raising exercise. One participant thought that flashing signs asking drivers what speeds they were doing could be effective (see Glendon and Cernecca (2003) on the effectiveness of road signage for young drivers) while another view was that an effective combination would be roadside signs and a police presence. One participant alluded to the relevance of recognising the types of cars the police used as unmarked cars.

An apparently novel suggestion was that instead of punishing drivers for speeding, they should be rewarded for driving within the signed limit, so that 'safe driving points' could be accrued during a year during which the driver was not caught speeding. However, reporting on Harano, and Hubert's (1974) evaluation of California's 'Good Driver' incentive program, Heino (1996; pp. 80-81) distinguishes reward from incentive programs. Drivers who were free of collisions and convictions over a one-year period had a twelve-month licence extension as a reward, and were promised a second extension if they remained free of collisions and convictions over the following year. Drivers having at least one collision or conviction during the prior year were involved in an incentive program – being informed that they would receive the free licence extension if they kept a clean record for the following year. Neither program influenced the subsequent number of convictions. However, the reward program had detrimental effects on the number of subsequent collisions, whereas the incentive program had various beneficial effects on the number of subsequent collisions. The authors speculate that rewarding drivers who were free of collisions and convictions over a one-year period could have reinforced unsafe driving strategies that happened not to lead to adverse consequences. Alternatively, the result could have reflected a regression-to-the-mean effect.

Alcohol/other drugs

Research into this aspect of driving among young drivers has *inter alia* considered, alcohol expectancy and sensation seeking (McMillen *et al.*, 1990), effects of random breath testing (Soames, 1990), risk and substance use (Shope *et al.*, 1997), urban-rural comparisons of drink-driving (Dunshire and Baldwin, 1999), illicit drug use and perceived risk (Aitken *et al.*, 2000), effects of illicit drug use on driving performance (Ridout *et al.*, 2003), risky driving and adolescent problem behaviour (Jessor, 1988), and designing programs to prevent alcohol-related injury (Boots and Midford, 1999). Figure X.2 shows the sub-themes reflecting the range of responses to the alcohol/other drugs theme in this study.

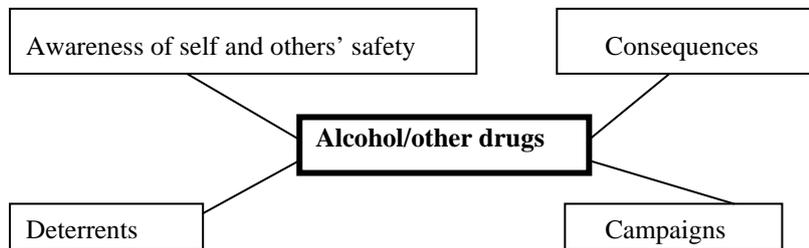


Figure X.2 Sub-themes within the Alcohol/other drugs theme

One perception of the ‘fatal four’ ‘severity hierarchy’ was that *drink-driving was the worst, followed by fatigue, then speeding and (not wearing) seatbelts*. Under the ‘awareness of self and others’ safety’ sub-theme, one participant stated that *while they could feel safe in a car with a speeding driver, this was not the case if they were drunk while driving, or if they were a passenger with a drunk driver*. Atop the hierarchy, *drugs were considered an even worse combination with driving than was alcohol*. Not to ‘do drugs’ at all was generally regarded to be the optimum strategy, although it was also stated that it was *common for people to take drugs but not to drink when out and then to drive home, or that people who smoke [dope] regularly don’t get that high any more and that they can drive ok, or that ‘... a lot of people go out and take drugs rather than drink because they know they won’t get caught for it when they drive’*. An alternative was that it was *good to have fun, but then don’t get in the car*. It was noted that *drugs affect concentration, attention, reaction time and judgement, that some medications can ‘put you over’ [the limit], and being aware of combinations of medication and alcohol and how this affects you as a driver*.

Comments on drink-driving included: *wouldn’t do it if they thought that it might be dangerous to others, feeling more responsible for friends when they’re drunk, trying to deter friends who drink-drive but ultimately recognising that it was their decision, and taking the keys from a drunk or drugged friend*. One commented that *some people were bad enough drivers without alcohol, and worse with it – e.g., ‘... she only had two drinks but*

shouldn't have been driving anyway ..., a similar view being that *even if you were a good driver, alcohol will make you drive worse. Designated drivers were seen as 'cool' – '... you always need a designated driver in a group; it's too dangerous to take the risk'*.

Effects of drinking included: *having no idea what's going on around you if really drunk, being less aware of other drivers, having lower frustration tolerance when drunk so that other people's driving affects you more ('... on alcohol, people get more frustrated more quickly and will do more dangerous things ...')*, *being more impulsive after a few drinks, with less thought of the consequences of driving when drunk, and that alcohol can affect you differently at different times, making a driver either more relaxed or more aggressive*. It was also reported that *you might have your drink 'spiked' while out and then drive without realising this until it was too late*.

A value for risk/compensation component was evident within this sub-theme, being expressed for example as: *overcompensating by driving safer if had a couple of drinks, often taking the risk of driving 'under the influence' because of the cost of taxis, and if 'not that drunk' would drive rather than pay for a taxi, and that there was less risk if driving in country areas compared with the city*. It was also noted that *a driver's emotional state changes when 'under the influence', which affects the risks that are likely to be taken*.

It was recognised that this issue was related to *one's maturity as a driver and as a person* – for example for one participant, *deciding not to drink-drive '... wasn't based on my driving, it was based on my maturity'*. The view was also expressed that *some people drink and drive because they think it makes them look 'harder' and that they thereby gained social status* (Vavrik (1997) found a relationship between high self-esteem and road crashes, considering that male adolescents may use risky driving to show off and to increase their self-esteem). However, the personal experience of one participant who had *had a bad accident while drunk changed a lot of their driving behaviour*. Thoughts expressed as a result of this account were that *this is generally considered to be a much more serious issue now, and that it was not worth taking the risk to show off*. There was also a view that *this was a stage that you grow out of, and that behaviour changes with increased responsibility, such as having a job. Such maturity was not necessarily considered to be age-related*.

Judging how close you were as a driver to the limit found expression in various ways. One view was that *if you were 'just over' and not so dangerous to others then this was ok as you were still in control of the car, but would not drive if others were also in the car, or being in control of the car but maybe a bit over the limit and that it would depend on how far you had to drive*. Another view was that *it would be good for an inexperienced driver to be able to test when they were over the limit and to know how much alcohol was required to put you over. The guidelines for what puts a driver over the limit were considered not to be concrete enough, and issues such as body mass and whether you had eaten were also recognised as being relevant*. *Driving the day after a 'big night out' and not feeling over the limit but realising that you could be* was also mentioned, as was *awareness of the*

length of time you had to wait after having a drink, and the importance of 'mouth alcohol'.

'Consequences' of drink/drug driving mentioned were: loss of licence and the inconvenience of this, embarrassment if caught, accidents, and hurting someone else. It was also noted that if you were on drugs and had an accident then this could interfere with some procedures that could otherwise be used to save you, the example being given of a friend on speed who died because adrenalin could not be used.

'Deterrents' mentioned were: introducing roadside testing for alcohol and now other drugs, personal experiences of friends who had died in alcohol/drug related crashes, police presence, and the need for more random breath testing. In Australia, the state of Victoria recently begun trials on roadside drug testing.

Comments made about 'campaigns' that could be effective were that ads might be effective for a brief period only, that appeals needed to be selective, and that they were more effective when kids were being hurt. Approval was also given to ads featuring people who have really been in accidents and who were now permanently in wheelchairs, or who had suffered similar fates. Radio campaigns using celebrities also found favour, as did campaigns in schools that involved reality – such as putting people in [crashed] cars and then cutting them out. It was suggested that to deter driving under the influence of alcohol, campaigns had to be more sophisticated. It was also considered that drugs were misunderstood and that there was insufficient information on how they affect you [when driving for example], so that campaigns giving information on the effects of drugs on driving were considered desirable.

Fatigue/tiredness

Previous research has considered dozing and driving among young drivers (Lindsay *et al.*, 1999), and its relation to motor vehicle crashes (Lyznicki *et al.*, 1998). Figure X.3 shows the sub-themes within the Fatigue/tiredness theme.

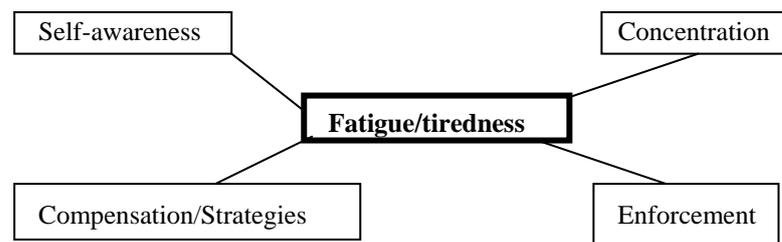


Figure X.3 Sub-themes within the Fatigue/tiredness theme

Comments under the 'self-awareness' sub-theme included that: *you can't predict when you are too tired, or even if you can predict this you will drive anyway; know when you are getting tired but worse when you're sitting in the car – get more relaxed and feel more fatigued; and not realising that I*

could fall asleep at the wheel until I actually did it! A distinction was drawn between *mental and physical fatigue*, a respondent noting that *you have a slower reaction time when physically exhausted, while in the case of mental exhaustion it was harder to concentrate*. One respondent stated that they *would not drive if tired because they knew that they would 'zone out' too much – '... even if you try and stay awake, it's just impossible sometimes ...'*.

Effects of fatigue upon 'concentration' when driving that were mentioned included: *concentrate more, concentrate more at the beginning but lose concentration as you keep driving, just use enough concentration to see what's in front of you, hardly concentrating on the road after a long drive but not falling asleep, reduced reaction time, and missing cues from other drivers*. Also mentioned were: *going into 'autopilot' being more likely when tired, not remembering the trip at all and wondering what happened on the way, and the effect being worse during highway driving as it is easier to 'switch off'*. A particular example of switching off was *looking down and realising that you are doing 110 kph in an 80 kph zone*. *Boredom while driving was reported to have the same effect as fatigue*.

'Compensation strategies' to counter fatigue effects that were mentioned included: *driving more slowly or carefully, opening the window, having a cigarette, playing loud music, getting out and running around the car, adjusting the seat so that you are less comfortable, and speeding more to keep yourself alert!* *Cats' eyes were considered to be one good warning when you were losing concentration or falling asleep, as they could warn you to stop driving or to be more careful*. One participant asked *what happened to 'driver reviver' stops*, while another view was that *pulling over for half an hour doesn't refresh you*, while yet another was that *even though fatigue was seen to be as dangerous as driving under the influence of alcohol and other drugs they still would not pull over to compensate for fatigue*. The value for risk component emerged through a participant who stated that they *would pull over if they thought that it was safe to do so, but what about the safety of the place where you stop – for example from the point of view of someone possibly attacking you in the car while you were sleeping, and needing to balance the respective risks involved*. *What would be needed would be monitored 'safe resting areas'*. Suggestions for modifications to cars to prevent drivers from falling asleep included: *mild shocks through the steering wheel, bright lights, bells, and progressively louder noises if the driver started to fade*.

Under the 'enforcement' sub-theme, it was recognised that there were *no enforcement consequences for driving when tired, and that people were more likely to do it because there was less chance of being caught – '... if you've been drinking you know you have to concentrate, but if you're tired you're in another world ...'*

Seatbelts

This theme did not generate much discussion. One view was that *wearing seatbelts was a habit you get into when you're a kid, and that it was now 'automatic' or 'natural' to wear a seatbelt, to the extent that one felt*

'uncomfortable' without one. One interesting comparison was with speeding – '... I don't think you could make not speeding an automatic response – like putting on a seatbelt'. There was recall of a campaign slogan from childhood days – 'click-clack front and back', while another view was that adverts were still needed to remind people to wear seatbelts. One respondent noted that they were conscious that what they do influences younger people in the car, so that they always wore a seatbelt, and another remarked that as the driver is liable for the fine they always made sure that their passengers were wearing them. One respondent compared seatbelt use in Australia with an overseas jurisdiction, noting that they wore them all the time here but not overseas. While one view was that there was a danger from seatbelts in accidents, such as bruising or broken ribs, and that there was a need to be more flexible in applying the rule, it was also pointed out that there was a 50% chance of dying in an accident if a seatbelt was not worn. There was a view that bus passengers should be required to wear seatbelts.

Conclusions

The research has both theoretical implications and practical applications. Using data from this study, some initial attempts have been made to identify relevant variables and to model some possible relationships between themes, sub-themes and components. It has demonstrated that rich data can be obtained from relatively small numbers of participants using qualitative methodology. The study represents an initial step in enhancing understanding of this important and challenging topic. The data provide some understanding of possible relationships between variables.

More quantitative research is required to develop and confirm these models so as to understand further the phenomena under investigation. On the assumption that participants' comments in this study were issues of importance to them, these could be used to develop questions designed to quantify the issues involved. Survey data from young drivers and pre-driving young people could be used to quantify the extent of the beliefs revealed through the current study within young driver populations.

Acknowledgements

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Notes

¹ In a landmark decision on 27 April 2004, the Lausanne Federal Court upheld a decision by lower courts to send two young car drivers to prison for six-and-a-half years for racing on a normal road, during which one of the drivers had lost control of his car and killed two teenage pedestrians. Source: *Risk Management*, vol 35, May 2004, pp. 2 and 10.

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