



Exploring perceived legitimacy of traffic law enforcement

Christopher N Watling & Nerida L Leal

ACRS Conference – 10/8/2012

Centre for Accident Research & Road Safety - Queensland

CARRS-Q is a joint venture initiative of the
Motor Accident Insurance Commission
and Queensland University of Technology



www.carrsq.qut.edu.au

Introduction

- Drink driving, speeding, driving while fatigued, and driving without a seatbelt contribute substantially to serious casualty crashes
- Traffic law enforcement and education campaigns can modify driver behaviours
- The ability of authorities to modify driver behaviours is limited by practical constraints
- A potential disparity exists between the perceptions of risk and actual behaviour, which could influence attitudes

Introduction (2)

- Different attitudes towards the behaviours and their enforcement may lead to disparate perceptions of legitimacy
- If the behaviour and its enforcement method are perceived as legitimate, then it could be expected that compliance is more likely
- Enhancing our understanding of the factors that influence willingness to comply with traffic laws could be important for road safety

Research Questions

- 1) Does **self-reported likelihood** of engaging in drink driving, speeding, driving while fatigued, and driving without a seatbelt differ between behaviours?
- 2) Does **perceived legitimacy of enforcement** of drink driving, speeding, driving while fatigued, and seatbelt laws differ between behaviours?
- 3) Do **attitudes** toward drink driving, speeding, driving while fatigued, and driving without a seatbelt differ between behaviours?
- 4) **What are the associations** between self-reported likelihood of engaging in these illegal behaviours, perceived legitimacy of enforcement and attitudes toward drink driving, speeding, fatigued driving, and driving without a seatbelt?

Method

- Participants
 - Drive on Queensland roads, have held an Open (unrestricted) drivers licence
 - A total of 312 respondents, only 293 were valid
- Procedure
 - Invited to participate via QUT email distribution lists, social networking sites, and the CARRS-Q research participation webpage
 - Online survey took approximately 10-15 minutes to complete
 - Could enter draw for one of six \$50 petrol vouchers as small thank you gift for taking part in survey

Method (2)

- Variables and measures
 - 5-point Likert scales, higher scores indicate greater agreement
 - **DV: Self-reported likelihood** of engaging in drink driving, speeding, driving fatigued, and unrestrained in next month
 - **IV1: Perceived legitimacy** of traffic law enforcement practices of the four driving behaviours
 - Purpose designed items based on work by Poulter and McKenna (2007)
 - **IV2: Attitudes** towards the four driving behaviours
 - Items based on the definitions component of Akers' SLT
 - Each behaviour had two positive, two neutral, and two negative items

Results

- Data cleaning and screening
 - Small amount of missing data (< 5%)
 - Departures from normality and some heterogeneity
 - Therefore, non-parametric tests were performed
 - Research question 1-3: Friedman's test with Wilcoxon signed-rank tests for post hoc comparisons ($p < .0083$)
 - Research question 4: Spearman's Rho correlation coefficient
- Sample characteristics
 - Mean age of 39 yrs ($SD = 14.96$; range = 20-84) with over half being female (58.7%)
 - Driving 1-10hrs/week (61.1%) and licensed for 19.6 yrs

Results (2)

Item	<i>M</i>	<i>SD</i>	α	No of items
Likelihood of behaviour				
Drink driving	1.30	0.62	.71	3
Speeding	2.94	1.33	.95	4
Fatigued driving	2.54	1.15	.85	2
Driving without a seatbelt	1.06	0.40	.92	4
Perceived legitimacy				
Drink driving	4.50	0.52	.72	4
Speeding	3.66	0.98	.91	7
Fatigued driving	3.52	0.87	.77	3
Driving without a seatbelt	3.89	0.85	.81	4
Attitudes				
Drink driving	1.51	0.57	.75	6
Speeding	2.29	0.96	.89	6
Fatigued driving	2.10	0.69	.81	6
Driving without a seatbelt	1.79	0.67	.82	6

Results – RQ1

- Does self-reported likelihood of engaging in the four behaviours differ?
 - $\chi^2 (3) = 480.86, p < .001$
 - All pairwise comparisons were significant at $p < .0083$

Extremely
unlikely



Extremely
likely

Results – RQ2

- Does perceived legitimacy of law enforcement differ between the four behaviours?
 - $\chi^2 (3) = 281.02, p < .001$
 - All pairwise comparisons were significant at $p < .0083$, except fatigue versus speeding ($p = .028$)

Not
legitimate



Legitimate

Results – RQ3

- Do attitudes differ between the four behaviours?
 - $\chi^2 (3) = 363.55, p < .001$
 - All pairwise comparisons were significant at $p < .0083$



Negative
attitude

Positive
attitude

Results – RQ4

Variable	1.	2.	3.
Drink Driving			
1. Likelihood	~		
2. Perceived legitimacy	-.15*	~	
3. Attitudes	.34**	-.44**	~
Speeding			
1. Likelihood	~		
2. Perceived legitimacy	-.41**	~	
3. Attitudes	.65**	-.69**	~
Driving while fatigued			
1. Likelihood	~		
2. Perceived legitimacy	-.23**	~	
3. Attitudes	.41**	-.48**	~
Driving without a seatbelt			
1. Likelihood	~		
2. Perceived legitimacy	-.08	~	
3. Attitudes	.09	-.55**	~

* $p < .05$; ** $p < .001$

Likely behaviour

- Overall, driving without a seatbelt was the least likely behaviour reported, followed by drink driving, driving while fatigued, and speeding
- Self-reported likelihood of behaviours similar to previous studies
- Driving while fatigued and speeding were most likely behaviours
- Continued education and enforcement of all high-risk driving behaviours is necessary, perhaps greater emphasis is warranted for driver fatigue and speeding

Perceived legitimacy

- Perceived legitimacy of traffic law enforcement has received limited attention
- Consistent with low self-reported levels of drink driving and driving without a seatbelt, enforcing these behaviours was perceived as the most legitimate
- Speed and fatigue enforcement were perceived as the least legitimate and were the two highest of the self-reported driving behaviours
- However, enforcement of the four behaviours were perceived as legitimate (on average)

Attitudes

- Attitudes towards the four behaviours were significantly different from one another
- The pattern of attitudes is consistent with likelihood of behaviour and perceived legitimacy of enforcement
- Most positive attitude was for speeding, then fatigues driving, driving without a seatbelt, and drink driving
- On average, the sample did not have particularly favourable attitudes towards the four behaviours
- Generally, a compliant and low risk sample

Associations between variables

- For drink driving, speeding and driving fatigued, significant correlations between behaviour, perceived legitimacy, and attitudes were found
- The largest correlations between perceived legitimacy and likelihood of behaviour scores were for speeding and driving fatigued
- Largest correlations were found between perceived legitimacy and attitudes
- Previous work has shown that a speeding intervention can modify individuals perceived legitimacy of speeding enforcement

Next steps

- Address limitations of current study
 - Convenience sample
 - Self-selection bias
 - Self-report, social desirability, and illegal driving behaviours
 - Preliminary investigation with simple quantitative analyses
- Future research
 - Refinement of measures
 - Larger sample
 - Other illegal driving behaviours (e.g., drug driving, hooning, driver aggression)
 - Longitudinal methodologies

Conclusion

- Each year, the amount of road fatalities and serious injuries that are attributed to one of the fatal four are substantial
- Self-reported likelihood of behaviour, perceived legitimacy of enforcement, and attitudes differ between these four behaviours
- The strength of associations have consistent patterns
- The perceived legitimacy of enforcement may have important implications for road safety

Comments or Questions?

christopher.watling@qut.edu.au



20-21 September 2012
Crowne Plaza Gold Coast
Australia

Multi-disciplinary event

- Road & transport safety
- Aviation safety
- Watercraft safety
- Construction safety



<http://ositconference.com>