Understanding the psychology of risky driving behaviour: Results of a national survey.

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Kiran Sarma (NUI Galway), PhD * Rachel Carey (NUI Galway), School of Psychology, NUI Galway

Yaw Bimph PhD, Statistician, Road Safety Authority

*Dr. Kiran Sarma, kiran.sarma@nuigalway.ie, Tel: 091493266
Overview

• The Psychology of Risky Driving Behaviour

• The Survey Methodology

• Headline findings

• Conclusions
1. The psychology of ‘risky driving behaviour’

- Multiple factors involved.
- Combinations of risk factors leads to risk taking.
- Different types of acts that can be deemed risky driving.
- Risk propensity differs across the lifespan and across gender.
What are the factors? – Age
Road deaths per 100,000
What are the factors? – Gender X Age
Road deaths per 100,000
What are the factors? Personality (emotion, attitude, behaviour)

- Excitement Sensation Seeking (e.g. ‘I enjoy being reckless’).
- Impulsiveness (e.g. ‘I usually make my mind up quickly’).
- Extraversion (e.g. ‘I am the life of the party’).
- Driving Anger (e.g. ‘I get angry when a vehicle moving slowly in front of me refuses to pull over’).
- Normlessness (Rule violation) (e.g. ‘It is all right to do anything you want as long as you keep out of trouble’).
What are the factors? Normative Influences

- Normative Influences and Cultural Worldview.
- ‘Significant others’ influence our behaviours through reinforcement, punishment, offering attitudinal norms and group dynamics.
- Family ‘On the whole, most of my family members think that Garda speed enforcement is about revenue raising’.
- Friends ‘My friends don’t really care about exceeding the speed limit, as long as they don’t get caught’.
What are the factors? Perceived Behavioural Control

• Our perceived confidence in our ability to perform the behaviour.

• ‘When driving fast, I believe my driving skills can meet the challenge’ (Capability)

• ‘When driving fast, my capacity can match the high challenge of the situation (Controllability).
What are the factors? Attitudes

- Positive and/or negative views about a behaviour
  - Attitudes towards speeding ‘Many traffic rules must be ignored to ensure good traffic flow’.
  - Attitudes towards others ‘It is ok to get into a car with a driver who speeds if that is the only way to get home at night’.
2. Survey of Risky Driving Behaviour

- Administered at NCT Centres in North Point Dublin, Letterkenny, Cork, Galway, Limerick and Nass.
- Sample of 1500, with 1435 complete responses.
- Male <25 = 165 Female <25 = 129 Male >25 = 627 Female >25= 514
- Broadly representative of licensed drivers in 2009 data.
- Field Research by Amárach Research.
- Our primary group of interest was young drivers aged 18-24
The questionnaire

- 127 Items! (22 minutes)
- Contained reliable and valid measures.
- Socio-Demographic
- Personality (Excitement Sensation Seeking, Impulsiveness, Extraversion, Normlessness, Driving Anger, Driving Self Esteem))
- Attitudes and beliefs (Driving Perceived Behavioural Control Scale, Driving Attitudes Scale, Driving Social Norms Scales)
- Driving Behaviour Scale
3. Headline Findings: Attitudes
Items from the Attitudes Towards Driving Scale (Iversen, 2004)

‘To what extent do you agree or disagree with the following statements?’

<table>
<thead>
<tr>
<th>% Who agreed with each statement</th>
<th>&lt;25Males</th>
<th>&gt;25Males</th>
<th>&lt;25Females</th>
<th>&gt;25Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>It makes sense to exceed speed limits to get ahead of Sunday Drivers</td>
<td>39.2</td>
<td>28.6</td>
<td>21.2</td>
<td>20.3</td>
</tr>
<tr>
<td>Many traffic rules must be ignored to ensure traffic flow</td>
<td>35.1</td>
<td>23.8</td>
<td>18.1</td>
<td>11.2</td>
</tr>
<tr>
<td>Speed limits are exceeded because they are too restrictive</td>
<td>62</td>
<td>47</td>
<td>44.8</td>
<td>34.4</td>
</tr>
<tr>
<td>It is acceptable to drive through a junction when changing from orange to red</td>
<td>44.9</td>
<td>31</td>
<td>32.4</td>
<td>27.6</td>
</tr>
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Headline Findings: Attitudes condrt.
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</thead>
<tbody>
<tr>
<td>Taking Chances and Breaking a few rules does not make me a bad driver</td>
<td>49.6</td>
<td>29.7</td>
<td>31.8</td>
<td>22.9</td>
</tr>
<tr>
<td>It is acceptable to take chances when no other people are involved</td>
<td>37.3</td>
<td>18.3</td>
<td>21.7</td>
<td>11.1</td>
</tr>
<tr>
<td>Traffic rules are too complex to be carried out in practice</td>
<td>37</td>
<td>17.2</td>
<td>25.3</td>
<td>8.9</td>
</tr>
<tr>
<td>If you are a good driver it is acceptable to drive a little faster</td>
<td>40.3</td>
<td>23</td>
<td>25.3</td>
<td>8.9</td>
</tr>
<tr>
<td>When road conditions are good and nobody is around, driving at 160kms is ok</td>
<td>18.2</td>
<td>12</td>
<td>15.2</td>
<td>8</td>
</tr>
</tbody>
</table>
‘To what extent do you agree or disagree with the following statements?’

<table>
<thead>
<tr>
<th>Attitudes Total for Sub-Scales</th>
<th>&lt;25Males M</th>
<th>&gt;25Males M</th>
<th>&lt;25Females M</th>
<th>&gt;25Females M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speeding and Rule Violation</td>
<td>23.27</td>
<td>21.11</td>
<td>21.04</td>
<td>19.17</td>
</tr>
<tr>
<td>Driving with others who are speeding</td>
<td>4.83</td>
<td>4.01</td>
<td>4.07</td>
<td>3.44</td>
</tr>
<tr>
<td>Attitudes Driving Alcohol</td>
<td>3.81</td>
<td>3.89</td>
<td>3.2</td>
<td>3.48</td>
</tr>
</tbody>
</table>

Conclusions: Males <25 have highest positive attitudes towards Speeding/Rule violation and driving with others speeding.
Headline Findings: Control of My Car.
Items from the Perceived Driving Behavioural Control Scale

‘To what extent do you agree or disagree with the following statements?’

<table>
<thead>
<tr>
<th></th>
<th>&lt;25Males % Agreeing</th>
<th>&gt;25Males % Agreeing</th>
<th>&lt;25Females % Agreeing</th>
<th>&gt;25Females % Agreeing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving fast, my skills can meet the challenge</td>
<td>51.7</td>
<td>40</td>
<td>40.7</td>
<td>29.8</td>
</tr>
<tr>
<td>Driving fast, I am in total control</td>
<td>54</td>
<td>40.4</td>
<td>42.7</td>
<td>30.1</td>
</tr>
<tr>
<td>Driving fast, I can manipulate the vehicle without thinking</td>
<td>50.4</td>
<td>33.5</td>
<td>33</td>
<td>23.5</td>
</tr>
</tbody>
</table>

A scale total, <25 males had highest Perceived Driving Control.
Headline Findings: Personality.
Items from the IPIP (Excitement Sensation Seeking & Extraversion) and IPQ (Impulsiveness)

Males <25 score higher on Impulsiveness and Excitement Sensation Seeking than other three groups.
Headline Findings: Behaviour Driving Behaviour Scale
‘How frequently do you…’ – Very often/Never

Finding: Males<25 report higher levels of speed and rule violations than other groups (small-medium effect size).

Derived from 6 items
e.g. frequency of
‘Breaking 60km speed limits by more than 10km’
‘Breaking 120km speed limits by more than 10km’
‘Overtaking a car that is keeping appropriate speed for conditions’
Headline Findings: Behaviour Driving Behaviour Scale

Finding: Males<25 report more frequent ‘reckless funriding’ than other groups (small-medium effect size (difference))

Derived from 5 items
e.g. frequency of
‘Drive too close to the car in front to be able to stop if it should break’
‘Keep driving when you are tired and actually need a break’
Headling Findings: Driving Behaviour
Headline Findings: Behaviour

- Have you ever raced a car on a public road?
- 21% of <25 males
- 7.3% of <25 females
- 10.2% of >25 males
- 2% of >25 female.
Looking at full sample

- Speed and rule violation correlated with
- Total attitudes ($r=0.47$)
- Driving behavioural control ($r=0.29$)
- Friends Norms ($r=0.31$)
- Driving Anger ($r=0.27$)
- Excitement Seeking, Impulsiveness and Extraversion ($r=0.20-0.25$)
Looking at full sample

• Strongest predictive model predicted 29% of variation on speeding and traffic violation:
  – Male
  – Age
  – Total Attitudes towards Speeding/Rule Violation
  – Perceived behavioural control
  – Normative Influences (Friends)
  – Anger
Focusing on young male drivers and correlates of speeding and rule violation.

- Correlated with:
  - Excitement Seeking ($r=0.23$)
  - Impulsiveness ($r=-0.26$)
  - Normlessness ($r=-0.36$)
  - Friends Norms ($r=0.434$)
  - Family Norms ($r=0.234$)
  - Driving Anger ($r=0.317$)
  - Perceived Behavioural Control ($r=0.368$)
  - Attitudes Towards Speeding ($r=0.438$)
Focusing on young male drivers and correlates of speeding and traffic violation (preliminary findings)

- Strongest predictive model predicted 31% of variation on speeding and traffic violation:
  - Total Attitudes towards Speeding/Rule Violation
  - Normative Influence (Friends)
  - Perceived behavioural control
Discussion: The Theory of Planned Behaviour
Conclusions

• Preliminary findings point to importance of
  – Attitudes towards speeding
  – Normative influences
  – Perceived behavioural control

• TPB ‘most comprehensive model’….. But ‘limited evidence that changing beliefs will give a change in road user behaviour’ (CAST, Road User Model and Persuasion Techniques).

• Sample is being boosted to 500 <25s, allowing for more additional analyses.