

Title New Speed Enforcement Initiatives: Changing Attitudes and Behaviour

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Biography

Dr. Geoff Smith commenced at Monash University Accident Research Centre (MUARC) in late 2002 as a Research Fellow, having previously worked as a cognitive gerontologist at the University of Aberdeen (Scotland) and at the Age and Cognitive Performance Research Centre in Manchester (England). Areas of interest include: road safety, injury prevention, ageing and cognitive function, prospective memory, and sports psychology.

Abstract

In 1999, new speed enforcement initiatives were planned for introduction in Victoria in following years. In order to assess public response to these initiatives, a baseline telephone survey was conducted in Melbourne during October 1999 ($N=1,000$), in order to record related attitudes and behaviours under the speed camera program in operation at that time. Since then several new speed camera technologies have been introduced (including flashless, fixed-site and point-to-point cameras), the number of camera hours per month has also been increased, and both the speed camera tolerance and the residential speed limit have been lowered. A revised survey to address these changes was conducted in Melbourne in October 2002 ($N=1,000$) to ascertain any changes in self-reported attitudes and behaviours in the period following the introduction of the new initiatives.

Overall respondents indicated continuing strong agreement that speed enforcement measures contribute to lowering the road toll. Additionally people reported an increase in the chances of being caught exceeding the speed limit, and that self-reported speeding behaviour has changed accordingly in the 3-year period between surveys. This is reflected in respondents reporting that they are becoming more aware of speed enforcement in general, and of speed cameras in particular. Accompanying this is an attendant improvement in the public's knowledge concerning the logistics and operation of speed cameras. Data analysis focussing on changing perceptions of specific demographic groups is presented.

Preliminary analysis indicates in general that the innovative efforts of Victoria Police and the changes in speed camera technology are proving to be effective in changing people's attitudes towards speeding and self-reported speeding behaviour. These efforts serve to increase road safety in Victoria, and to provide a model for implementation of similar practice in other States and Territories. Implications for future strategies and specific target groups are discussed.

1. INTRODUCTION

The present paper reports preliminary data analysis from one aspect of a larger project concerned with the evaluation of road safety initiatives. Concurrent work involves the analysis of data concerning recorded casualty crashes within the same time frame.

Driving over the stated speed limit is likely to be one of the main factors in the occurrence and severity of car accidents (Johnson et al. 1980). Attitude towards speeding and beliefs about the outcome of this behaviour are important factors in people's reported intention to speed and real speeding behaviour (Kimura, 1993). Speed limit enforcement strategies may therefore be successful if the attitudes of their target audience can be shown to be changing.

Speed camera use became widespread in Victoria in the late 1980s, and marked the start of a period of significant decrease in the numbers of people killed and injured on the roads. The use of speed cameras has increased steadily since then and become more effective with the advent of superior technology, making them cheaper to operate in terms of labour needed to run them as well as improving road safety.

Recently, debate has arisen as to whether the intention behind the use of speed cameras is one of deterrence or a useful way of generating revenue for the State Government; this debate is not a major concern of this paper. However, this issue has had increasing media coverage and consequently may have some bearing on people's attitudes towards speed cameras and their appropriate use. Thus this should be borne in mind in any discussion of this nature.

In 1999 another round of new speed enforcement initiatives were planned for introduction over the next few years in Victoria. In order to assess public response to these strategies two telephone surveys were carried out in Melbourne, firstly in October 1999 and then in October 2002. Between these two dates, speed enforcement measures changed in the following ways:

- total number of camera hours worked increased from 4000 to 6000.
- the phased introduction of "no-flash" cameras across the State
- reduced enforcement thresholds were announced and introduced in March 2002

The aims of this paper are to examine changes in beliefs and attitudes to speed enforcement, and to investigate any changes in driving behaviour that may have occurred within the context of the specific changes in speed enforcement strategies.

2. METHOD

2.1 Participants

One thousand respondents were surveyed in Melbourne via telephone in October 1999. Respondents were randomly selected from the White Pages. To increase the cross-representation of respondents the driver in each household whose birthday fell nearest to the survey date was asked to take part. Postcodes were also recorded to ensure a sample representative of all metropolitan areas, and to allow matching of participants to police district.

A similar survey was conducted in October 2002, using the same sampling methods as in 1999, again for 1000 respondents. The numbers of respondents in each demographic group are shown in Table 1.

Age Group	1999		2002	
	Male	Female	Male	Female
<20	13	17	14	13
20-29	73	88	67	88
30-39	86	136	81	130
40-49	84	128	83	133
50-59	66	100	73	107
60+	116	90	123	89

Table 1: Number of respondents as a function of Survey-time, gender and age group.

2.2 Materials

The 1999 survey comprised six sections. Sections I-VI asked respondents to rate levels of agreement with statements on a scale ranging from 0 (do not agree at all) to 10 (agree very

strongly). Section VII asked for person specific responses concerning experience and demographics.

Section I. General factors influencing decision-making processes while driving.

Section II. Specific factors influencing speed choice decisions.

Section III. Perceived risk of detection while driving in general.

Section IV. Perceived risk of detection by all types of speed enforcement.

Section V. Perceived risk of detection by speed camera enforcement only.

Section VI. Enforcement experiences.

Section VII. Demographics: sex, age group, years of driving and postcode.

The 2002 survey consisted of 19 questions (with response dependent sub-sections). Two questions used similar statements and ratings scales as employed in the 1999 survey. This allowed only partial replication and extension of the findings from the 1999 survey.

2.3 Procedure

The interviewers informed the respondents of the nature and duration of the survey and that the survey was being conducted on behalf of MUARC. If participants agreed to proceed the survey was then carried out. At the conclusion of the survey participants were given contact details in case of any further enquiries, and were reminded of the organisation involved. Each survey lasted approximately ten minutes.

3. RESULTS AND DISCUSSION

It was necessary initially to establish whether the background details of the two samples were similar. This was expected to be the case as the second survey targeted the same distribution as the first using postcodes. In each case the participants were the driver whose birthday was nearest to the date of the survey, to maximise representativeness of each sample.

Frequencies of participants located in each designated "police district" in each survey were similar. This is an important concern as all speed initiatives were not introduced in all areas simultaneously. Also the numbers of participants in each age group did not differ between surveys. Finally the distribution of years spent driving was not different from survey to survey. This shows there is an adequate basis to make comparisons between the 1999 survey and the 2002 survey, on questions that were similar.

3.1 Getting caught

Figure 1 illustrates agreement with the statement "There's not much chance of being caught speeding by a speed camera." The figures are towards the 'disagree' end of the scale, with the only significant change ($p < .01$) being in the 60+ group.

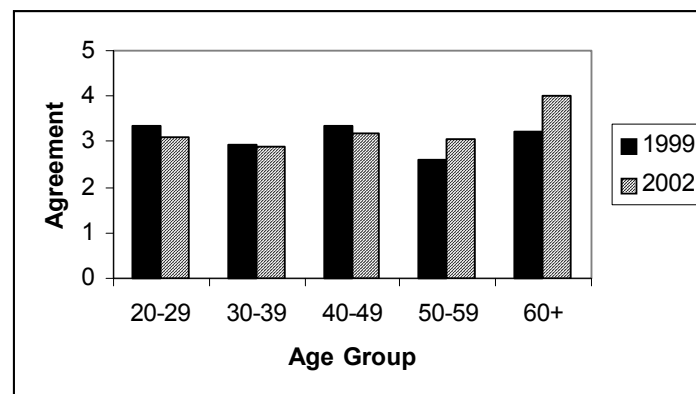


Figure 1: Agreement as a function of age and year of Survey.

Figure 2 shows the ratings of the likelihood of being caught speeding by any method.

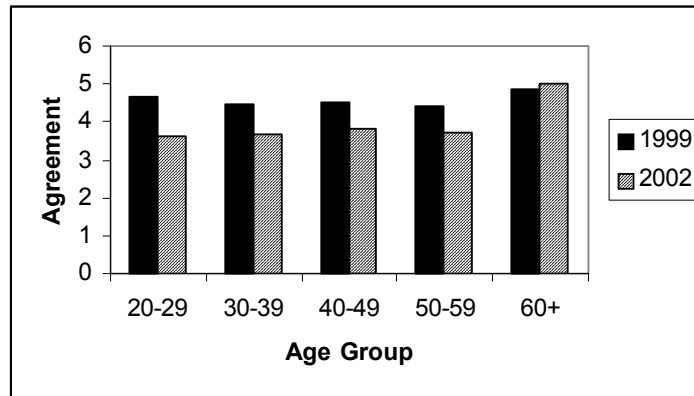


Figure 2: Ratings of being caught speeding by any method.

There is only a very small change with time in this instance indicating that people are wary of speeding, and the possibility of penalties.

3.2 Enforcement sightings

As should be the case with an increase in the number and operating hours of speed cameras, people reported an increase in the number of times they had seen a speed camera being used in the four weeks prior to completing a survey. In the 1999 survey the mean number of sightings was 2.44, compared with 3.44 in 2002 ($p < .001$). This intuitive, yet important, finding shows that people are more aware of the presence of speed cameras which is likely to increase the chances of people moderating their speeding behaviour.

3.3 Speeding behaviour

Respondents gave ratings of their agreement with the statements: "I often drive between 5-9km/h over the speed limit" and "I often drive 10km/h or more over the speed limit." Figure 3 compares the levels of agreement with the 5-9km/h statement have significantly reduced with time. The later survey indicates that frequent speeding behaviour of 10km/h over the speed limit is becoming less common.

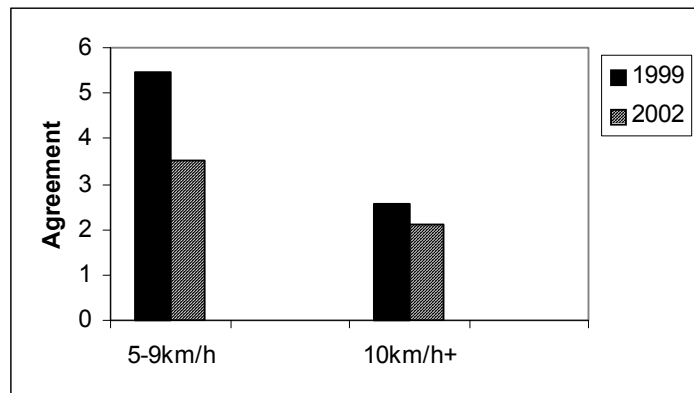


Figure 3: Reported speeding behaviour.

This would indicate that people are generally moderating their speeding behaviour in line with the aims of the new initiatives described earlier.

Figure 4 illustrates the level of reported speeding behaviour among different age groups. In general older drivers appear less likely to report speeding, with the trend being more

pronounced in the 2002 survey. This again supports the argument that the speed enforcement initiatives introduced in the 1999-2002 period are having an effect on Victorian driving behaviour. For speeding at over 10km/h over the speed limit (Figure 5) the trend is similar to the 5-9km/h trend. It must be noted that the figures here are very small, indicating disagreement in all groups.

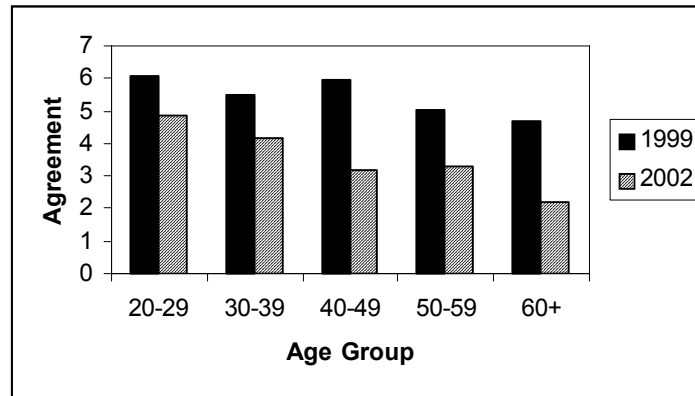


Figure 4. Reported speeding behaviour 5-9km/h.

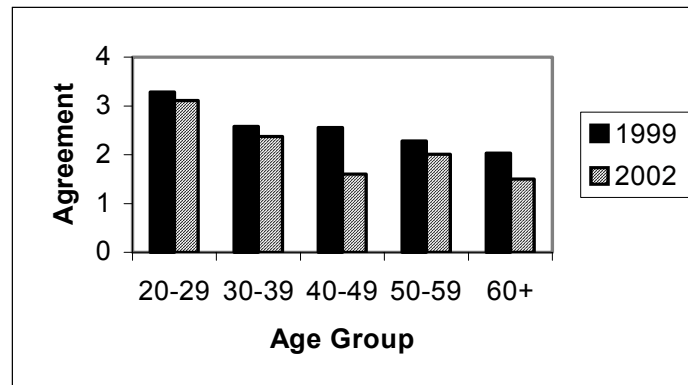


Figure 5. Reported speeding behaviour 10+km/h.

Following on from this, respondents in the 2002 survey were asked to indicate if they had increased/decreased or kept their general driving speed constant. Table 2 shows the percentage of respondents in each category for the five age groups.

	20-29	30-39	40-49	50-59	60+
Increase	6%	5%	4%	5%	1%
Constant	63%	54%	44%	52%	60%
Decrease	31%	41%	52%	43%	39%

Table 2: Change in Speed in last 2 years.

This shows that where most drivers report no change in speed, many have indeed decreased their general speed. Very few respondents have reported having increased their travel speed. The increases in all age groups were very small, 6% equating to only 9 people.

3.4 Road Toll

Both surveys asked participants to rate how strongly they agreed with the statements that “Enforcing the speed limit helps lower the road toll” and “Enforcing the speed limit helps lower the road toll using speed cameras.” Overall agreement was moderately strong in both surveys for both statements, however it fell between 1999 and 2002 from 7.99 to 7.42 ($p < .001$), in general, and from 7.35 to 6.51 ($p < .001$) specifically for cameras. Splitting by age group indicates a consistent drop in agreement ($p < .02$), with the exception of the 40-49 group, whose opinion did not change for enforcement in general only.

Disaggregation by gender shows that women report stronger agreement than men ($p < .001$), also they report a smaller (non-significant) drop with time, in terms of both speed enforcement in general and for cameras with regard to their role in lowering the road toll.

Overall respondents are in general agreement that speed limit enforcement will help lower the road toll, although with time agreement is getting less strong. One reason for this view may be the increased publicity surrounding the issue of revenue collection leading to people forming opinions on a basis of finance rather than road safety issues.

4. SUMMARY

From the preliminary data presented in this paper, there are encouraging signs that people's attitudes and behaviours with regard to speeding are changing. These changes are in the desired direction from a road safety perspective. It should be noted that the present findings are based on self-reports, but the surveys were carried out sufficiently stringently to minimise any of the problems associated with this methodology.

In conclusion the new speed enforcement initiatives introduced in Victoria between October 1999 and October 2002 are influencing people's attitudes toward speeding, and their reports of behaviour changes can only be beneficial to road safety.

References

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Keywords

Speed Cameras, Attitudes, Speeding Behaviour