

‘Hooning’ around: A focus group exploration into the effectiveness of Vehicle Impoundment legislation.

Belinda Clark*, Michelle Scully, Effie Hoareau & Stuart Newstead

Monash University Accident Research Centre

*email: belinda.clark@monash.edu

Abstract

Vehicle Impoundment (‘hoon’) legislation was implemented in Victoria in July 2006. The objective of the legislation is to use vehicle impoundment as a deterrent for reducing the incidence of serious injuries and fatalities associated with high risk driving practices. Since its introduction there have been more than 11,000 vehicle impoundments for excessive speed and hoon offences, across Victoria. The overall aim of this research was to explore the effectiveness of the Vehicle Impoundment legislation in reducing the occurrence and recidivism of ‘hoon’ driving behaviour. This was undertaken in two phases, the first involved the analysis of Victoria Police Vehicle Impoundment data. The second phase, which is the focus of this paper, involved a more detailed inspection of behavioural and attitudinal factors surrounding hoon behaviour and the legislation. This was undertaken through a self-report questionnaire administered to drivers whose vehicles had been impounded under the legislation (n=51). Focus groups conducted with a portion of these participants (n=21) augmented the survey results and provided further insight into the factors underpinning hoon driving behaviour. The focus group discussions facilitated the exploration of underlying attitudes pertaining to engaging in ‘hooning’, having a vehicle impounded, and the effectiveness of the Vehicle Impoundment legislation. Results provide timely and valuable insights into this high profile, but currently under-researched, driving population, as well as the legislation that has evolved in response.

Key words

Vehicle impoundment, hoon behaviour, hooning, risk-taking, recidivism, enforcement, speed, drink-driving, drifting, burnouts, deterrence, young driver.

Introduction

Vehicle sanctions have become an increasingly popular mechanism both nationally and internationally to: reduce the opportunity for high risk driving behaviours by removing an offenders access to their vehicle; and as a deterrent to discourage other drivers (typically peers) from engaging in these driving behaviours. Vehicle impoundment refers to the confiscation of an offender’s vehicle which is then stored at a storage facility for a specified period of time. Vehicle forfeiture refers to the permanent seizure of an offender’s vehicle, this usually occurs for more serious offences or multiple repeat offences.

Vehicle impoundment legislation has been implemented in the US for over a decade as a penalty for drink driving and unlicensed driving. More recently, vehicle impoundment has become the popular enforcement method across Australia to address ‘hooning’. ‘Hoon’ driving typically refers to antisocial driving behaviour commonly including driving a vehicle in a manner that involves loss of tyre traction, producing smoke and excessive noise. Behaviors such as ‘drifting’ caused by accelerating when taking a corner to cause

the back of the car to slide out and wheels to screech, and 'burnouts' where the driver deliberately causes the tyres to spin and create smoke are common examples of hoon driving (Folkman, 2005). Queensland was the first Australian State to introduce vehicle impoundment legislation to target 'hoon' driving behaviour in November 2002, with the Northern Territory being the last Australian jurisdiction to introduce this type of legislation in 2009.

Victorian Vehicle Impoundment Legislation

The Vehicle Impoundment and Other Amendments Act (2005) came into effect in Victoria on the 1st July 2006 (Perry & McGillian, 2008). The name Vehicle impoundment was chosen to enable the application of this sanction to other offences, traditionally not viewed as hooning acts, such as disqualified driving. The original offences listed under this legislation were: Participation in a race or speed trail;

- Dangerous driving committed in circumstances involving intentional loss of traction;
- Careless driving (involving intentional loss of traction);
- Failure to have proper control of the motor vehicle (involving intentional loss of traction); Causing a motor vehicle to make excessive noise or smoke (involving intentional loss of traction);
- Exceeding the speed limit by 45kph or more; Improper use of a motor vehicle;
- Driving while disqualified (only if repeat offender and has a prior conviction after 1st July 2006).

However, similar to other Australian States, the Victorian Vehicle Impoundment legislation has evolved since its introduction, with the Evade Police offence included in November 2007 and the Deliberately/Recklessly entering a railway crossing offence included in December 2007.

The specific offences targeted under hoon legislation and the impoundment time period varies across Australian States and internationally. In Victoria, vehicles are impounded for 48 hours for first offences and second offences within a three year period incur three months' impoundment (Perry & McGillian, 2008). Third convictions can result in vehicle forfeiture. Vehicles may be seized on the spot, or within two days. Alternatively the driver can be served a notice within 10 days. The costs associated with recovering an impounded vehicle include towing and storage fees and can range between \$270-\$600 (Perry & McGillian, 2008). Proposed changes to this legislation have recently been introduced in Victorian Parliament to incorporate other driving offences such as drink and drug driving and to increase the impoundment time for first offences to 30 days, with fines and costs ranging up to \$2,389 (Mulder, 2011).

Evaluations of vehicle impoundment legislation

Most of the relatively few evaluations into the effectiveness of vehicle impoundment as a sanction have been conducted in the US. An evaluation of the Vehicle Impoundment legislation in California supported the role of vehicle impoundment in the reduction of both future convictions and crashes. Results showed that subsequent driving while suspended (DWS) and driving while unlicensed (DWU) convictions were 24% less for first time offenders and 34% less for repeat offenders who had had their cars impounded compared to the controls group who had not had their cars impounded (DeYoung, 1999;

NHTSA, 1998). Similarly, subsequent crash rates were 25 % less for first time offenders and 38% less for repeat offenders who had experienced vehicle impoundment compared to the control group. The effect of vehicle impoundment appeared to be greatest for recidivists who reported the highest reductions for both repeat offending and subsequent crashes.

A second evaluation was conducted to explore whether the perceived threat of a vehicle sanction (impoundment or forfeiture) would deter suspended drivers from driving illegally (DeYoung, 1998). Monthly crash rates of more than 2,000,000 drivers whose licences had been suspended or revoked were compared with 370,000 drivers who did not have their licences suspended or revoked, for periods prior to and post introduction of the impoundment legislation. The results showed a significant 13.6% fall in the crash rates for the suspended/revoked drivers group coinciding with the introduction of the legislation. Overall, the results of both studies indicated that vehicle impoundment works as a specific future deterrent for individuals who have previously had their vehicles impounded (NHTSA, 2000b).

An evaluation into the effectiveness of vehicle impoundment legislation on drink driving offenders was undertaken in the Franklin County US. The data consisted of over 2,700 drink driving offenders. Drivers whose vehicles were immobilised had 58% fewer drink driving offences during the impoundment period, and 35% fewer drink driving offences up to 2 years later compared to the non-vehicle impoundment group (NHTSA, 2000a). This Franklin County evaluation was replicated in Hamilton County with similar results. The group of drink drivers who had experienced vehicle impoundment sanctions showed a 60% reduction in drink driving offences during the impoundment period and a 56% percent reduction post-impoundment compared to the non-vehicle impoundment group (Voas & DeYoung, 2002; Voas, Tippetts, & Taylor, 1998).

While these US evaluations indicate support for vehicle impoundment sanctions, caution should be taken in generalising these outcomes to the Australian legislation due to the different driving populations governed by this legislation. Vehicle Impoundment Legislation in the US has typically been introduced to target drink drivers or unlicensed drivers, as compared to Australian legislation targeting hoon driving (NHTSA, 2009).

While vehicle impoundment legislation has been adopted in every Australian jurisdiction, only a small amount of research has been undertaken to explore its effectiveness - in reducing the road safety risks associated with hoon-type driving behaviour, and in deterring recidivist hoon behaviour. Early research conducted by Folkman (2005) into the anti-hoon legislation in Queensland, provided a baseline profile of offenders identifying the overrepresentation of young males and the common driving behaviors that result in impoundment. For their research exploring the deterrence effectiveness of hoon legislation, Gee Kee, Steinhardt and Palk (2007a) conducted a web-based survey with 717 university students. They found that a key deterrent for engaging in hoon driving was a high perceived threat of detection and punishment but that this deterrent effect was moderated by perceptions of positive reinforcement from the hooning behavior, such as increased peer status.

In Victoria, despite anecdotal reports of success and the general popularity of this legislation, prior to this research there had been no formal evaluation of the Victoria Vehicle Impoundment legislation to investigate the effectiveness of the legislation in achieving a road safety benefit. The aim of this research was to explore the effectiveness of the Victorian Vehicle Impoundment legislation in reducing the occurrence and recidivism of hoon driving behaviour.

Method

Participants

Participants were recruited via several sources: online, through the MUARC website and from the social-networking website Facebook; mail-out facilitated by the Victoria Police; and flyers distributed at Road Trauma Support Services (RTSS) Traffic offender programs, the Victoria Police Impoundment Unit and three rural towing companies who are contracted to conduct vehicle impoundment. Interested participants had the option of completing and returning the questionnaire only and/or contacting the researchers to attend a focus group.

Materials

The questionnaire and focus group discussion guide were informed by the literature review as well as discussion with Victoria Police project representatives.

Questionnaire

In anticipation of challenges in recruiting offenders to attend focus groups, a questionnaire was devised to increase the sample size by surveying individuals who were unwilling to attend a focus group discussion. The self-report questionnaire consisted of 31 questions, the majority of responses proposed a multiple choice format. The questionnaire addressed the following topics: demographics (age, gender, education level, postcode); traffic offence and crash history; driving behaviours post vehicle impoundment; awareness of the Vehicle Impoundment legislation; and attitudes towards the legislation.

Focus group discussion guide

The discussion guide addressed the following topics: the impact of vehicle impoundment; attitudes towards hoon legislation; perceptions of being detected for hoon driving; exposure to models; perceived rewards from hoon driving; and alternative penalties/deterrents.

Procedure

The questionnaires took approximately 20 minutes to complete. Questionnaire-only participants remained anonymous with completed questionnaires submitted on-line or using a reply-paid envelope. Participants who contacted the research team to attend a focus group were allocated to one of two focus groups based on availability to attend. Both focus groups were facilitated by the same two research team members, and were audio taped for data analysis purposes. Participants were reimbursed \$70 for their attendance and the average duration of the focus groups was 90 minutes.

Results

Sample

A total of 52 participants completed the anonymous questionnaire (31 questionnaire only & 21 focus group attendees), 50 males and 2 females. The age range was 16 to 46 years with 83% of participants under 28 years of age. The most common reported educational attainment was year 12 or greater (40%), with the majority currently employed full-time (54%) A total of 21 participants (3 female, 18 male) attended two focus groups (of 11 & 10 people, respectively); these participants were aged 18 to 46 years. The response rate from all recruitment strategies (mail-out, advertising through flyers and online) was low. The mail-out resulted in only three individuals contacting the research team and then attending a focus group discussion. The most successful form of recruitment was the flyers at the Impoundment Unit however; to increase participation rates snowball recruitment was also used. All focus group participants were from the Melbourne metropolitan area. Although concerted efforts were made to recruit participants from two regional cities through the towing companies, no volunteers offered to participate.

Questionnaire and focus group results

Offence profile

For 65% of the participants this was their first offence and for 33% the second offence. The most common driving behaviour leading to vehicle impoundment involved deliberate 'loss of traction' e.g. drifting and burnouts (38%). The second most common offence involved speeding (37%), with speeds ranging from 45-120 km/h over the designated speed limit.

In reference to previous traffic offences (in the last 2 years) 42% of participants reported committing one offence, 19% three offences and two participants had committed over 15 offences. The remaining seven participants reported not committing any traffic offences in the last two years.

Where and when offences were committed

Primary arterials were the most commonly reported site for hooning (30%), followed by local roads (20%), secondary arterials (16%) and freeways (14%). Late night/early morning (23:00 -06:59 hrs) was the most common hooning time period with 58% of offences occurring within these hours, 12% of these occurred at 03:00 hours. Day-time (07:00 – 15:59 hrs) was the second most common time (20%), evening 14% (16:00 – 19:29 hrs) and night 1% (19:30 – 22:59 hrs).

Passengers and peers

At the time of their offence 59% of the drivers reported being alone in the car, 29% reported having one passenger and 12% had two or more passengers. When asked about their usual hooning behaviour, the majority of participants reported hooning when alone (45%), or both alone and with others (33%); only 22% reported it as a behaviour they engage in with others.

Crash history

Eight participants reported being the driver in at least one crash within the last two years, with a total of 12 crashes between them. Three of these were self-attributed to hoon driving behaviour. Nine participants reported being the passenger in a total of nine crashes within the last two years, of which six were self-attributed to hoon driving behaviour.

Knowledge of Vehicle Impoundment legislation

Regarding the legislation, 77% of the participants were aware of the legislation prior to being detected, of which 55% had heard about the legislation via television, and 20% by 'word of mouth'. Sixty-five percent of participants were aware of the ability to report hoon drivers through the Crime Stoppers hoon hotline.

The impact of vehicle impoundment

To elicit information about how the participants felt about having their vehicle impounded they were asked the following question: "*What emotions came up when you had your vehicle impounded, and what was the worst thing about having your vehicle impounded?*" The main intent behind this question was to gauge whether individuals accepted responsibility regarding driving in an illegal manner. This was the opening question of both focus groups and all responses recalled were negative. None of the participants acknowledged responsibility or recognition that their actions had caused the impoundment, and the overall sentiment was one of victimisation. Some participants recalled feelings of having their rights taken away, others cited financial burden.

This question elicited much negativity towards the police and justice system throughout both focus groups. Many believed that their impoundment was motivated by revenue-raising, that police officers were actively targeting them for minor violations, and that officers displayed an obvious disrespect toward them at the time of apprehension.

When asked about the worst aspect of having their vehicle impounded, approximately one third of participants cited having to tell their parents, for the other third it was financial, and the remaining third miscellaneous (e.g. loss of mobility, having their expensive vehicle removed from their care).

Attitudes towards hooning and the Vehicle Impoundment legislation

There was general consensus that hoon driving wasn't dangerous. Justifications for this included being in a controlled environment, not being drunk, and references to their own greater driving skill level. Distinctions were made between what they do now in comparison to when they first got their license, alluding to a maturation of driving skills. Comparisons were also made between themselves and "other" hoons claiming that when they engage in drifting they are in a "controlled environment" (over which they perceive they have a sense of control) compared to those who are 'showing off to mates'.

This distinction between *skilful drifters* and *other hoons* frequently emerged when discussing the dangerous nature of hoon driving. The majority of participants identified themselves as the skilled driver contrary to admitting being involved in crashes and also

experiencing the loss of peers in hoon driving crashes. The term “others” was used in reference to groups of younger males, viewed as unskilled, who attended gatherings and took greater risks in attempts to show off and be accepted into the group. One participant attributed his recent decision to stop drifting to concerns for the safety of his younger brother who had begun imitating him.

Perceived rewards (motivations) from hoon driving

In the questionnaire, when asked if they felt there were any benefits obtained from hooning 53% responded ‘yes’. Of the 26 participants who elaborated on these benefits 19 referred to feelings of enjoyment, or thrill. Other motivating factors were a lack of legal car sports venues, peer pressure, and alcohol.

Focus group participants expressed a range of motives for engaging in hoon driving. For example, some participants were caught speeding because they were in a hurry, whereas others were speeding for the “thrill”. Those who engaged in drifting tended to do so in a controlled setting (eg. industrial or rural area); this group of drivers would also refer negatively to drivers who engage in the same behaviour (drifting) in “uncontrolled” settings (on public roads or built-up areas). The decision to hoon was usually spontaneous for those who sped and engaged in street hooning and more premeditated - in fact quite methodically orchestrated - for those who viewed their behaviour as a sport. While all stated that there were no advantages of hooning, they did report motivations such as experiencing an adrenaline rush, a *buzz*, earning a reputation, and a sense of identity.

Perceptions of being detected for hoon driving

Overall the questionnaire results showed mixed perceptions regarding the likelihood of being detected, with 40% thinking it was *likely* or *very likely* someone would be detected and 36% thinking detection was *unlikely* or *very unlikely*. While the majority of participants were aware of the hoon hotline (65%) only 26% thought it was *likely* or *very likely* someone would be detected by this method.

The participants were asked to rank their perceptions of being detected via the following methods: police patrol, hoon hotline, witness report, and speed camera. The majority of participants (69%) ranked police patrol as the most likely method of detection, secondly speed camera, thirdly a witness. Detection via the hoon hotline was viewed as least likely.

Focus group participants were asked “*What are your chances of getting caught, and what’s the most likely thing you can do to get caught?*” In terms of getting caught, philosophies such as “wrong place wrong time” or “just unlucky” were common. Although the hoon hotline was viewed as the most likely way to be reported, the chances of this report leading to detection were judged to be unlikely. A reported strategy for avoiding detection was getting to know your local area and identifying infrequently patrolled areas. Many claimed to know every speed camera in their area. Overall attitudes reflected a perception that the chances of being detected were unlikely and that detection was due to a failure in implementing avoidance strategies.

Exposure to models

It was clear that for many participants the culture of drifting, hotting up cars, and general recreational driving originated in the family home. Participants cited uncles, brothers, and fathers on whom they had modelled their driving culture.

Attitudes regarding the effectiveness of the Vehicle Impoundment Legislation

The highest ranked inconvenience resulting from being caught under the Vehicle Impoundment legislation was the fines/associated costs (32% ranked this 1st), followed by not having access to the vehicle (30%), third was having a conviction (25%), and fourth were concerns about facing harsher penalties in the future (13%).

In regard to the penalties 55% identified the legislation as *too harsh and* 39% considered it *fair*. When asked if the current penalties were harsh enough to deter them from hooning in the future 49% answered *no* and 51% responded *yes*.

Post impoundment behaviour

The majority of participants (71%) claimed they had not engaged in hoon driving since their vehicle impoundment. However responses to the question about the specific number of times they have hooned since the impoundment contradicted these claims with 18% reporting hooning three or more times a month and only 13% of participants reported zero times. Hooning was identified as a spontaneous decision by 53%, with 20% consciously *planning to hoon*.

Within the focus groups there were a range of responses regarding the effectiveness of vehicle impoundment on recidivist hooning behaviour. Some agreed that it had been effective, but for others the impoundment was only periodically effective (a day, a month) or it had no effect. Commonly, participants viewed detection for what they deemed a minor hooning offence (eg. not releasing their clutch correctly on u-turn) as not warranting the 48 hour impoundment, explaining that if they were going to have their vehicle impounded they would rather it be for something deemed as worthy.

Alternative penalties

To conclude the questionnaire, participants were asked what would deter them and/or others from hoon driving. The most common suggestion was regular access to legal car sport venues (21%). The second most common response was that nothing could be done to stop hoon driving, and thirdly increasing penalties and enforcement e.g. greater fines or crushing cars. Focus group participants were asked "*What would stop hoons on the street?*" to which the overwhelming response was that a weekly meet on a public race track (e.g. Sandown, Calder Park, Winton) is needed.

Car crushing

With regard crushing offender's vehicles, participants argued that they would continue to engage in hoon driving but in a vehicle of inferior quality as this inferior quality vehicle would not be missed if it was crushed. When asked about having their car crushed for subsequent offences, many referred to a 'word of mouth agreement' amongst peers that

if driving an expensive car, they would attempt to evade police even if it involved a high speed car chase.

Speed limiters

There was a common perception amongst participants that speeding fines were motivated by revenue raising. Overall, participants believed that speed limits were an inappropriate sanction and that speed inhibitors would be ineffective in reducing hoon driving behaviour, "it's the driver not the vehicle". However, a few participants did acknowledge that a speed inhibitor would deter them. Other comments included "target poor performance drivers, not high performance cars", and that the high powered vehicle restriction for novice drivers is ineffective because "people will speed in any car".

In reference to other possible solutions to address hoon driving, participants argued that whilst more driver training is certainly needed, current courses (i.e. defensive driver training courses) do not teach them (i.e. those that engage in drifting) anything new. They felt that unlike other drivers, they already understood the basics of vehicle control, and being able to modify their driving to the road conditions (i.e. they argued that when it is wet they slow down). For example one participant reported that "we've learnt to drive from the basics to where we are now so we can enter a corner at 100 km/h. Drifting is like training, it's like practicing. You're trying to practice something, we do it for ourselves."

Discussion

Profile and motivations of hoon drivers

The questionnaire and focus group participants closely matched the profile of all hoon offenders obtained from the Victoria Police Vehicle Impoundment Data (2006-2010) in terms of age and gender, with an overrepresentation of young males as found in previous studies (Folkman, 2005; Gee Kee, Palk & Steinhardt, 2007b). For the majority of participants this was their first vehicle impoundment offence, however, almost half of the participants had prior traffic offences, with several having multiple prior offences. The reported offending activities also align closely with the Victoria Police vehicle impoundment data and previous Australian research (Folkman, 2005), with the most common offence being excessive speeding, followed by improper use of vehicle particularly described as drifting and burnouts. Interestingly, the majority of participants reported engaging in hoon driving whilst alone however this response may be in reference to within the driver's vehicle; it does not allow an understanding of whether the offender was with other vehicles at the time of engaging in hoon behaviour. The results of the focus groups indicate that indeed offenders are more likely to engage in hoon driving as a group, with separate vehicles. Participants had a greater level of crash-involvement (as drivers and passengers) in the past two years prior to vehicle impoundment, in comparison to the general population of drivers as a whole. These findings support previous research by Gee Kee et al., (2007b) identifying a relationship between the number of hooning acts and crash involvement and also the growing concerns regarding an increased crash risk associated with hoon type driving behaviours.

The majority of participants perceived that they gained some benefit from hooning, such as enjoyment, thrills, a buzz or what Gee Kee et al., (2007a) referred to as *perceived*

positive reinforcement. A common frustration among participants was the lack of legal off-street facilities to engage in these behaviours legally. However, as the majority of participants reported hooning resulting from a spontaneous decision, the effectiveness of offering alternative legal venues is questionable.

This study was conducted on a small sample of drivers who have had their vehicles impounded in the Melbourne metropolitan area. The focus group attendees appeared to be biased towards drivers who view this type of driving as a sport, and seem politically motivated to argue for legal racing venues. Unfortunately the present study was unable to obtain any participants from rural areas. Recruitment of rural participants is necessary for developing an inclusive picture of the hooning problem, especially taking into account the high rate of vehicle impoundments that occur in rural areas. Comparisons can also then be made between the rural and metropolitan hoon offenders.

Deterrence value of the legislation and potential alternatives

The majority of participants were aware of the Vehicle Impoundment legislation, most commonly by word of mouth or via television. They were also aware that they could be reported by the general public through the Crime Stoppers hoon hotline. Perceptions on the likelihood of detection were polarised between likely and unlikely. However, most reported that they were caught because they were unlucky, not because there was a high chance of detection. This suggests that the majority of participants believe that if you plan your activity to avoid police you are unlikely to get caught (e.g. travelling long distances to engage in drifting, being aware of speed cameras, and being aware of frequently patrolled locations). Past research has found that a high perception of detection is a key deterrent in hooning (Gee Kee et al., 2007a) but that experiences of punishment avoidance reduce this effect (Leal, Watson, Armstrong & King, 2009). This commonly expressed confidence in a small likelihood of detection and in their ability to implement strategies to avoid detection, warrants further address for the development of effective deterrence strategies.

Although the majority of participants had reported avoiding hoon driving following vehicle impoundment, it was clear from other responses that the majority had continued to engage in hoon driving behaviour, with around 20% engaging in this driving behaviour regularly. The principal deterrence mechanisms of the program were reported as the costs (towing and storage), inconvenience, and also having to tell family members. Very few participants were concerned about the prospect of harsher penalties associated with repeat offences and only 50% of participants acknowledged that the current penalties had been severe enough to deter them; the remainder reported no deterrence effect.

Alternative penalties, such as speed limiters or crushing cars, were considered to be ineffective or of little deterrence value. For example, participants indicated that they would drive vehicles of inferior quality to minimise financial loss if car crushing was introduced. This would potentially have detrimental road safety implications because of the generally poorer safety standards of cheaper vehicles. However the crushing of older, unsafe vehicles, identified through either ANCAP or UCSR, should be considered since this would offer a general road safety benefit to the community. The risk associated with high speed chases in attempts to avoid having their cars crushed, also identified in previous research (Leal et al., 2009), should be taken seriously and investigated. Participants' only reported solution to hoon driving was offering off-street

facilities. As previously highlighted, the effectiveness of this strategy is questionable in addressing spontaneous hooning incidents.

It appears unlikely that alternative penalties such as speed limiters and car crushing will increase the deterrence effect of the program. If so, there is a need to consider a wider range of alternative deterrence mechanisms. These might include: linking to licensing penalties such as loss of licence for novice drivers engaged in hoon driving behaviours and, wheel clamping of vehicles on prominent display at the offender's residence for extended time periods, as is legislated in New Zealand (hence family members and friends/peers are made aware of the penalty).

The prevalence of a victim mentality amongst this group of offenders, which impedes the recognition of, and acceptance of responsibility for their illegal driving behaviour, is of concern and warrants address. Success of any sanction is unlikely while this attitude prevails. This prevailing attitude appears to be used as a strategy to avoid taking responsibility for engaging in illegal driving behaviours. Viewing oneself as a victim may actually be comparable to the benefits from *perceived positive reinforcement* identified in previous studies as a moderator in deterrence (Gee Kee et. al., 2007a). Future research is necessary to explore the merits of providing legal off-street facilities for drivers who want to engage in drifting etc. as a genuine sport. Should such a facility be provided, empirical assessment of on-road behaviour changes should be undertaken in response to the establishment of these facilities.

Vehicle impoundment legislation has been implemented Australia-wide to address the antisocial driving behaviour commonly known as hooning. Since its introduction many states have modified their original legislation. These modifications range from expanding the types of offences incorporated under the legislation, to increasing the impoundment time, and introducing more severe penalties such as crushing of vehicles. While these sanction increases are a reflection of the importance placed on dealing with hoon drivers, by legislators and the public, they commonly occur in reaction to highly publicised hooning incidents rather than from empirically based research recommendations. Further research is needed to explore both the road safety risks posed by hoon drivers and effective deterrence mechanisms.

References

- DeYoung, D. J. (1999). An evaluation of the specific deterrent effects of vehicle impoundment on suspended, revoked and unlicensed drivers in California. *Accident Analysis and Prevention* 31, 45-53.
- DeYoung, D. J. (1998). *An evaluation of the general deterrent effect of vehicle impoundment on suspended and revoked drivers in California*. Sacramento CA: Department of Motor Vehicles.
- Folkman, L. M. (2005). *Queensland's anti-hoon legislation and policing methods used to prevent hooning Behaviour*. Proceedings from the 2005 Road Safety: Research, Policing and Education Conference. 13-16 November, New Zealand.
- Gee Kee, Alita and Steinhardt, Dale A. and Palk, Gavan (2007a). *Hoon driving: predicting willingness to be involved from social learning and deterrence perspectives*. In Proceedings 2007 Road Safety: Research, Policing, Education Conference, Melbourne.
- Gee Kee, Alita, T., Palk, G. R., & Steinhardt, D. A. (2007b). *Hoon driving behaviour: Prevalence, associated characteristics and crashes*. In Proceedings 2007 Australasian Road Safety Research, Policing and Education Conference, Melbourne

- Leal, N., Watson, B., Armstrong, K., & King, M. (2009). There's no way in hell I would pull up": Deterrent and other effects of vehicle impoundment laws for hooning. In Proceedings of the 2009 Australasian Road Safety Research, Policing and Education Conference, Sydney
- Mulder, T. (2010). *Tough new laws to crack down on hoons*. Media release, Thursday 26th May. State Government Victoria
- NHTSA (2009). Update of vehicle sanction laws and their application. *Technology Transfer Series*, No. 352, January 2009. Washington, DC: National Highway Traffic Safety Administration.
- NHTSA (2000a). Effectiveness of administrative license suspensions and vehicle sanction laws in Ohio. *Technology Transfer Series*, No. 214, February 2000. Washington, DC: National Highway Traffic Safety Administration.
- NHTSA (2000b). Evaluation of vehicle impoundment on suspended and revoked drivers in California. *Technology Transfer Series*, No. 218, April 2000. Washington, DC: National Highway Traffic Safety Administration.
- NHTSA (1998). California impounds the vehicles of motorists caught driving without a valid licence. *Technology Transfer Series*, No. 180, May 1998. Washington, DC: National Highway Traffic Safety Administration.
- Perry, S. & McGillian, T. (2008). *Victoria's anti-Hoon legislation and policing methods used to prevent hooning behaviour*. 2008 Joint ACRS-Travelsafe National Conference
- Voas, R. B., & DeYoung, D. J. (2002). Vehicle action: effective policy for controlling drunk and other high-risk drivers? *Accident Analysis and Prevention* 34, 263-270.
- Voas, R. B., Tippetts, A. S., & Taylor, E. (1998). Temporary vehicle impoundment in Ohio: a replication and confirmation. *Accident Analysis and Prevention* 30(5), 651-655.