

Contributed articles

How unacceptable is speeding? Insights from a Social Acceptability Survey in Victoria

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Introduction

Compliance with speed limits among vehicle operators, and attitudes towards speeding behaviour, do not appear to have changed significantly in Victoria over the last eight or nine years. Contrary to drink driving behaviour, which in Victoria is met with almost unanimous social disapproval, speeding behaviour does not attract the indignation of the populace; consequently there is little or no social pressure to comply with speed limits. Building community acceptance for effective speed management is, therefore, a priority for road safety agencies, including the Transport Accident Commission (TAC). The TAC believes its efforts in public education and road safety promotion over the past 20 years have contributed to a shift in the community's social norms in relation to drink driving behaviour. Making speeding behaviour similarly socially unacceptable is likely to be a long term process. This article considers the current level of social acceptance of speeding in light of a range of survey data collected by the TAC.

The problem

Survey data collected on a regular and ongoing basis by the TAC since 2001 reveals that since 2004 there has been little movement in self-reported speeding behaviour and a range of attitudes and beliefs in relation to speeding and speed enforcement (see Figure 1 and Table 1).

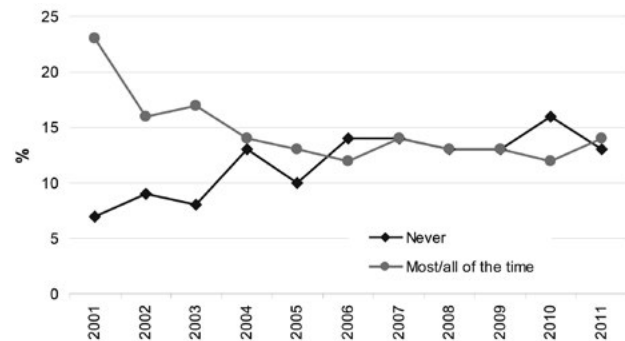


Figure 1. Drivers exceeding the speed limit - TAC tracking study. Question put to drivers (aged <50 yrs only): When driving, how often would you exceed the speed limit, even if by only a few km/h?

The early movements observed between 2001 and 2004 are likely to be a result of a package¹ of speed management changes implemented in Victoria between 2000 and 2004. The lack of progress since that time suggests that making speeding behaviour socially unacceptable is a major challenge for the TAC and other road safety agencies. This challenge has become a key element of the TAC's road safety and marketing strategy.

This follows on from the premise that social norms are a powerful motivator of behaviour (see, for example, Goldstein, Cialdini and Griskevicius [1]). Of particular relevance is whether there are elements of social norms, social unacceptability and social pressure that can be used to help shift social norms in relation to speeding behaviour.

Table 1. Agreement with speeding-related statements - TAC Road Safety Monitor survey

	2001 (n=511)	2002 (n=499)	2003 (n=509)	2004 (n=510)	2005 (n=500)	2006 (n=499)	2007 (n=499)	2008 (n=500)	2009 (n=500)	2010 (n=702)	2011 (n=702)
Speeding significantly increases my chances of crashing	86%	86%	85%	87%	87%	87%	88%	85%	88%	81%	83%
Enforcing the speed limit helps lower the road toll	79%	71%	71%	75%	76%	75%	74%	78%	74%	66%	73%
I often drive 5km/h or more over the limit	35%	25%	25%	24%	27%	22%	24%	27%	24%	NA	NA
Driving 5km/h over the limit is safe	31%	22%	23%	19%	25%	22%	21%	22%	22%	NA	NA

Quantifying the social acceptability of speeding behaviour

In 2009, the TAC and Sweeney Research developed the Social Acceptability Survey, an instrument that sought to quantify and rank the levels of social acceptability and unacceptability of a range of driving and other general behaviours (see [2]). The objective of the survey instrument was to track changes in the community's attitudes over time, and identify segments within the community that are most resistant to the TAC's public messages. A range of social behaviours were included in the survey so as to position the level of community acceptance of speeding behaviour in relation to other behaviours.

A questionnaire asked respondents to assess a range of human behaviours as being acceptable or unacceptable, on a seven-point scale, ranging from 'very unacceptable' through to 'very acceptable'. Each behaviour question was prefaced by the question 'How would most other people judge my behaviour if I...' and was phrased in the past tense for consistency. There were seven questions in the survey that dealt with speeding behaviour.

Social Acceptability Survey results

A selection of results from the second iteration of the survey, conducted in 2010, is presented below. The twenty most socially unacceptable behaviours from the questionnaire (according to the arithmetic mean where 'very unacceptable' is scored -3, 'unacceptable' -2 and so on through to 'very acceptable' being +3) are presented in Table 2.

Of those speeding behaviours included in the survey, the more extreme behaviours were considered more unacceptable than lower level speeding behaviours. The most unacceptable speeding behaviour tested was driving at 100 km/h in a 60 km/h zone, considered to be unacceptable by about 95% of respondents. By contrast, the least unacceptable speeding behaviour was driving at 110 km/h in a 100 km/h zone, with 61% considering this to be unacceptable and around 25% of respondents considering this behaviour to be acceptable.

Female drivers believe the community to have less tolerant attitudes towards speeding than male drivers. This is the case for each of the seven speeding behaviour questions, with the difference being significant.

There is an increase in unacceptability ratings with age group for each of the speeding behaviour questions. The differences were more substantial in the speeding behaviours 10 and 20 km/h over the limit, where people in the younger groups are less likely to consider speeding to be an extreme behaviour. For example, 57% of 50-60 year olds consider driving 50 km/h in a 40 km/h zone to be either very unacceptable or unacceptable, compared with 50% of 40-49 year olds, 42% of 30-39 year olds and 35% of 18-29 year olds.

The differences between geographic locations are less pronounced, but variations do apply. For speeding behaviours 40 km/h over the speed limit and 80 km/h in a 60 km/h zone, residents of major urban locations have the most tolerant attitudes, followed by rural and other urban locations. In 100 km/h zones, residents of other urban and

Table 2. Twenty most socially unacceptable behaviours, 2010 TAC Social Acceptability Survey

	Average	% unacceptable	% acceptable	Very unacceptable	Unacceptable	Somewhat unacceptable	Neither	Somewhat acceptable	Acceptable	Very acceptable
Drove with a BAC of .10	-2.63	95%	1%	78%	13%	4%	3%	1%	0%	0%
Took ecstasy tablets before driving my car	-2.59	95%	2%	77%	13%	4%	3%	1%	1%	0%
Deliberately damaged a bus shelter	-2.58	95%	1%	73%	19%	3%	3%	1%	0%	0%
Drove 100km/h in a 60km/h zone	-2.53	94%	2%	72%	17%	6%	4%	1%	0%	0%
Spent the month's mortgage/rent money on pokie machines	-2.50	95%	1%	68%	21%	5%	4%	1%	0%	0%
I was a man and I hit a woman	-2.47	92%	3%	72%	16%	3%	5%	2%	1%	1%
Tagged public property with graffiti without permission	-2.42	94%	2%	65%	22%	7%	5%	1%	0%	0%
Drove 140km/h in a 100km/h zone	-2.40	93%	3%	65%	20%	8%	4%	2%	1%	0%
Drove after smoking marijuana	-2.30	91%	3%	60%	22%	9%	6%	2%	1%	0%
Drove a car while my licence was suspended	-2.28	91%	3%	59%	22%	10%	6%	2%	0%	0%
Claimed Centrelink benefits when I was not eligible	-2.24	91%	4%	58%	24%	9%	5%	3%	2%	0%
Sold marijuana	-2.18	87%	5%	60%	19%	8%	8%	3%	1%	1%
Urinated in a public place	-2.11	89%	5%	53%	24%	12%	6%	4%	1%	0%
Parked in a disability car spot when not entitled to do so	-2.09	91%	3%	46%	30%	15%	6%	2%	1%	0%
Slightly damaged another car in car park without leaving details	-2.06	91%	3%	43%	34%	14%	6%	3%	1%	0%
Took a chocolate from the charity collection box without paying	-2.00	91%	2%	39%	34%	18%	6%	1%	0%	1%
Smoked in close proximity of children	-1.97	88%	4%	44%	27%	17%	7%	3%	1%	0%
Drove when I have a BAC of .06 (i.e. just over legal limit)	-1.95	86%	7%	46%	26%	15%	7%	6%	1%	0%
Drove 80km/h in a 60km/h zone	-1.89	86%	6%	41%	29%	16%	8%	4%	1%	0%
Had an affair	-1.88	82%	6%	47%	23%	12%	13%	3%	2%	1%

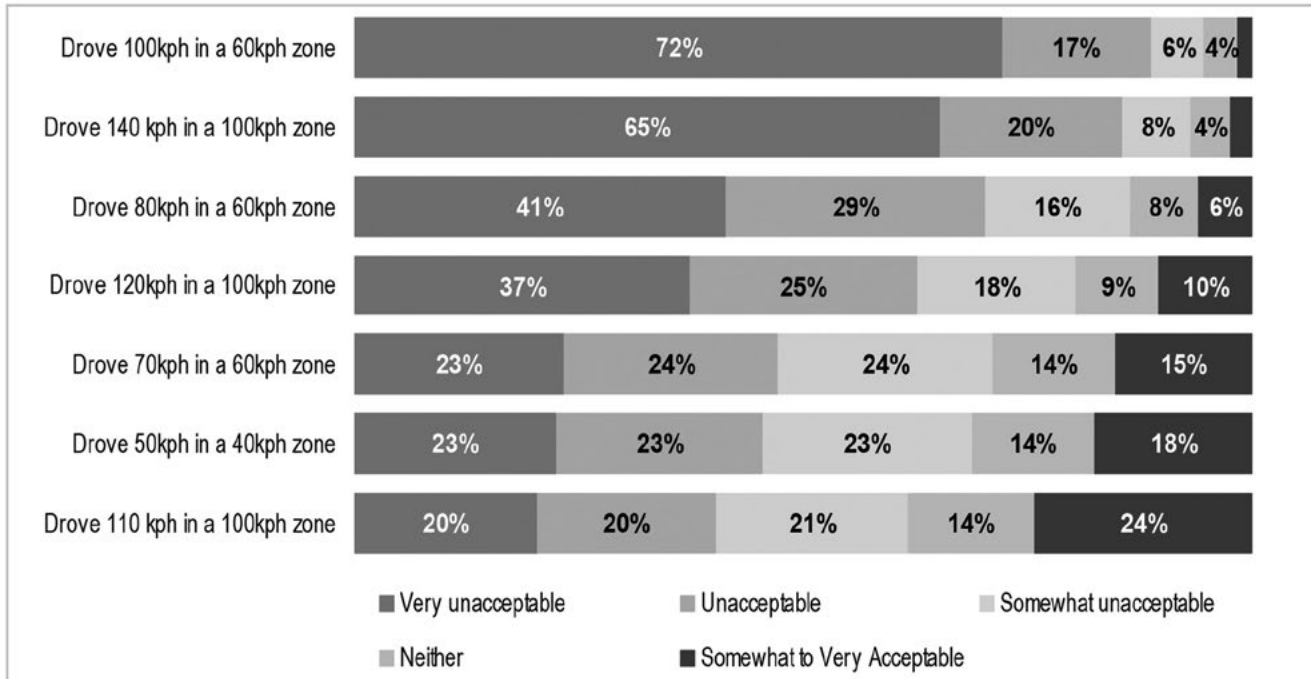


Figure 2. Speeding behaviours – responses from 2010 survey

rural locations are more tolerant of travelling at 110 km/h than residents of major urban locations. Travelling at 120 km/h in a 100 km/h zone was considered by 30% of rural residents as not unacceptable, compared with 19% and 20% of residents in major urban and other urban locations respectively. Table 3 shows these demographic variations.

The survey also identified self-reported speeders, being those who reported they speed all or most of the time when they drive. They represented 8.6% of respondents, and consistently reported higher levels of acceptance of speeding behaviour. In fact, the majority of self-reported speeders consider their behaviour while driving 110 km/h in a 100 km/h zone would be judged to be acceptable, with one-third believing that behaviour to be socially unacceptable.

Another perspective

An alternative source of data provides another perspective on the issue of acceptability of low level speeding, this time with a personal rather than social focus. The TAC Road Safety Monitor survey in 2011 considered self-reported speeding behaviour in the context of the participant’s personal opinion of what constitutes speeding. The survey first asked what speed a person should be allowed to drive in a 60 km/h zone. This was followed by the question ‘When you have the opportunity, how often do you exceed that speed?’ The results show that a majority of people are willing to speed, even after allowing for their personal level of tolerance. As shown in Figure 3, 38% of drivers think they should be allowed to drive at 65 km/h in a 60 km/h zone, and 69% of these drivers actually do this sometimes.

Table 3. Level of unacceptability of speeding behaviours by demographic group

	"10 k's over"				"20 k's over"			"40 k's over"		
	70 in 60	50 in 40	110 in 100	Average	80 in 60	120 in 100	Average	100 in 60	140 in 100	Average
Male	-0.99	-1.01	-0.61	-0.87	-1.78	-1.43	-1.61	-2.42	-2.28	-2.35
Female	-1.41	-1.23	-1.09	-1.24	-2.01	-1.88	-1.95	-2.63	-2.51	-2.57
Major Urban	-1.17	-1.08	-0.88	-1.04	-1.85	-1.65	-1.75	-2.51	-2.37	-2.44
Other urban	-1.40	-1.31	-0.79	-1.17	-2.07	-1.73	-1.90	-2.61	-2.50	-2.56
Rural	-0.93	-1.12	-0.60	-0.88	-2.05	-1.49	-1.77	-2.58	-2.42	-2.50
18-29	-0.87	-0.76	-0.58	-0.74	-1.60	-1.42	-1.51	-2.29	-2.13	-2.21
30-39	-1.12	-1.02	-0.72	-0.95	-1.80	-1.54	-1.67	-2.53	-2.39	-2.46
40-49	-1.39	-1.28	-0.93	-1.20	-2.05	-1.76	-1.91	-2.62	-2.51	-2.57
50-60	-1.53	-1.53	-1.26	-1.44	-2.21	-2.00	-2.11	-2.71	-2.63	-2.67

These results reveal that two-thirds of drivers knowingly exceed the actual speed limit in 60 km/h zones. Also, a majority (58%) of drivers think people should be allowed to exceed the speed limit by up to three km/h, while those who think people should be allowed to exceed the limit by more than five km/h are in the minority (12% of all drivers).

Perhaps the most important conclusion to draw from these results is that a majority of drivers admit to exceeding the speed at which they think they should be allowed to drive, and those drivers with a more liberal interpretation of speed limits are most likely to exceed the speed at which they think they should be allowed to drive.

Implications

The Social Acceptability Survey sheds light on the social pulse: what society views as socially wrong. The TAC expects to continue to use and develop this survey in coming years, with the intention of monitoring trends in the unacceptability of speeding behaviour as well as identifying segments within the community most resistant to the TAC’s message.

The results show that the community feels very strongly about high-level speeding, but is much more accepting of lower-level speeding. The challenge appears to be greatest in 100 km/h speed zones, where there is a higher level of acceptance of speeding behaviour. Consideration of the range of behaviours that were rated as *more* unacceptable than driving at 110 km/h in a 100 km/h zone gives an

insight into the nature of this challenge. Such behaviours as failing to say please/thanks to a waiter, picking your nose in public, throwing recyclables in landfill bin, being drunk in a public place and watering the garden during restrictions were all considered more unacceptable. There is clearly a challenging task ahead for public educators such as the TAC to convince drivers of the risks associated with speeding behaviour.

Perhaps more worrying than the complacency about driving at 110 km/h in a 100 km/h zone is that one-third of self-reporting speeders recognise that the community views their speeding behaviour as unacceptable. This implies that road safety proponents cannot rely on social norms alone. We also know from the Road Safety Monitor survey questions on speed tolerance and speeding behaviour that 68% of drivers think people should be allowed to exceed the posted speed limit.

It would seem that, where there is compliance with speed limits, this behaviour is largely influenced by speed enforcement. With widespread acceptance of speeding by a few km/h, and a low level of social unacceptability of speeding by 10 km/h, it is clear that enforcement remains a key element of any speed management approach. A question worthy of future research would be whether the widespread availability of speed assistance technology, such as Intelligent Speed Assist – a technology that alerts drivers when they exceed the speed limit – will lessen the acceptance of low-level speeding.

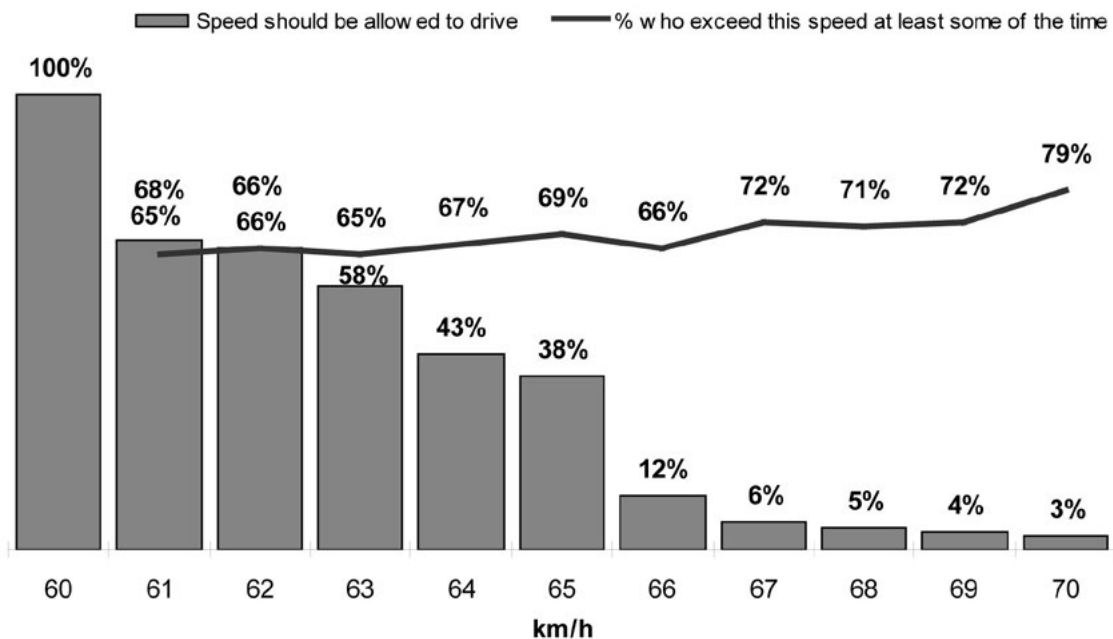


Figure 3. Speed at which a person should be allowed to drive in a 60 km/h zone, and level of compliance - TAC Road Safety Monitor 2011

The power of social influence will perhaps become a key influencer of driving speeds only when speeding is overwhelmingly considered to be very unacceptable, as is the case with driving with a Blood Alcohol Concentration (BAC) of 0.1%.

Notes

¹ This package of measures included expansion of the covert speed camera program, a lowering of the cameras' speed detection threshold, increased camera operating hours, the introduction of a 50 km/h general urban speed limit and a large public education campaign *Wipe off 5*. It has been evaluated [3] as having led to a statistically significant reduction in casualty crashes.

References

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Methods for measuring motorcycle speeds and their implications for understanding 'safe speeds'

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Introduction

New Zealand traffic accident data show that motorcycles account for 13% of road crash fatalities [1] but that motorcyclists undertake only around 0.5% of travel time or trips [2]. From these statistics, it is determined that motorcyclists are around 16-23 times more likely to be involved in a fatal or injury crash than car drivers [1]. The high relative crash risk for motorcycles is replicated in every country; only the magnitude of the estimate varies, as motorcycles are always the most dangerous form of travel. One report estimates that motorcycles have a relative crash risk as high as 34 times that of cars [3].

Based on vehicle registrations, the number of motorcycles may seem insignificant: they constitute only 3.47% of the NZ vehicle fleet. However, motorcycle registrations have grown to over 100,000 in recent years, with the largest increase occurring between 2004 and 2008 [4]. The popularity of the motorcycle comes and goes but the recent rise in registrations coincides with increased rates of crashes resulting in death or injury [1]. Stephan et al [5] reviewed fatal motorcycle accident files from 115 Australian coroners' cases and found the rider was travelling too fast for the conditions in over 70% of cases. This conclusion is made notwithstanding that forensic techniques used for estimating a motorcycle's speed from crash scene evidence are far less accurate than those available for cars [6-7].

The main concern here is to consider the relative speeds of motorcycles and cars implied by reported statistics available from New Zealand, Australia, the United Kingdom and elsewhere. The argument developed in this paper is that our

routine monitoring of vehicle speeds is not sophisticated enough to reveal the actual speed profile of motorcycles and is confounded by the classification of motorcycles in a group with scooters and mopeds. Recent work in New Zealand reveals how misleading our reported statistics are concerning motorcycle speeds.

The category that is referred to as 'motorcycles' formally includes motorcycles, motor scooters, mopeds, motor-powered bicycles and three-wheeled motorcycles [8]. The category can be referred to as 'powered two-wheelers' to avoid misclassification of the range of vehicle types, but this will simply mask the fact that scooters and motorcycles are used by different demographics for different trip purposes, implying different speed profiles and crash rates. To further complicate the issue, modern scooters can be more powerful than small motorcycles. The wide range in vehicle power associated with 'motorcycles' places the researcher in a position akin to classifying light trucks with family sedans and expecting speed monitoring to fit within a single distribution.

Annual speed surveys

In New Zealand, an annual vehicle speeds survey is conducted by the Ministry of Transport to provide key monitoring statistics on all vehicle speeds based on vehicle classifications [9]. The survey is central to all performance criteria established by other agencies (as it is in Australia, see for example [10]). It is usual practice to report mean speeds, 'excessive speeds' (defined as the percentage of vehicles travelling in excess of the speed limit) [11], and the 85% percentile of the distribution of observed speeds.