Young and unlicensed: Risky driving before entering the licensing system

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(Prof Barry Watson, Dr Mark King, Dr Melissa Hyde)

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Young Drivers

• Young drivers (17-24 yrs) in Queensland, 2009
  – 14% of licensed driver/ rider population
  – 20% of road fatalities
    • 86% were judged to be at fault in the crash
  – 25% of all fatalities involved young drivers/ riders
Casualty Crash Involvement in Queensland by Licence Type

Source: Queensland Government, 2005
Queensland’s Graduated Driver Licensing (GDL) Program for Learners

• Must pass Learner Theory Test
  – Some knowledge of safe road use \textit{before} driving
  – Minimum age 16 years

• Must gain 100 hours of \textit{supervised} driving practice over minimum 12-month period
  – Hazard perception skills
  – Safe road use skills
  – Safe driving habits

• Must pass Practical Driving Assessment to progress to Provisional Licence
A limitation of all licensing programs...

- Their effectiveness is reduced if they do not ‘capture’ all drivers
- At any time, a portion of drivers on the road do not have a valid licence
  - For some, their licence has expired
  - For others, their licence has been suspended
  - Some drivers never obtain a licence
  - Some are **pre-licence drivers** who are driving on the road **before** entering the licensing system
    - too young to be licensed
    - of licensing-age but have not applied for a licence
Pre-Licence Driving (PLD)

- Very risky for the PLD and other road users
  - Haven’t passed the Learner theory test (safe vehicle/road use knowledge?)
  - No supervisor present (who is instructing/monitoring?)
- Very difficult to determine the extent of PLD
  - Crash fatality data
    - United States: 57% of 15 year old drivers involved in fatal crashes, 1989-1993, did not have a driver’s licence
  - Police-reported crashes
  - But did these drivers intend to apply for a licence?
  - Surveys
    - New Zealand: 49% of Maori population reported PLD
    - Los Angeles: 12% of high school students reported PLD
Method

• Survey 1
  • 1032 drivers, 17-19 years (609 females)
  • Queensland-wide sample, recruited April-June 2010 when passed practical driving assessment
  • Experiences and behaviours as a Learner driver and pre-Licence driver

• Survey 2
  • 355 drivers, 17-20 years (247 females)
  • Participants from Survey 1 followed up six months later
  • Experiences and behaviours as a Provisional driver
The Surveys

- **Sociodemographics** (age, gender, education, study/employment/ marital status, postcode, country of birth, language spoken at home)
- **Sensation seeking propensity**
- **Driving behaviours** (Behaviour of Young Novice Drivers Scale [BYNDS], 44 items, \(1 = \text{never}, \ 5 = \text{nearly all the time}\); crashes, offences)
- **Driving attitudes** (Intentions/likelihood bend road rules)
- **Self-appraisal** (safe driver, risky driver)
- **Pre-Licence driving** (yes/no, number of times)
- **Unsupervised driving** (yes/no)
- **Difficulty** (getting supervised driving practice)
Results: PLD of 1032 Learners

- 12% of Learners reported pre-Licence driving
  - Average 15 times, range 1-150 times, 81% ≤ 10 times
- No significant gender differences in incidence
  - 11.6% of males, 30% ≥ 10 times
  - 12.5% of females, 7% ≥ 10 times
- No significant rurality differences
  - No PLD: 57.5% resided in urban areas
  - PLD: 58.4% resided in urban areas
- PLD significantly greater sensation seeking propensity
Results: PLD of 1032 Learners

- PLD reported by Learners who were
  - In a relationship (39.5% vs No-PLD 30.2%)
  - Not born in Australia (13.6% vs No-PLD 8.8%)
  - Did not speak English at home (10.4% vs No-PLD 4.6%)

- Some significant gender differences
  - More female-PLD reported a relationship (50.7% vs males 22.4%)
  - More female-PLD reported difficulty obtaining practice (30.7% vs males 12.2%)
  - Male PLD reported significantly greater sensation seeking than female PLD and male non-PLD
## Results: Learner Behaviour ($n = 1032$)

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Pre-Licence Driving</th>
<th>No Pre-Licence Driving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drove unsupervised</td>
<td>22.4%</td>
<td>9.4%</td>
</tr>
<tr>
<td>Crash</td>
<td>4.8%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Offence</td>
<td>8.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td><strong>BYNDS Composite</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>73.6</td>
<td>69.5</td>
</tr>
<tr>
<td>Transient Violations</td>
<td>21.9</td>
<td>19.9</td>
</tr>
<tr>
<td>Fixed Violations</td>
<td>11.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Misjudgement</td>
<td>12.9</td>
<td>12.9</td>
</tr>
<tr>
<td>Risky Exposure</td>
<td>22.4</td>
<td>21.6</td>
</tr>
<tr>
<td>Driver Mood</td>
<td>5.3</td>
<td>4.7</td>
</tr>
</tbody>
</table>
## Results: Longitudinal Sample \((n = 355)\)

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>Learner Pre-Licence Driving</th>
<th>Learner No Pre-Licence Driving</th>
<th>Provisional Pre-Licence Driving</th>
<th>Provisional No Pre-Licence Driving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crash</td>
<td>7.1%</td>
<td>3.0%</td>
<td>11.9%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Offence</td>
<td>11.9%</td>
<td>1.0%</td>
<td>16.7%</td>
<td>12.0%</td>
</tr>
<tr>
<td>BYNDS (\text{Mean})</td>
<td>\begin{tabular}{c}Composite \ 74.0 \end{tabular}</td>
<td>\begin{tabular}{c}Fixed Violations \ 21.5 \end{tabular}</td>
<td>\begin{tabular}{c}27.5 \end{tabular}</td>
<td>\begin{tabular}{c}22.1 \end{tabular}</td>
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<td></td>
<td>\begin{tabular}{c}Transient Violations \ 21.5 \end{tabular}</td>
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<td>\begin{tabular}{c}10.9 \end{tabular}</td>
<td>\begin{tabular}{c}10.6 \end{tabular}</td>
</tr>
<tr>
<td></td>
<td>\begin{tabular}{c}Risky Exposure \ 13.2 \end{tabular}</td>
<td>\begin{tabular}{c}Driver Mood \ 23.3 \end{tabular}</td>
<td>\begin{tabular}{c}27.6 \end{tabular}</td>
<td>\begin{tabular}{c}25.1 \end{tabular}</td>
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<td>\begin{tabular}{c} \end{tabular}</td>
<td>\begin{tabular}{c} \end{tabular}</td>
<td>\begin{tabular}{c}6.2 \end{tabular}</td>
<td>\begin{tabular}{c}5.3 \end{tabular}</td>
</tr>
</tbody>
</table>
## Results: Longitudinal Sample \( (n = 355) \)

<table>
<thead>
<tr>
<th>Beliefs</th>
<th>Learner Pre-Licence Driving</th>
<th>Learner No Pre-Licence Driving</th>
<th>Provisional Pre-Licence Driving</th>
<th>Provisional No Pre-Licence Driving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risky Driver</td>
<td>2.3</td>
<td>2.0</td>
<td>2.9</td>
<td>2.3</td>
</tr>
<tr>
<td>Safe Driver</td>
<td>5.2</td>
<td>5.3</td>
<td>5.0</td>
<td>5.1</td>
</tr>
<tr>
<td>Likelihood of <strong>not</strong> following road rules</td>
<td>3.6</td>
<td>2.9</td>
<td>4.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Intentions to not follow road rules</td>
<td>3.3</td>
<td>2.2</td>
<td>3.6</td>
<td>2.6</td>
</tr>
</tbody>
</table>

- **Risky/Safe**: 1 = *never risky/safe*, 7 = *always risky/safe*
- **Likelihood/Intentions**: 1 = *definitely will not/very unlikely*, 7 = *definitely will/very likely*
Discussion

- One in eight of the Learners reported PLD
  - The majority did not report substantial PLD
- Did not differ by rurality
  - Analyses suggests not a sampling issue
- PLD more likely to
  - report being a relationship as a Learner
  - not have been born in Australia
  - not speak English as the language at home
PLD as a Licensed Driver

• Continue their risky driving
  – Transient violations, risky exposure, driving in response to their mood, detected for an offence
  – PLD Learners also reported more unsupervised driving and fixed violations

• Intended to and a greater likelihood they would continue their risky driving
  – Learners and Provisional
  – Provisional behaviours suggests greater intentions/likelihood of the Learner are predictive

• Had insight into their riskiness
  – Less safe driver, more risky driver
Practical implications

• Who to target in (a) countermeasure(s)?
  – Teenagers (Potential PLD/ PLD passengers)
  – Parents (Own the car/ Majority of sample < 16 years old when PLD)

• What countermeasures? Can they fit into GDL?
  – Education (Increased risk/ Continued risky behaviour)
  – Monitoring (Car use/ Relationship as a PLD?)
  – Enforcement
    • Current fine a deterrent? Impound the vehicle?

• Is pre-Licence driving leading to a habit of risky driving in the novice?

• Or is the risky driver evident from the PLD stage?
Strengths and Limitations

- **Limitations**
  - Learner response rate, Provisional attrition
  - Self-report
  - Not designed to explore PLD in-depth
  - Small PLD sample

- **Strengths**
  - Longitudinal research
  - State-wide sample
  - Anonymity
  - Data otherwise unavailable
Future Research

• **More** who/ what/ when/ where/ why of PLD
  – **Who is in** the car?
    Who **owns** the car?
  – **What** were they driving?
    What was the **purpose** of the drive?
    Do **Mum** and **Dad** know?
    What about PLD in **other GDL** programs?
  – **When** did they PLD?
    **How old** were they
    • the **first/ majority** of the time?
    • the **longest/ shortest** journey?
    • the **most/ least** passengers)?
  – **Where** did they go (the **first/ most** of the time)?
  – **Why** did they PLD the **first** time?
    Why did they do it **again**?
Conclusions

• Some Learners are driving on the road before even passing the Learner theory test and gaining some supervised driving experience
• PLD is risky for the driver and all other road users
• PLD is also risky for the driver when they subsequently gain their Learner and Provisional licences
• Interventions need to target teenagers and their parents before they are eligible for a Learner licence
  – Teens should be encouraged not to PLD nor be a PLD-passenger
  – Parents should be encouraged to monitor their child’s behaviour and to discourage PLD in any circumstance
  – Penalty for PLD may need to be reconsidered
Questions?

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Mark your Diaries!
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