

Comparing provisional and unrestricted licence holders on speeding offence and crash rates

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Background

● Speeding

- The most common traffic offence in NSW.
- The single largest behavioural factor in road trauma.
- Accounts for 40% of fatal crashes in NSW.
- High risk behaviour



Background

- Risk taking behaviour and crash involvement
- Males, young drivers are over-represented.
- Excessive speed, alcohol use, seatbelt wearing
- In NSW, 34% of provisional drivers involved in fatal crashes are speed-related compared to 17% of unrestricted drivers.



Hypothesis

- Overrepresentation of provisional drivers in speed-related fatal crashes in NSW may be at least in part explained by their overrepresentation in speeding offences.

Aims

- To compare between provisional and unrestricted licence holders on
 - 1) Speeding offences.
 - 2) The extent of high range speeding offences relative to other traffic offences.
 - 3) Speed-related crash rates.
- Age and gender controlled for in all comparisons.

Methods

- Data

Licence, offence and crash data from NSW Roads and Traffic Authority (RTA)
- Recorded fatal crashes include crashes
 - that have occurred on public roads and
 - that have been reported to the police and
 - where at least one person has been killed.

Methods

- Sample

- Offence data analyses:

Those who held an **unrestricted licence** as their highest type (n=3,823,368) and those who held a **provisional licence** as their highest type (n=495,484) at the time of committing a traffic offence between 2001 and 2006.

- Crash data analyses:

The licence type of the vehicle controllers involved in a fatal crash between 2001 and 2006.

Methods

- Sample

- A note on provisional drivers in this study

- P1 and P2 are analysed together as provisional licence holders.

- Some of the licence holders in this study obtained their licence under the old system (pre-GLS).

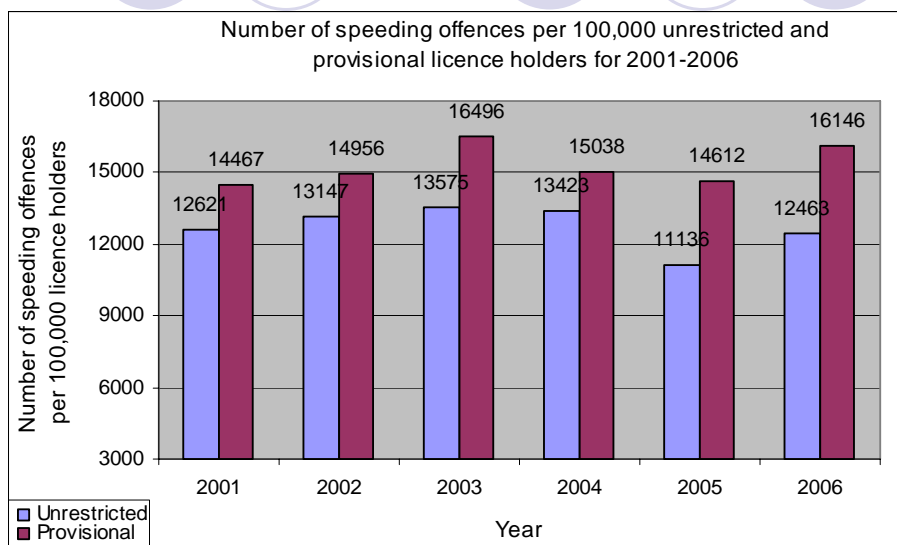
Methods

● Analyses

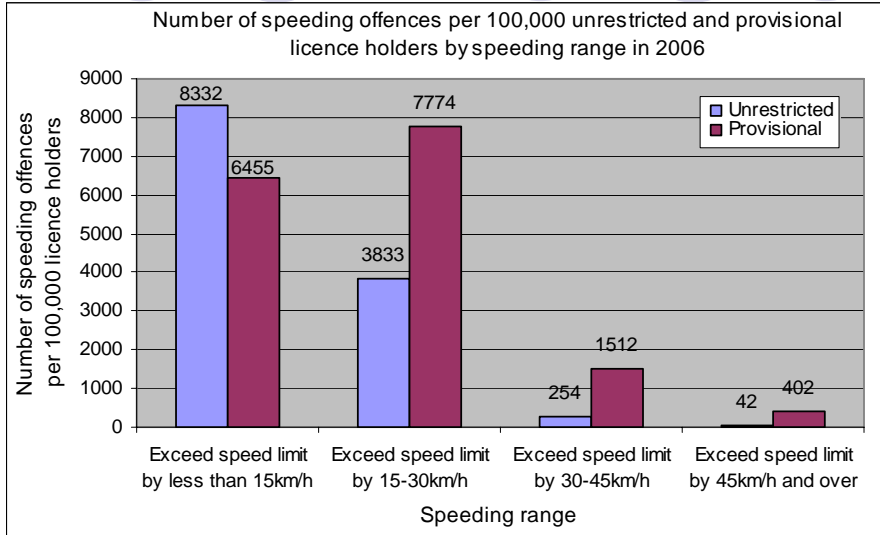
- Speeding offence rate per 100,000 provisional and unrestricted licence holders.
- Rate of speeding offences and crashes by licence type, age and gender.
- Regression analyses - age, gender and licence type relating to range of speeding above the limit and to speeding in excess of over 30 km/h.

Results

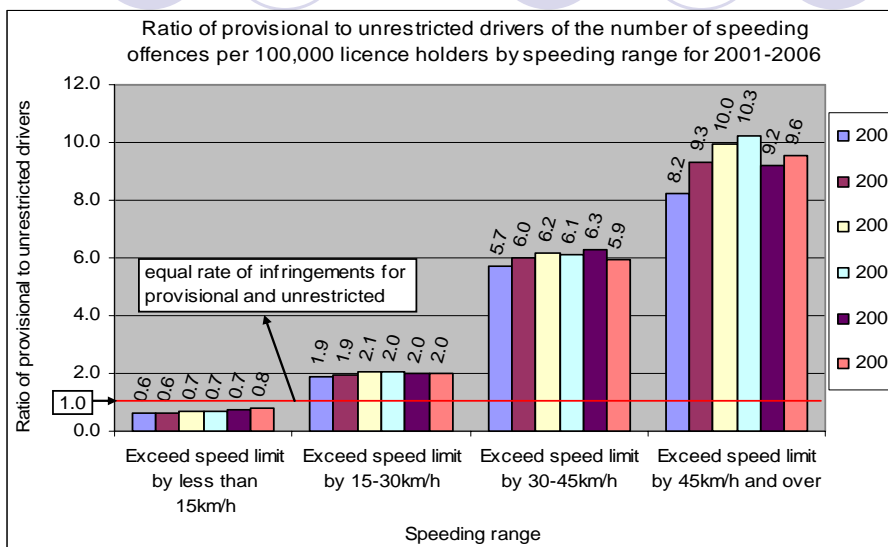
speeding offence rate



Results speeding offence rate



Results speeding offence rate



Results *Age and gender*

Table 1. Male to female ratio amongst provisional and unrestricted licence holders.

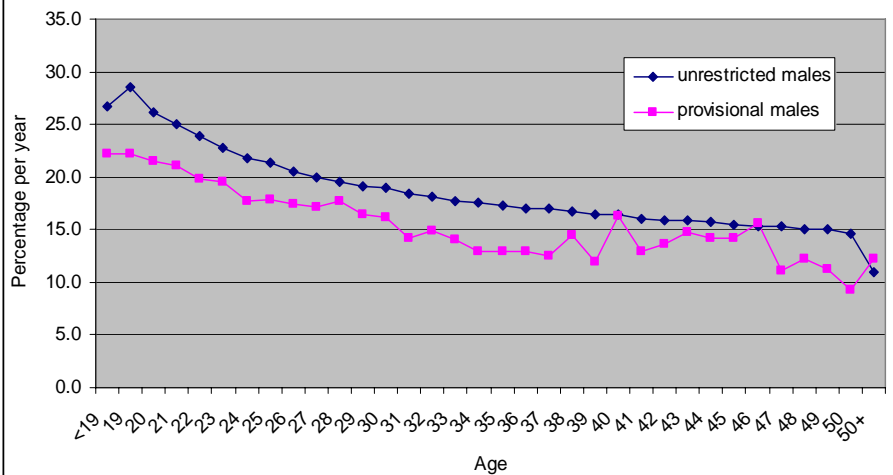
Population	Provisional	Unrestricted
Licence holders	0.9	1.1
Speeding offenders (all ranges)	2.3	1.8

Table 2. Mean age for provisional and unrestricted licence holders.

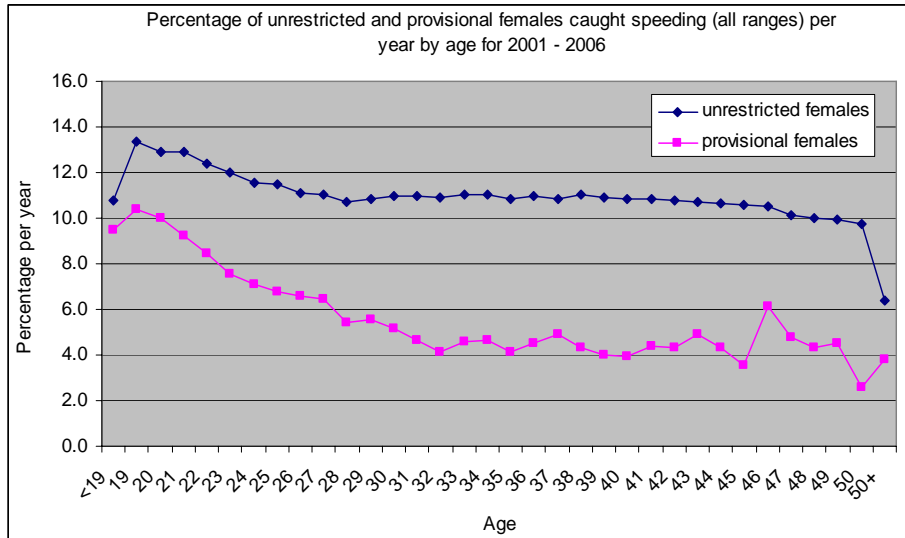
Population	Provisional	Unrestricted
Licence holders	21.7	46.0
Speeding offenders (all ranges)	20.6	41.8

Results *speeding offence rate by age and gender*

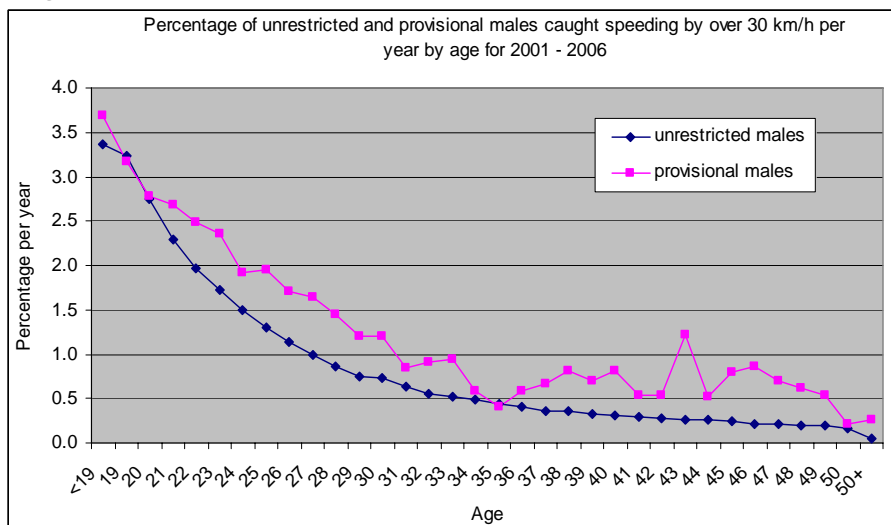
Percentage of unrestricted and provisional males caught speeding (all ranges) per year by age for 2001 - 2006



Results speeding offence rate by age and gender

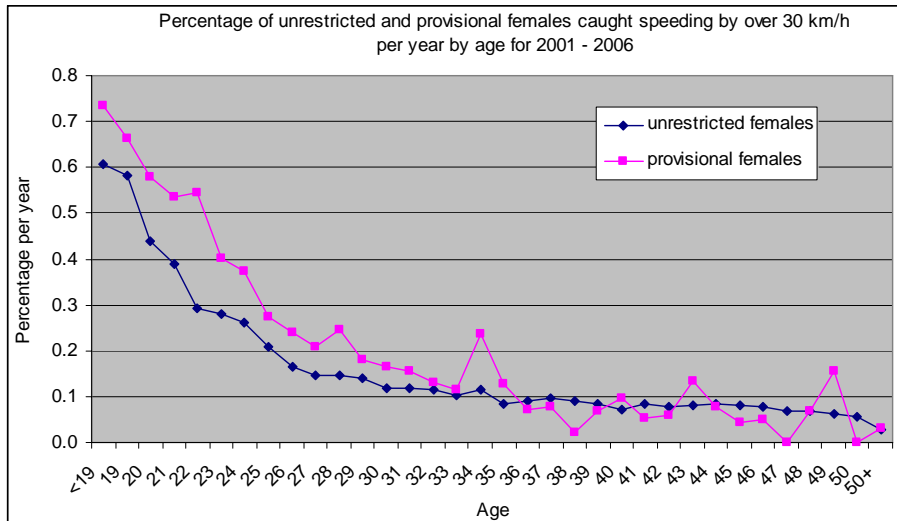


Results high range speeding offence rate by age and gender



Results

high range speeding offence rate by age and gender



Results

Mean range of speeding above the limit controlling for age and gender

- Outcome variable

- Four ranges of speeding above the limit:
 - 1 = speeding by not more than 15 km/h,
 - 2 = speeding by 15-30 km/h,
 - 3 = speeding by 30-45 km/h,
 - 4 = speeding by more than 45 km/h.

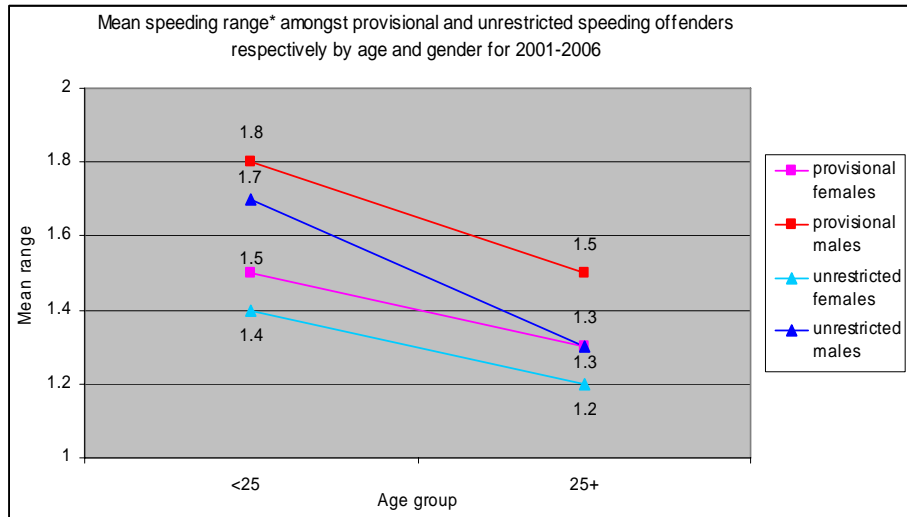
- Predictor variables

- Licence status: UR vs P
- Age group: < 25 vs 25 +
- Gender: F vs M
- Interactions: age by gender, licence by age, licence by gender, licence by age by gender

- Licence status – statistically significant independent predictor.

Results

Mean range of speeding above the limit



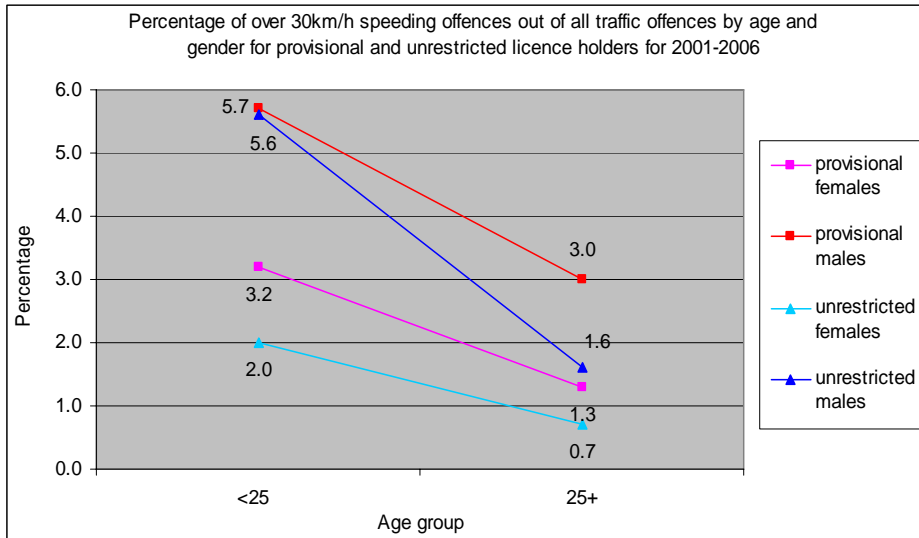
Results

likelihood of over 30 km/h speeding offence relative to other traffic offences controlling for age and gender

- Outcome variable
 - Speeding by over 30km/h offence vs other traffic offences
- Predictor variables
 - Licence status: UR vs P
 - Age group: < 25 vs 25 +
 - Gender: F vs M
 - Interactions: age by gender, licence by age, licence by gender, licence by age by gender
- Licence status – statistically significant independent predictor.

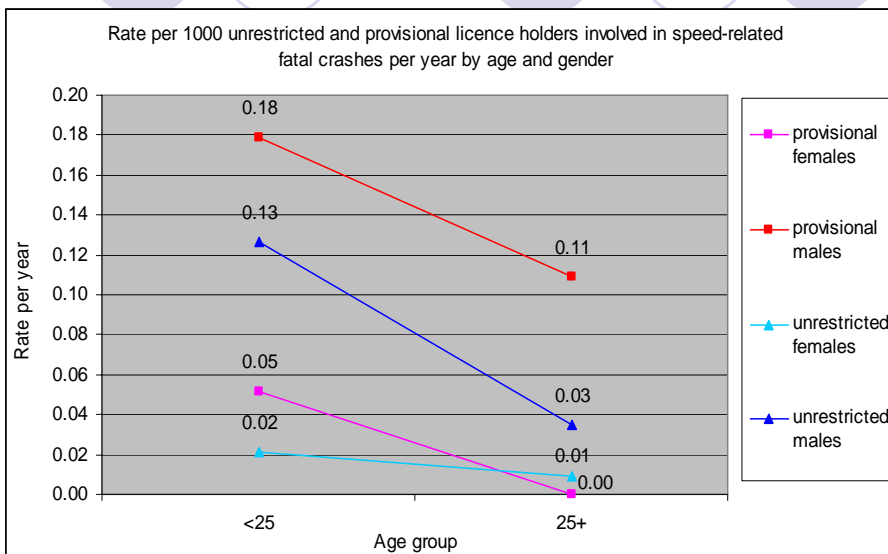
Results

the likelihood of over 30 km/h speeding offence



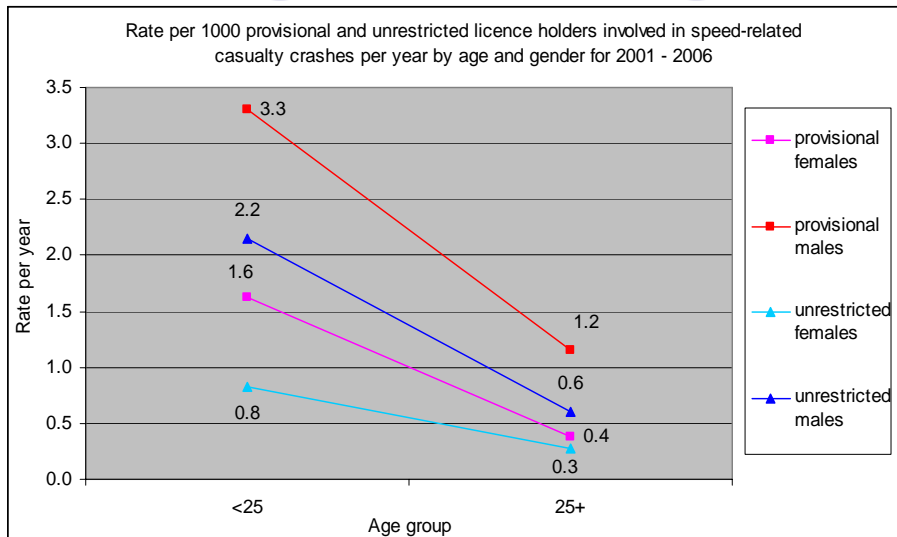
Results

speed-related fatal crash rate



Results

speed-related casualty crash rate



Summary of results


- 1) Provisional licensees are on average younger and show higher speeding offence rate;
- 2) The rate of **overall** speeding offences is higher for unrestricted, but the rate of **over 30 km/h** speeding offences is *higher for provisional* licence holders across age and gender;
- 3) The **mean speed above the limit** is *higher for provisional* licence holders regardless of age and gender;
- 4) The **likelihood of being detected for high range speeding** of over 30 km/h is *higher for provisional* licence holders, particularly for M 25 +, and F across age groups.
- 5) Provisional licence holders are overrepresented in speed-related crashes across age and gender;

Summary of results



- The results suggest that
 - High range speeding is a large contributing factor for the overrepresentation of speed-related crashes amongst provisional licence holders.
 - Better speed compliance with age is not as strong for provisional males as for unrestricted males.
 - Provisional males and females are less safe drivers than unrestricted males and females respectively across age groups.
 - For males, high risk speeding behaviour is more likely to result in harmful consequences when they are on provisional.

Discussion



- Previous research suggests that the greater speeding of younger drivers is deliberate rather than inadvertent, and based on greater perceived risk utility (Prabhakar, Lee and Job, 1996).

Discussion

- Countermeasures

- Increased deterrence - increased penalty and/or increased perceived probability of apprehension.
- New conditions for novice drivers in NSW since July 2007
- The automatic suspension for speeding → the perception that all forms of speeding are serious.
- The increased number of fixed speed cameras in NSW → increase the perceived (and real) probability that speeding will be detected.

Conclusion

- Provisional licence status adds to the predictive power of age and gender in predicting high range speeding and fatal crashes.
- Being a provisional/novice driver is an independent risk factor.