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## **Hooning Driving Behaviour: Prevalence, Associated Characteristics and Crashes**

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The use of vehicles in an antisocial, 'loutish' and dangerous manner constitutes the phenomenon of hooning, a risky behaviour with heightened concern for Australian roads (Folkman, 2005; Jarred, 2002). The concern has been highlighted by extensive media attention particularly from local newspapers within Australian states and territories (see 'Hoons need for speed and danger', 2006; Ferguson, 2006; 'Hoons go for a joyride', 2006). There has also been general observations made by police and traffic groups as to the related components of hooning (e.g. Folkman, 2005; Jarred, 2002) although the amount of accessible published documents is minimal. Thus, hooning may lead to on road accidents and warrants research to identify its related factors.

Current Australian state governments typically refer to hooning as the act of using a vehicle in an irresponsible and dangerous manner in public places (Jarred, 2002; New South Wales Legislative Assembly Hansard, 1997; Northern Territory Government Australia, 2004; Office of Parliamentary Counsel, 2004; Parliament of South Australia, 2006; Victorian Legislation and Parliamentary Documents, 2006; Western Australian Office of Road Safety, 2006). For example, in Queensland, the offences of 'unlawfully organising, promoting or participation in any race, speed record attempt or speed trial on the road' or 'the willful starting or driving of a vehicle that produces unnecessary noise or smoke' are prohibited under the Transport Operations (Road Use Management) Act 1995 (Jarred, 2002). Hooning, a smaller subset of risky driving behaviour, may include any of the activities described in Table

1. However, it is important to note that individuals who engage in one hooning act may not necessarily be involved in all of these behaviours (Armstrong & Steinhardt, 2005).

**Table 1: List of activities that may constitute hooning**

Activity	Definition
Illegal street racing	A competitive speed challenge between two or more vehicles.
Time or speed trials	An attempt to break any vehicle speed record designed to test the skill of the driver or vehicle.
Speeding	Traveling at speeds over the limit.
Burnouts or donuts	Sustained loss of traction due to excessive acceleration which may produce smoke and excessive noise.
Cruising or lapping	Slowly driving a vehicle around a predetermined route usually with the stereo system at a high volume.
Rolling road blockages	A large number of vehicles traveling slowly as a convoy on major highways to block other vehicles and to facilitate street racing.
Drifting	Approaching a corner at a relatively low speed and rapidly accelerating around the corner causing the rear of vehicle to slide out and the tyres to slip and screech.

*Source:* Folkman (2005) and Jarred (2002)

### *Associated characteristics of hooning*

A report from the Queensland Police Service suggests that hooning typically involves males aged 17 to 25 years, of low income and in blue-collar occupations (Folkman, 2005). The implication of males rather than females in risky driving behaviours is well-documented (Fergusson, Swain-Campbell & Horwood, 2002; Leigh, 1996; Ozanne-Smith, 2004), as is the youth age group (Begg & Langley, 2004; Queensland Transport, 2005b; Sarkar & Andreas, 2004). This may be due to the fact that those involved are predicted to grow out of it in a brief number of years (Folkman, 2005). Other authors have noted this 'maturing out' effect in the mid-twenties for street racing (Leigh, 1996) and risky driving (Begg & Langley, 2001; Begg & Langley, 2004). Overall, although a deviation from this stereotype is possible, young males seem to be the main subgroup involved in hooning.

### *Youth and risky driving*

The typical 'hooning' age group of 17 to 25 years is also identified as the most 'at-risk' group on the roads in Australia (Queensland Transport, 2005b). For example, in Queensland the road fatality rate in 2004 for 17 to 25 year olds was double the fatality rate for drivers over 25 years (Queensland Transport, 2005b). Many factors are identified by Queensland Transport (2005a) to contribute to this 'at risk' age group's over-representation in vehicle crashes, such as inexperience or lack of perception. Nevertheless, risky driving acts such as speeding, rapid lane changes and drag racing have been implicated in crashes and are behaviours synonymous with hooning. This supports the contention that hooning may be a risk factor for young people and a significant contributing factor to this age groups' over-representation in crashes (Begg & Langley, 2004; Moller, 2004; Queensland Transport, 2005b; Ozanne-Smith, 2004).

#### *Prevalence of hooning*

The majority of hooning occurrences are monitored by traffic complaint systems and police enforcements made under anti-hoon legislation. There was a total of 5325 complaints made by members of the public between 1999 to 2005 in Queensland (Folkman, 2005). However, the number of complaints recorded was substantially higher than the amount of confiscations. From November 2002 to September 2005 in Queensland, 2005 vehicles were confiscated for first time offences, with a rapid reduction to 40 confiscations for second time offences and only 3 instances of a vehicle being liable for forfeiture for a third offence (Armstrong and Steinhardt, 2005). This is likely due to underrepresented instances of hooning in police records of enforcement.

#### *Crash involvement*

There is no 'hooning' factor per se in the Queensland Police Service's top ten contributing factors to vehicle crashes (Queensland Transport, 2005a). Although, hooning activities may be synonymous with illegal maneuvers, speed related driving and dangerous driving- factors which are included in the top ten. For instance, a general search within Queensland Transport's WebCrash 2 Database using the contributing circumstance of 'dangerous driving' with hooning search words (e.g. 'burnout' or 'dragging') identified 169 crashes for the period of 1999 to 2004 (Armstrong and Steinhardt, 2005). Overall, this figure is minimal considering that alcohol contributed to a vast 840 fatal and hospitalisation crashes in 2003

(Queensland Transport, 2005a). However, hooning may be difficult to quantify since specific hooning terms may not be used in all police recordings. Therefore, many hooning instances may go undetected and thus under-represented in crash records (Folkman, 2005).

### *The present study*

The purpose of the present study was to validate the claims made by previous police and government reports to increase the knowledge base of hooning and to contribute to future road-safety legislation and strategies. The aims were:

- To estimate the frequency with which males aged 16 to 24 years report past hooning, individual hooning behaviours (Table 1) and future hooning compared to other groups.
- To examine whether personal characteristics of license type, education level and driver experience are predictive of hooning behaviour.
- To examine the self-reported frequency with which hooning is associated with traffic accidents.

## Method

### *Participants*

A total of 717 voluntary participants were recruited with the majority assumed to include university students, although participants external to QUT were thought to be recruited via referrals from students. The study included 307 (42.8%) male and 406 (56.6%) female participants who had ever driven a motor vehicle regardless of whether a current license was held.

### *Measures*

*Hooning behaviour.* The dependent variable of hooning behaviour was measured by three items. The first item asked participants to indicate specific hooning activities (see Table 1) they had previously participated in ranging from 'never' to 'in the last week'. A second item measured the exact frequency of hooning in the past and the last item pertained to the participant's intention to hoon in the future using a 7-point likert scale (1- very willing to 7- very unwilling). A new dichotomous variable (willing or unwilling to hoon) was created from this question (intention to hoon) to appropriately answer the research questions. Those who answered 1 to 3 were considered 'willing' while those who answered 5 to 7 were

considered 'unwilling' to hoon in the future. Those who answered 4 (neutral or unsure) were excluded.

*Driver characteristics.* A range of independent variables were selected to examine their relationship to hooning including age, gender, education level, license type and driver experience.

*Crash involvement.* An item was included to examine the frequency of self-reported crashes that were directly related to hooning: 'Have you ever been involved in a crash while taking part in hooning? If yes, how many times?'

### *Procedure*

The questionnaire was pilot tested using thirty participants to test the procedural orientations, resulting in minor adjustments of ambiguous terms<sup>1</sup>. The questionnaire was available entirely online for a total of four weeks with a direct email containing an invitation to participate and a direct web link to the online questionnaire sent out to approximately 5000 students. Additional participants who did not receive the email were encouraged to access the questionnaire directly via the website address. The anonymity, confidentiality and consent (consent was gained once the questionnaire was submitted) of responses were relayed on a page prior to the questionnaire page.

### *Data analysis*

The Statistical Package for the Social Sciences (SPSS) was used to analyse the data. An alpha level of  $p < .01$  was used for all analyses due to the large amount of power derived from a large sample size.

## Results

### *Characteristics of sample*

Over 75% of participants were between the ages of 16 and 24 years, with the remaining participants being 25 years and over. The majority of participants had an education level of either a bachelor degree or higher (38%) or a year 12 certificate (42%). However, it was likely that many of the year 12 responses were undergraduates. Almost all of the participants held a provisional (41%) or opens license (53%), with only a few holding no license or a learners permit. A total of 215

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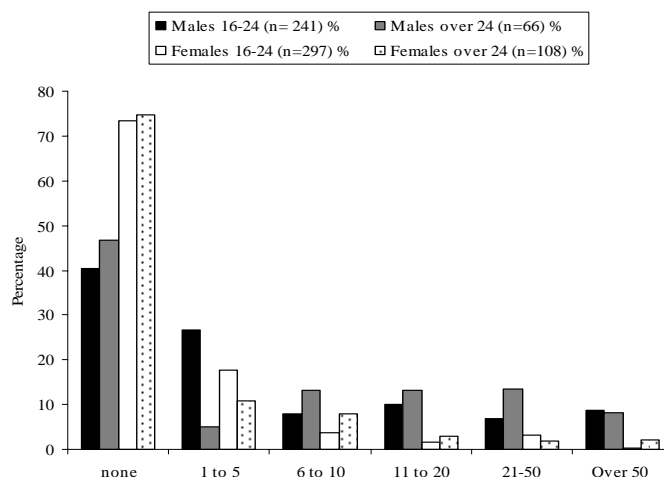
<sup>1</sup> The items in this study were part of a larger survey that aimed to measure other variables not included in the current analysis.

(30%) participants had been caught for a speeding offence in the last three years although very few (less than 3%) had been caught for any other driving offences measured.

### *Prevalence of hooning*

#### *Past hooning*

For self-reported hooning behaviours (Figure 1), almost 40% of participants reported engaging in hooning at some time throughout their life although the majority of these had only engaged in the behaviour one to five times. A lesser amount of participants reported higher instances of past hooning, with only 4% of participants hooning over 50 times in their lifetime. The trend shows that the percentage of people decreases as the number of reported hooning acts increases. As expected, males tended to report higher levels of past hooning than females and possibly due to more time experienced driving, males and females over 24 years appeared to have engaged in more hooning acts in their lifetime.

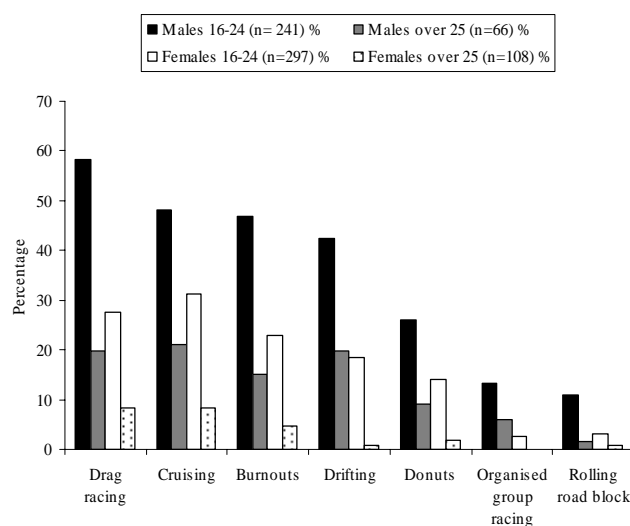


**Figure 1: Self-reported past hooning behaviours**

#### *Distribution of hooning acts*

Figure 2 compares the distribution of self-reported hooning activities (at least one in the past year). Overall, drag racing (34.3%) was the most common activity among all participants followed by cruising (32.6%) and burnouts (27.6%). In comparison, small minorities of the sample reported organised group racing (6.4%)

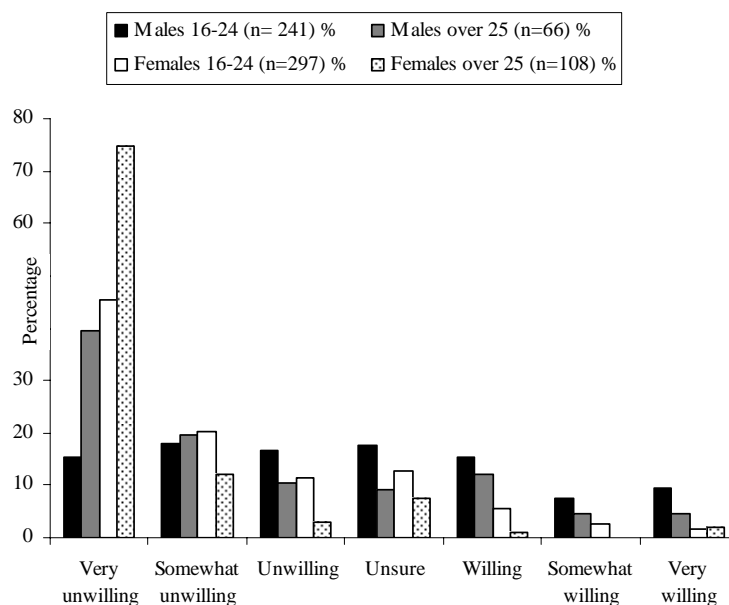
and rolling roadblocks (5.3%). Expectedly, all hooning activities were far more common among males aged 16 to 24 years than any other group. For example, a substantial 58% of 16 to 24 year old males reported engaging in drag racing at some point over the last year. Surprisingly, females aged 16 to 24 years seemed to be the second highest group to report hooning activities.



**Figure 2: Self-reported hooning activities within the last year**

### *Hooning intentions*

For future intentions to hoon (Figure 3), males aged 16 to 24 years were more willing to hoon than any other group, followed by males over 24 years. Younger females appeared to be more willing to hoon than older females. Overall, only a small percentage were 'willing', 'somewhat willing' or 'very willing' to hoon in the future (18%) and as the willingness to hoon increased, the percentage of participants decreased.



**Figure 3: Self-reported intentions to hoon**

#### *Associations between hooning and driver characteristics*

A logistic regression analysis was conducted to examine the associations between hooning and driver characteristics. The predictors included type of license held, education level, and driver experience and the dependent variable was based on the intention to hoon in future (willing or unwilling). In addition, age and gender were included as predictors given the clear differences seen in the previous graphs. Only age ( $p < .05$ ) and gender ( $p < .01$ ) were found to be predictive where future hooning was associated with younger age groups and males.

#### *Associations between hooning and crash involvement*

Overall, from the people who responded 'yes' to past hooning, 20% of these had been involved in a crash resulting directly from hooning (8% of the total sample was involved in a hooning related crash). Table 2 shows the relationship between the number of hooning acts committed and the rates of crashes reported. There was a clear trend for rates of motor vehicle accidents to increase with hooning behaviours. For example, amongst those who participated in hooning 1 to 5 times, 8.9% of drivers experienced at least one crash. As the amount of hooning instances increased to 50 times or above, 63% of drivers endured at least one crash. Critically, 26.8% of those who had been involved in at least one hooning related crash were still willing to hoon in the future.



**Table 2: Relationship between number of hooning acts and crash involvement (at least once).**

	Number of reported hooning acts in lifetime				
	1-5	6-10	11-20	21-50	50+
Percentage of crashes reported	8.9%	13.7%	23.7%	25.7%	63%

## Discussion

The aim of this study was to examine the prevalence of hooning among young males, the driver characteristics associated with hooning, and the prevalence of crashes resulting from hooning. The major findings are summarised below.

### *Prevalence of hooning*

Some form of past hooning was reported among 40% of participants although it was assumed that these instances were mostly 'one-off' acts for the majority of this group, a fact substantiated by the lower rate of subjects that were 'willing' to hoon in future (18%). This may also substantiate the 'maturing-out' effect of hooning in the mid-twenties. In essence, it appears that only a small proportion of the population engages themselves in hooning. This may be because, although the survey was anonymous, participants may have wanted to maintain high self-esteem by portraying themselves in a positive light and therefore responded as a person 'unwilling' to hoon in future.

Interestingly, drag racing and cruising seemed to be the most popular activities reported, followed by burnouts and drifting. The popularity of drag racing or street racing among young males is a common finding supported by other studies (Fergusson, Swain-Campbell & Horwood, 2002; Leigh, 1996; Sarkar & Andreas, 2005). This poses some concern as drag racing encompasses a competitive form of speeding, an activity that has shown to be highly risky (Queensland Transport,

2005a). On the other hand, cruising, burnouts and drifting may bring about less risk but are commonly associated with noise and 'nuisance', therefore providing disturbance to communities and other road-users. Fortunately, organised group racing and rolling roadblocks, which are dangerous to partakers as well as other drivers, were uncommon hooning acts. This may be due to the high level of planning and organising that is required to perform these behaviours.

The young male predominance in all three measures of hooning is consistent with previous literature on hooning (Folkman, 2005) and risky driving (Fergusson, Swain-Campbell & Horwood, 2002; Leigh, 1996; Ozanne-Smith, 2004). The disproportionate participation of this group in hooning is vast, implicating males aged 16 to 24 years as a priority group for intervention.

#### *Associations between hooning and driver characteristics*

As with previous findings of other related driving behaviours, age and gender were significant predictors of hooning. Thus, this finds statistical support for males and younger age groups' association with hooning. The failure to find other significant associated driving characteristics may be related to limitations of the data. The sample was assumed to consist predominantly of undergraduate university students and 75% were aged 16 to 24. The lack of data available from other age groups and backgrounds (i.e. blue-collar workers) may have limited the ability to achieve significant findings.

#### *Associations between hooning and crash involvement*

A moderate proportion of people who had 'hooned' in the past had also had a hoon-related crash (20% or 8% of the entire sample). It was unknown whether these crashes were fatal or minor damage, but these results show that hooning can be a direct cause of vehicle crashes, implicating hooning as a serious driving risk. Results from previous studies have shown that risky driving habits such as drag racing among young people are related to crashes (Fergusson, Swain-Campbell & Horwood, 2003) and motor vehicle injury (Blows, Ameratunga, Ivers, Kai Lo & Norton, 2005).

#### *Limitations*

A number of limitations were evident in the current study. Firstly, all aspects of the survey involved self-report and memory reflection for past incidences and it is unlikely that all responses were entirely accurate for both hooning and accident rates. Next, the construct of hooning was difficult to define and measure as it incorporates activities that, if conducted without the presence of other variables, may not represent hooning. For example, speeding may not necessarily constitute hooning, however, speeding for the sake of showing off or racing is more readily defined as hooning. Furthermore, intentions to hoon in the future may not be an accurate measure of actual future behaviour. In addition, the sample consisted mainly of university students. This may have biased results considering that blue-collar workers, rather than students, are typically implicated in hooning. Furthermore, with an under-representation of age groups over 24 years, the nature of the sample limits the ability to generalise these results to other populations.

### *Implications*

There are a number of implications of the present findings. First, despite anti-hoon legislation, a small subset of the population seems to very highly endorse hooning as a regular activity. From this, the highly risky behaviour of drag racing is very popular. These results suggest heightened need for driver education, persuasion and police presence to decrease the incidence of dragging. For example, 'hot spot' areas for drag racing can be identified and monitored.

Second, the results highlight the conclusions of many other studies in Australia and other countries, that is, the implication of young males in risky driving practices. The results emphasise that anti-hoon strategies should predominantly target this main group. For example, driver education could begin prior to receiving learner's permits. Possibly, the social acceptability of hooning could be reduced via advertising campaigns targeted to 16 to 24-year-old males.

Finally, the central role that hooning plays in motor vehicle crashes has been established by the current study, although a better documentation strategy is needed to record all hooning-related crashes in Australia among police records. This also heightens the need for increased regulation of hooning behaviours on public roads. Further characterisation of the 'problem-hooners' in subsequent studies may also be beneficial for targeting road strategies and legislation.

### Conclusion

This study is the first to use experimental methods to collect hooning data amongst a large sample size in Australia. It highlights the extent of hooning among younger males as well as the potential crash risks. Thus, strategies aimed at decreasing hooning among males aged 16 to 24 years is crucial. Overall, this study contributes significantly to the sparse amount of hooning literature, provides direction for future experimental research and offers insight into road safety strategies and policies.

### References

- Armstrong, K., & Steinhardt, D. (2005). *Understanding street racing and 'hoon' culture: An exploratory investigation of perceptions and experiences*. Centre for Accident research and Road Safety- Queensland (CARRS-Q).
- Begg, D.J., & Langlely, J.D. (2001). Changes in risky driving behavior from age 21 to 26 years. *Journal of Safety Research*, 32, 491-499.
- Begg, D.J., & Langlely, J.D. (2004). Identifying predictors of persistent non-alcohol or drug-related risky driving behaviours among a cohort of young adults. *Accident Analysis and Prevention*, 36, 1067-1071.
- Blows, S., Ameratunga, S., Ivers, R.Q., Lo, S.K., & Norton, R. (2005). Risky driving habits and motor vehicle driver injury. *Accident Analysis and Prevention*, 37, 619-624.
- Fergusson, D., Swain-Campbell, N., & Horwood, J. (2003). Risky driving behaviour in young people: prevalence, personal characteristics and traffic accidents. *Australian and New Zealand Journal of Public Health*, 27, 337-342.
- Ferguson, L. (2006, September 29). Camps to avoid hoons. *The Southland Times*, p22.
- Fiske, S.T., & Taylor, S.E. (1991). *Social Cognition*. (3<sup>rd</sup> ed.). New York: McGraw-Hill.
- Folkman, L. (2005). *Queensland's anti-hoon legislation and policing methods to prevent hooning behaviour*. Queensland Police Service (State Traffic Support Branch).
- 'Hoons' go on joyride. (2006, September 16). *Geelong Advertiser*.
- 'Hoons' need for speed and danger. (2006, October 10). *The Gold Coast Bulletin*.

- Jarred, W. (2002). *Police powers and responsibilities and another act amendment bill 2002: Confronting bad and nuisance road behaviour*. Queensland Parliamentary Library.
- Leigh, A. (1996). Youth and street racing. *Current issues in Criminal Justice*, 7, 387-393.
- Moller, M. (2004). An explorative study if the relationship between lifestyle and driving behaviour among young drivers. *Accident Analysis and Prevention*, 36, 1081-1088.
- New South Wales Legislative Assembly Hansard. (1997). *Traffic Amendment (Street and Illegal Drag Racing) Bill*. Retrieved 13<sup>th</sup> October, 2006 from [www.parliament.nsw.gov.au](http://www.parliament.nsw.gov.au)
- Northern Territory Government Australia (2004). *Traffic Amendment Act 2004*. Retrieved 13<sup>th</sup> October 2006 from [www.dcdsca.nt.gov.au](http://www.dcdsca.nt.gov.au).
- Office of Parliamentary Counsel. (2004). *Police Offences Amendment Bill, 2004*. Retrieved 19<sup>th</sup> October, 2006 from [www.tas.gov.au](http://www.tas.gov.au).
- Ozanne-Smith, J. (2004). Road traffic injury- a global public health scourge: A review for World health Day 2004 (April 7). *Australian and New Zealand Journal of Public Health*, 28, 109-112.
- Parliament of South Australia. (2006). *Road Traffic Act 1961*. retrieved 31 May, 2006 from [www.parliament.sa.gov.au](http://www.parliament.sa.gov.au).
- Queensland Transport. (2005a). 2003 Road traffic crashes in Queensland: A report on the road toll. Queensland government.
- Queensland Transport. (2005b). *Queensland youth on the road and in control: A discussion of ways to improve young driver safety*. Queensland Government.
- Sarker, S., & Andreas, M. (2004). Acceptance and engagement in risky driving behaviors by teenagers. *Adolescence*, 39, 687-700.
- Victorian Legislation and Parliamentary Documents. (2006). *Road Safety and Other Acts (Vehicle Impoundment and Other Amendments) Act 2005*. Retrieved 13<sup>th</sup> October 2006 from <http://www.dms.dpc.vic.gov.au/>.
- Western Australian office of Road Safety. (2006). *Hoon legislation*. Retrieved 31<sup>st</sup> May 2006 from [www.officeofro\\_adsafety.wa.gov.au](http://www.officeofro_adsafety.wa.gov.au)