SmartStart
Preloading & A Safe Night Out

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Acknowledgements
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Background

• Alcohol is one of the most widely used drugs in Australia (Doherty & Roche, 2003).
• Prior to entering licensed venues, youth are pre-loading, mixing energy drinks with alcohol, and using illicit drugs (e.g., DeJong, DeRicco, & Schneider, 2010; Hummer, Napper, Ehret, & LaBrie, 2013; LaBrie & Pedersen, 2008).
• Preloading may increase subsequent alcohol consumption & violence (Maclean & Callinan, 2013).
• Increased Police Resources needed?
Background

• POINTED study – Systematic random sample of all people in entertainment district. X-sectional during the night. Asked regarding preloading but not focussed on preloaders (Miller, 2013).
  – 67% males & 62% females reported pre-loading (73% mixed Energy Drinks).
  – Median number of drinks: 6 and 4.
  – 47% at home & 36% at another’s home.
  – Reasons: 67% = price, 13.9% = for fun, 8.5% = socialise.
  – 19% of alcohol pre-loaders (11% of non-preloaders) also consumed illicit drugs.
  – Preloaders higher median BAC when breathalysed during night (.068) compared to non-preloaders (.021).

• So what are they like when they come into the Entertainment Districts?

Aims

Academic, Community & Operational Aims

• Gauge level of preloading as people enter entertainment district.
• Assess preloading behaviour – where, what, how much.
• Assess intoxication knowledge (guessed BAC in comparison to real BAC).
• Assess reasons for preloading.
• Estimate alcohol problems in sample.
Aims

• Look at preloading with energy drinks.
• Other aims (with caution):
  – Assess preloading of drugs;
  – Assess body (particularly muscle) dysmorphia and any interactions with BAC (results for another day).

Solely Operational Aims

– Community engagement with police (particularly new constables).
– Police presence in form other than ‘Command & Control’.

Method

• Funding from National Drug Strategy Law Enforcement Funding Committee (NDSLEFC; $39,800).
• Teams = 2-4 researchers & 2-3 Police (usual = 2 of each).
• Weekend – usually 9pm until 1am:
  – Thursdays: Usually outside City Metro, Victory Hotel, The Exchange.
  – Fridays: Usually outside Fortitude Valley Metro.
  – Saturdays: Usually outside Fortitude Valley Metro, Oh Hello!, The Family.
• Specials: Melbourne Cup (Doomben); Pre-Christmas (Mackay); Post-Christmas (Gold Coast – Surfer’s and Broadbeach);
• Began: 21st August 2014; Completed 27th February 2015. The ‘warm months’.
Method

- Stopped by researchers or police and asked to take part in research.
- If already drinking in town gave BAC test and feedback (no questionnaire).
- Long Questionnaire (40 questions if ‘yes’ to all; about 3-5 minutes) – 2 versions (extra questions after 1 month of data collection).
- Short Questionnaire (3 questions: age, how many drinks, guess BAC).
- If 1 or 2 participants complete long questionnaire in group all others in group given short q’re and BAC levels taken by ‘roving researcher’.

The Setting
The Setting

The Setting
## Participants

<table>
<thead>
<tr>
<th>Region</th>
<th>Area</th>
<th>Long Q'res</th>
<th>Short Q'res</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brisbane</td>
<td>Valley</td>
<td>2,166</td>
<td>586</td>
<td>2,752</td>
</tr>
<tr>
<td></td>
<td>City</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gold Coast</td>
<td>Surfer's</td>
<td>87</td>
<td>0</td>
<td>137</td>
</tr>
<tr>
<td></td>
<td>Broadbeach</td>
<td>50</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>North Qld</td>
<td>Mackay</td>
<td>60</td>
<td>91</td>
<td>151</td>
</tr>
<tr>
<td>Melb Cup</td>
<td>Doomben</td>
<td>0</td>
<td>161</td>
<td>161</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2,363</td>
<td>838</td>
<td>3,201</td>
</tr>
</tbody>
</table>

N=3,201 – uncleaned data.

Average Time = 2 ½ Minutes (Long Q’re).

Gender: 52.67% men, 47.33% women (ratio 1.11; BoS 2014 Oz:15-24 years: 1.05).

### Participants / Results

**How Many Said They Preloaded With Alcohol?**

- Females = 926 / 1,157
- Males = 963 / 1,206
Participants / Results

If preloaded on anything ...

**Males**
- Number of drinks:
  - Mean = 6.34 (sd=4.39)
  - Median = 6
  - Mode = 5
- Where:
  - Most common = My House
  - 2\(^{nd}\) = Friend’s House
  - 3\(^{rd}\) = Suburban Pub
  - 4\(^{th}\) = Hotel / Motel / Hostel

**Females**
- Number of drinks:
  - Mean = 4.15 (sd=2.78)
  - Median = 4
  - Mode = 5
- Where:
  - Most common = My House
  - 2\(^{nd}\) = Friend’s House
  - 3\(^{rd}\) = Hotel / Motel / Hostel
  - 4\(^{th}\) = Suburban Pub

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<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean (sd)</th>
<th>Median</th>
<th>Mode</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>1,682</td>
<td>23.58 (6.14)</td>
<td>22</td>
<td>19</td>
<td>16</td>
<td>61</td>
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<tr>
<td>Females</td>
<td>1,512</td>
<td>22.58 (6.33)</td>
<td>20</td>
<td>18</td>
<td>16</td>
<td>64</td>
</tr>
<tr>
<td>All</td>
<td>3,194</td>
<td>23.11 (6.25)</td>
<td>21</td>
<td>18</td>
<td>16</td>
<td>64</td>
</tr>
<tr>
<td>BAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>1,677</td>
<td>.055 (.05)</td>
<td>.047</td>
<td>0</td>
<td>0</td>
<td>.258</td>
</tr>
<tr>
<td>Females</td>
<td>1,509</td>
<td>.046 (.047)</td>
<td>.033</td>
<td>0</td>
<td>0</td>
<td>.246</td>
</tr>
<tr>
<td>All</td>
<td>3,186</td>
<td>.051 (.049)</td>
<td>.042</td>
<td>0</td>
<td>0</td>
<td>.258</td>
</tr>
<tr>
<td>BAC if &gt; 0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>1,255</td>
<td>.073 (.045)</td>
<td>.067</td>
<td>.09</td>
<td>.008</td>
<td>.258</td>
</tr>
<tr>
<td>Females</td>
<td>1,022</td>
<td>.068 (.043)</td>
<td>.06</td>
<td>.033</td>
<td>.008</td>
<td>.246</td>
</tr>
<tr>
<td>All</td>
<td>2,277</td>
<td>.071 (.044)</td>
<td>.064</td>
<td>.033</td>
<td>.008</td>
<td>.258</td>
</tr>
</tbody>
</table>
Results – BAC By Region

**Female**
- Brisbane: 0.00
- Gold Coast: 0.01
- North Qld: 0.02
- Brisbane MC: 0.03

**Male**
- Brisbane: 0.00
- Gold Coast: 0.01
- North Qld: 0.02
- Brisbane MC: 0.03

Results – Guessed BAC vs Real BAC

- If guessed < 0.3 (≈ 19% no idea) then:
  - Overall: mean difference between guessed and real (n=2,658) = 0.007 (.045)
  - Males: mean difference between guessed and real (n=1,424) = 0.006 (.044)
  - Females: mean difference between guessed and real (n=1,234) = 0.008 (.045)
  - Correlation – younger = more likely (just) to overestimate their BAC (variance explained = 0.55%).
  - Correlation – more drunk = more underestimate their BAC (variance explained = 20.58%).

Correlation: \( r = -0.0738 \)

Guessed BAC Minus Real BAC

Correlation: \( r = -0.4537 \)
Results – How Drunk They Felt?

In relation to how drunk they were...

In relation to how many drinks they had...

Results - Reasons For Preloading

- Reasons for preloading if only one answer:

**Females**

- To socialise with friends: 45%
- To save money: 40%
- To get as drunk as possible: 2%
- To increase confidence: 1%
- To feel more comfortable/relaxed: 5%
- Other: 7%

**Males**

- To socialise with friends: 45%
- To save money: 33%
- To get as drunk as possible: 4%
- To increase confidence: 2%
- To feel more comfortable/relaxed: 6%
- Other: 8%
Results – Use Of Energy Drinks

• If preloading, mixed energy drinks?

Females = 112 / 926
Males = 117 / 963

Yes, 12% No, 88%

Results – Use Of Energy Drinks

• If preloading:

Energy Drinks Used

No of obs

Mixed Energy Drinks?

BAC If > 0

Current effect: F(1, 1649) = 2.2306, p = .13549
Results – Use Of Energy Drinks

• If preloading:

* No masking effect:

Current effect: F(1, 1583)=.74281, p=.38889
Vertical bars denote 0.95 confidence intervals
Include condition: Actual BAC>0

Have you mixed energy drinks with alcohol before coming out tonight?

Guessed BAC Minus Real BAC

-0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5

Yes (n=194) No (n=1391)

Results – Why Energy Drinks?

• If preloading:

Males

Females

Increase Energy Tastes Good Increase High Other

Increase Energy Tastes Good Increase High Other

No of obs

No of obs

50% 32% 27%

50% 56% 56%

13% 5% 12%

5%
Results – Use Of Drug Preloading

Females = 23 / 1157

Yes, 2%  No, 98%

Males = 62 / 1206

Yes, 0%  No, 95%

Results – Injury

• Irrespective of whether preloaded:

- You have punched / slapped / kicked someone

Current effect: F(4, 2342)=5.7874, p=.00012

- You have been punched / slapped / kicked

Current effect: F(4, 2342)=9.7808, p=.00000
Results – Impairment / Dependence?

• Irrespective of whether preloaded:

![Graph showing BAC levels for different frequency levels of not remembering the night before.]

![Graph showing BAC levels for different frequency levels of people suggesting a problem with alcohol.]

Results – Sexual Practices

• Irrespective of whether preloaded:

![Graph showing BAC levels for different frequency levels of waking up with a stranger.]

<table>
<thead>
<tr>
<th>Woken-up with a stranger?</th>
<th>Gender</th>
<th>BAC Mean</th>
<th>BAC Std Err</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Female</td>
<td>.044</td>
<td>.002</td>
<td>930</td>
<td>80.8%</td>
</tr>
<tr>
<td>Never</td>
<td>Male</td>
<td>.05</td>
<td>.002</td>
<td>669</td>
<td>56%</td>
</tr>
<tr>
<td>Once</td>
<td>Female</td>
<td>.047</td>
<td>.005</td>
<td>88</td>
<td>7.7%</td>
</tr>
<tr>
<td>Once</td>
<td>Male</td>
<td>.058</td>
<td>.004</td>
<td>129</td>
<td>10.8%</td>
</tr>
<tr>
<td>Few Times</td>
<td>Female</td>
<td>.052</td>
<td>.005</td>
<td>84</td>
<td>7.3%</td>
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<tr>
<td>Few Times</td>
<td>Male</td>
<td>.055</td>
<td>.003</td>
<td>299</td>
<td>25%</td>
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<tr>
<td>Frequently</td>
<td>Female</td>
<td>.054</td>
<td>.010</td>
<td>28</td>
<td>2.4%</td>
</tr>
<tr>
<td>Frequently</td>
<td>Male</td>
<td>.065</td>
<td>.007</td>
<td>73</td>
<td>6.1%</td>
</tr>
<tr>
<td>Nearly Always</td>
<td>Female</td>
<td>.07</td>
<td>.014</td>
<td>21</td>
<td>1.8%</td>
</tr>
<tr>
<td>Nearly Always</td>
<td>Male</td>
<td>.055</td>
<td>.010</td>
<td>25</td>
<td>2.1%</td>
</tr>
</tbody>
</table>
Results – Body Weight?

- Irrespective of whether preloaded:

<table>
<thead>
<tr>
<th>BAC Level</th>
<th>Researcher Rated Weight</th>
<th>Self Rated Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.02</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>0.02</td>
<td>0.04</td>
<td>0.04</td>
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<tr>
<td>0.04</td>
<td>0.06</td>
<td>0.06</td>
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<tr>
<td>0.06</td>
<td>0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>0.08</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>0.10</td>
<td>0.12</td>
<td>0.12</td>
</tr>
<tr>
<td>0.12</td>
<td>0.14</td>
<td>0.14</td>
</tr>
</tbody>
</table>

Current effect: F(4, 2343)=9.2672, p=.00000

Possible Research Effects

1. As of December 2014, change in personal crime where the research happens in relation to police utilisation generally

<table>
<thead>
<tr>
<th></th>
<th>2013/14</th>
<th>2014/15</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Crime</td>
<td>21</td>
<td>7</td>
<td>28</td>
</tr>
<tr>
<td>Calls for assistance</td>
<td>419</td>
<td>488</td>
<td>907</td>
</tr>
<tr>
<td>Totals</td>
<td>440</td>
<td>495</td>
<td>935</td>
</tr>
</tbody>
</table>

X²(df=1,N=935) = 9.05, p=.001, Phi = 0.098; Yates’ Correction = 7.26, p= 0.002; Fisher’s Exact Test = .002

2. As of December 2014, change in public order crime where the research happens in relation to police utilisation generally

<table>
<thead>
<tr>
<th></th>
<th>2013/14</th>
<th>2014/15</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Order</td>
<td>43</td>
<td>32</td>
<td>75</td>
</tr>
<tr>
<td>Calls for assistance</td>
<td>419</td>
<td>488</td>
<td>907</td>
</tr>
<tr>
<td>Totals</td>
<td>462</td>
<td>520</td>
<td>982</td>
</tr>
</tbody>
</table>

X²(df=1,N=982) = 3.45, p=.03, Phi = 0.06; Yates’ Correction = 3.02, p= 0.04; Fisher’s Exact Test = .004
Conclusions

• Analysis still continuing...
• Higher rate of preloading than expected (80% vs 65% from previous research)
• BAC of people entering entertainment district even higher than previously estimated (more in line with x-section of people already out)
• No difference between males & females
• The more they drink, the more they underestimate their BAC
• 20% had NO idea how the BAC system worked
• Main reason = ‘socialise’ followed by ‘save money’

Conclusions

• Rate of violence related to preloading BAC
  – 10.37% been hit a few times or more
  – 6.34% have hit others (4% lost in self-image or same people hitting?)
• Increased BAC on entry to entertainment district related to impairment & dependence
• Research may have performed community service
• Giving BAC feedback may have performed a diversionary service
• Increased engagement between police and revellers
Future

• Assess people at end of night
  – End loading?
  – Money spent over the night?
• Provision of breathalysers in entertainment districts
• Role of body image needs further research
• More targeted research on drug preloading
• Need to look the issue of ‘happy hour’ again?

Thank you!

• Contacts:
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  – Corey = Allen.CoreyM@police.qld.gov.au