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
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)

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
Sampling Methodology

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

Sampling Methodology cont.

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

Country of research

- United States
- Australia
- New Zealand
- Asia
- Europe
- Canada
- Middle East
Results cont.

Age of participants (years)

- 16-65
- 16-35
- 17-29
- 15-26
- 15-19

Results cont.

Sample size

- 100,001-500,000
- 10,000-100,000
- 5,001-10,000
- 1,001-5,000
- 501-1,000
- 101-500
- <100
Results cont.

Data source

- Pubs and clubs
- Advertisements
- Driving schools/licensing centres
- School students
- University students
- Crash databases

Research methods

- Random breath tests
- Observations
- Interviews
- Simulator
- Self-report survey
- Crash database
Results cont.

Response rate, n = 22

- Not provided
- Provided

Results cont.

Incentives, n = 22

- Specifically addressed
- Not specifically addressed
Summary and implications

• 80% of research published in TIP in last 5 years from *WEIRD* countries
  • Western, Educated, Industrialised, Rich, Democratic
  • 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
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

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
Questions?

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