Methodology and broader implications for young driver research published in *Traffic Injury Prevention*

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Road *safety(?)*

- Each year around the world
  - ~1.24 million people are killed in a road crash
  - 20-50 million people are injured in a road crash
  - road crashes are leading cause of death for people aged 15-29 years
- In Queensland, 17-24 year olds
  - comprise 10.8% of the population
  - contribute 22.9% of the fatalities

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Response?

- More than 1,000 'young' or 'teen' driver peer-reviewed journal papers (Scopus 1977-2013)
- Identified variety of contributing variables, e.g.,
  - Personal factors (age, sensation seeking propensity)
  - Social factors (peer pressure, parent models)
  - Environmental factors (night driving, vehicle)

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Response? cont.

- Multitude of interventions
  - Education
  - Engineering
  - Enforcement
  - (Engagement)
    - Not always evidence-based
    - Evidence-based actually based on good evidence?
      - Raises importance of *sampling methodology*

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Sampling Methodology

- Generalisability
  - Sampled population?
  - Jurisdiction?
- Comparability
  - Earlier research?
  - Other populations
  - Other jurisdictions?

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Sampling Methodology cont.

1. Participants
   - Age
   - Gender
   - Ethnicity
2. Recruitment strategies
   - Source of participants/data
   - Incentives
   - Response/attrition rates
3. Variables
   - Exposure
   - Experience

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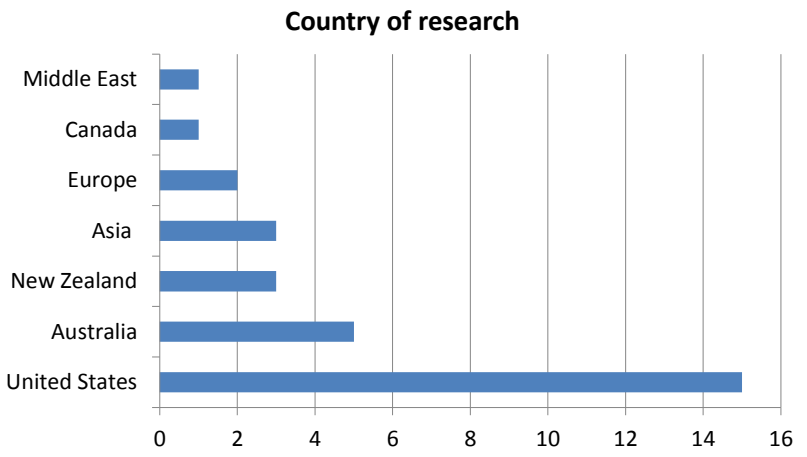
Current Study: Research Methodology

- Literature review of *Traffic Injury Prevention*
  - Articles published 1 January 2008 – 31 December 2012
  - Contain terms 'young driver' or 'teen driver'
  - 218 papers identified
    - 30 papers had young drivers as participants

Results



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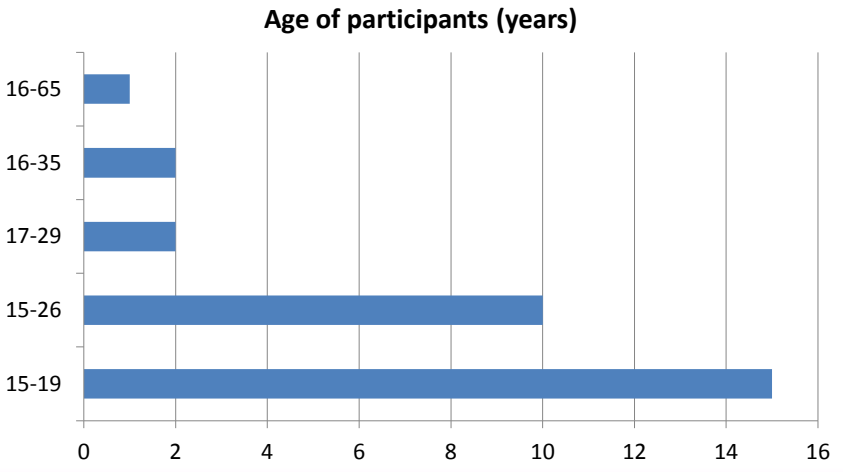
Results cont.



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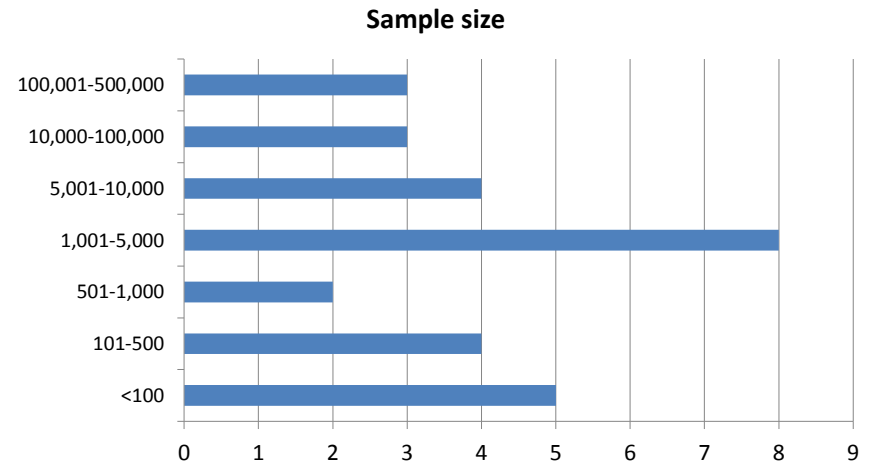
Results cont.



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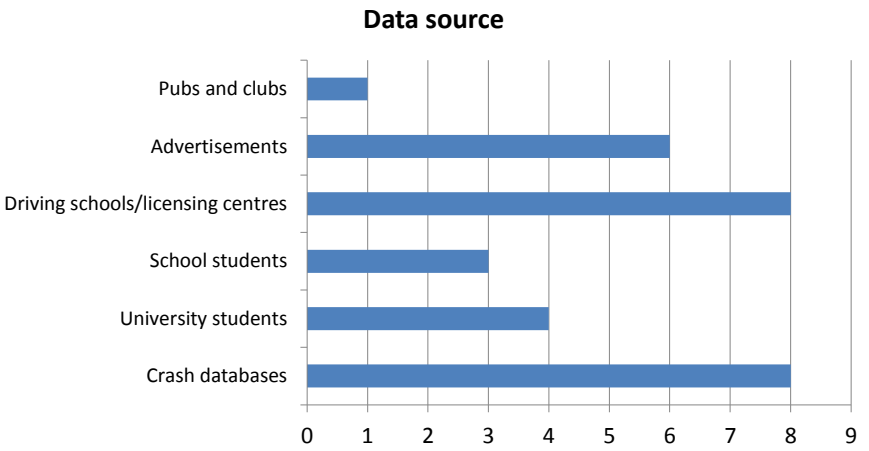
Results cont.



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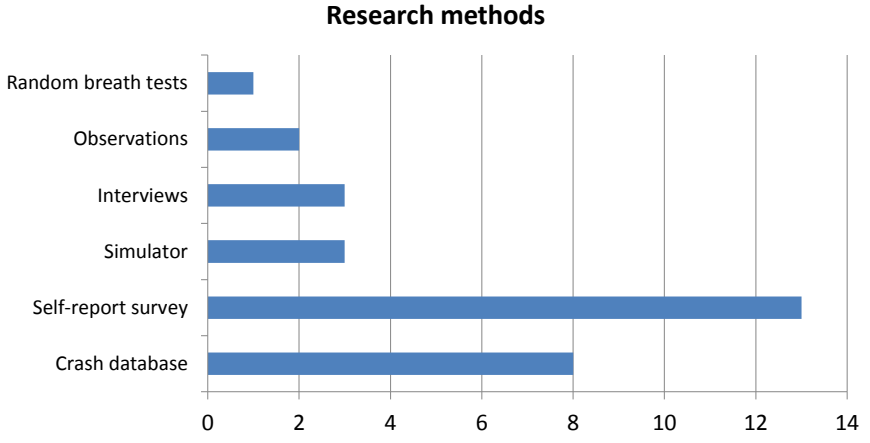
Results cont.



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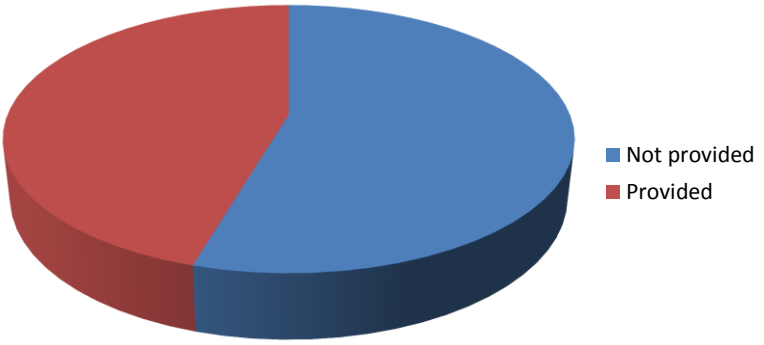
Results cont.

Response rate, n = 22



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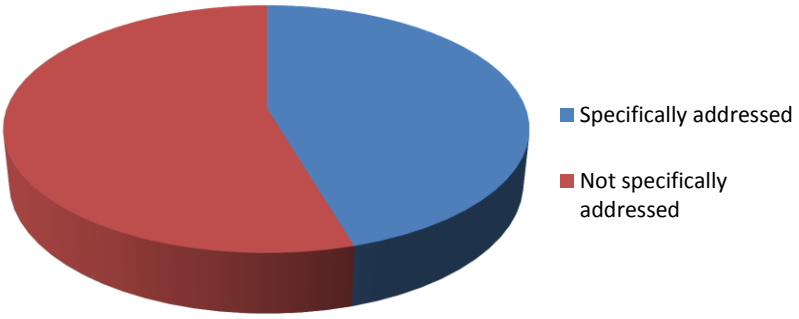
Results cont.

Incentives, n = 22



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Summary and implications

- 80% of research published in TIP in last 5 years from *WEIRD* countries
  - **W**estern, **E**ducated, **I**ndustralised, **R**ich, **D**emocratic
  - Consistent with countries of origin
- Age and gender
  - Majority included both genders
  - 'Young' = 15-35 years; 'Novice' = 15-65 years
    - Psychosocial and physiological differences?
    - Length of licensure?

Summary and implications cont.

- Data source
  - 27% based on national fatality databases
    - Unknown if representative of low socio-economic and remote areas; inclusion of indigenous populations
  - 73% other sources than databases
    - 60% of these were self-report
  - 2 out of 30 applied nationally-representative sampling methods
  - 25% relied on university/school students

Summary and implications cont.

- Data source cont.
  - 25% sourced at licensing centres/driving schools
    - Major urban/suburban centres
  - Sample sizes varied widely
- Response rates?
- Incentives?

Limitation

- Only reviewed *Traffic Injury Prevention* publications during last five years
  - May not reflect all recent young and novice driver literature

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Conclusions

- Comparing findings already challenging
  - Different driving environments (geography; licensing laws etc)
  - Different levels of enforcement
- Improved methodological approaches and reporting in literature could lead to greater gains
  - Understanding 'bigger picture'
  - Intervention development
  - Reduce road trauma

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Recommendations

- Strong research methodologies
  - Representative samples
  - Improved reporting (e.g., response rates)
  - Generalisability explicitly addressed
- Editorial boards review Author guidelines
- Balance between research ideal and resources
  - Improve representativeness by
    - Narrowing sample sufficiently to explore in detail
    - Widening sample to explore isolated issue so sample is as representative as possible

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Questions?

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