SEXUAL HEALTH KNOWLEDGE, RISK BEHAVIOURS AND HEALTH SERVICE UTILISATION AMONG ABORIGINAL AND TORRES STRAIT ISLANDER PEOPLE WHO USE METHAMPHETAMINES

Daniel Di Fiore, James Ward, Joanne Bryant, Handan Wand, Dea Delaney-Thiele, Heather Worth, John Kaldor
Acknowledgements

I acknowledge the Kaurna people as the traditional custodians of the Adelaide Plains region, where we are located; I recognise Kaurna people cultural, spiritual, physical and emotional connection with their land. I honour and pay my respects to Kaurna elders, both past and present, and all generations of Kaurna people, now and into the future.
Presentation Overview

• Background
• Honours project research question
• Methods
• Data analysis
• Results
• Conclusion/key findings
Methamphetamine in Australia

• MA is a potent psychomotor stimulant drug with strong physiological effects on peripheral and central nervous systems, resulting in both physical and psychological alterations (1)

• Crystal meth is the strongest, most addictive form with the most harmful side effects, with double the dependence liability of other forms (2)

• Australia has one of the highest prevalence rates in the world (3)

• 2013 NDSHS reported 2.1% of Australians used Methamphetamines in the prior year and 7% reported ever use (4)
• Growing concerns about methamphetamines in Aboriginal communities (4)

• Concerns regarding methamphetamines and increased risk of STI and HIV acquisition related to numbers of partners and inconsistent condom use (4)

• Additionally injecting methamphetamine leads to increased risk of HIV and HCV (3)
• **Primary Question:** Is sexual knowledge, risk behaviours, and health service access different for people who use methamphetamines compared to non-users?

• **Secondary Question:** Are behaviours, knowledge and health service access different for people who use methamphetamines frequently compare to those who use less frequently?

• To answer these questions I analysed previously collected data from the GOANNA survey.
GOANNA is a national cross sectional survey that collected data from Aboriginal and Torres Strait Islander people aged 16-29 years on (6)

- Demographics
- Sexual behaviours
- Alcohol and other drug use
- Sexual health knowledge
- Utilisation of health services
Data Collection

- Surveys administered nationally between 2011 and 2013
- Self-reported survey
- Participants completed surveys in community at events such as
  - Survival day
  - Sporting carnivals
  - NAIDOC week
  - Regional shows
Methamphetamine Use

For purposes of this study classified

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used Frequently</td>
<td>Used ≥ Monthly</td>
</tr>
<tr>
<td>Used Less Frequently</td>
<td>Once every few months or less</td>
</tr>
<tr>
<td>Not used</td>
<td>haven’t used in past 12 months</td>
</tr>
</tbody>
</table>

Analysed the Variables

• 12 questions that were asked of participants on STI and BBV acquisition
• Sexual risk behaviour variables
• Health Service access (STI and BBV testing)
## GOANNA Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>N: 2877</td>
</tr>
<tr>
<td>Gender</td>
<td>Males: 39%  Females: 61%</td>
</tr>
<tr>
<td>Area</td>
<td>Urban: 51%  Regional and Remote: 45%</td>
</tr>
<tr>
<td>LGBTI</td>
<td>Heterosexual: 90%  LGBTI: 8%</td>
</tr>
</tbody>
</table>
GOANNA results

Data from GOANNA Survey

- Total reported meth use 9% (n=272)
- Classified as Frequent users ≥ once a month (67.6%)
- Less frequent users < once every few months (32.3%)

Frequent Use and Less Frequent Use

- 88 (32.3%)
- 184 (67.6%)
Data Analysis

A logistic regression model was built to determine the likelihood of frequent users as oppose to less frequent in 3 steps

1. Descriptive statistics were used to describe patterns of methamphetamine use

2. Chi-squared and Fisher exact tests to find associations between variables

3. Univariate and multivariate to describe likelihood of variables associated with methamphetamine use.
   • Those who use frequently as oppose to those who don’t methamphetamine
   • Those who use less frequently as oppose to those who don’t use methamphetamine
### Methamphetamine use and Gender

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequent</strong></td>
<td>44.60%</td>
<td>55.40%</td>
</tr>
<tr>
<td><strong>Less Frequent</strong></td>
<td>45.50%</td>
<td>54.60%</td>
</tr>
<tr>
<td><strong>Never used</strong></td>
<td>39.50%</td>
<td>60.50%</td>
</tr>
</tbody>
</table>

- More Females had never in the past year used Methamphetamine than males (P<0.05)
Methamphetamine and Age

<table>
<thead>
<tr>
<th>Frequency of use and Age</th>
<th>25-29</th>
<th>20-24</th>
<th>16-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequent</td>
<td>28.80%</td>
<td>33.70%</td>
<td>37.50%</td>
</tr>
<tr>
<td>Less Frequent</td>
<td>18.20%</td>
<td>36.40%</td>
<td></td>
</tr>
<tr>
<td>not used</td>
<td>23.90%</td>
<td>30.80%</td>
<td>45.30%</td>
</tr>
</tbody>
</table>

- Older population are using methamphetamines more than the younger population in the past year (P<0.05)
## Demographics

<table>
<thead>
<tr>
<th></th>
<th>Never used</th>
<th>Used Less Frequently</th>
<th>Used frequently</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>60.5%</td>
<td>54.6%</td>
<td>55.4%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Male</td>
<td>39.5%</td>
<td>45.5%</td>
<td>44.6%</td>
<td></td>
</tr>
<tr>
<td>16-19</td>
<td>45.3%</td>
<td>18.2%</td>
<td>37.5%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>20-24</td>
<td>30.8%</td>
<td>36.4%</td>
<td>33.7%</td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>23.9%</td>
<td>45.5%</td>
<td>28.8%</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>50.5%</td>
<td>56.8%</td>
<td>51.1%</td>
<td>0.019</td>
</tr>
<tr>
<td>Regional</td>
<td>35.7%</td>
<td>35.2%</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Remote</td>
<td>8.8%</td>
<td>4.6%</td>
<td>5.4%</td>
<td></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>96.3%</td>
<td>93.2%</td>
<td>87%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>LGBTI</td>
<td>3.7%</td>
<td>6.8%</td>
<td>13%</td>
<td></td>
</tr>
</tbody>
</table>
Sexual Health Knowledge

Sexual Health Knowledge and Methamphetamine use

*Results Significant (P>0.05)*

- Less Frequent appear to have higher knowledge than expected
- Frequent users had lower levels of knowledge compared to less frequent and non users
<table>
<thead>
<tr>
<th>Demographics</th>
<th>Less Frequently vs Not used Adjusted Odds Ratio (CI 95%)</th>
<th>Frequently vs Not used Adjusted Odds Ratio (CI 95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Female</td>
<td>0.72 (0.47, 1.12)</td>
<td>0.51 (0.38, 0.70)</td>
</tr>
<tr>
<td>16-19</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>20-24</td>
<td>2.97 (1.61, 5.42)</td>
<td>1.33 (0.93, 1.90)</td>
</tr>
<tr>
<td>25-29</td>
<td><strong>4.74 (2.70, 8.78)</strong></td>
<td><strong>1.54 (1.06, 2.24)</strong></td>
</tr>
<tr>
<td>Regional and remote</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Urban</td>
<td>1.29* (0.80, 1.90)</td>
<td>1.01* (0.75, 2.24)</td>
</tr>
<tr>
<td>Completed high school</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Did not complete high school</td>
<td>1.29* (0.84, 1.99)</td>
<td><strong>1.49 (1.09, 2.03)</strong></td>
</tr>
<tr>
<td>Heterosexual</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>LGBTI</td>
<td>1.89* (0.61, 3.46)</td>
<td><strong>3.26 (2.01, 5.30)</strong></td>
</tr>
</tbody>
</table>
## Sexual behaviour results

<table>
<thead>
<tr>
<th>Sexual Behaviour (Past 12 months)</th>
<th>Less Frequent vs Not Used Adjusted Odds Ratio (CI 95%)</th>
<th>Frequent vs Not Used Adjusted Odds Ratio (CI 95%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;3 partners</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>≥ 3 partners</td>
<td>1.67 (1.07, 2.06)</td>
<td>1.65 (1.21, 2.25)</td>
</tr>
<tr>
<td>Always used condom</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Not always</td>
<td>2.31 (1.27, 4.20)</td>
<td>1.62 (1.12, 2.01)</td>
</tr>
<tr>
<td>Used condom last encounter</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Did not use last encounter</td>
<td>1.61 (1.01, 2.57)</td>
<td>1.62 (1.12, 2.33)</td>
</tr>
<tr>
<td>Last sex was with regular partner</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Last sex was someone just met</td>
<td>1.95 (1.11, 3.46)</td>
<td>2.55 (1.75, 3.72)</td>
</tr>
</tbody>
</table>
## Results

<table>
<thead>
<tr>
<th>STI Screening</th>
<th>Less Frequent Vs Not at all</th>
<th>Frequent Vs Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adjusted Odds Ratio (CI 95%)</td>
<td>Adjusted Odds Ratio (CI 95%)</td>
</tr>
<tr>
<td>Not tested for STI</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tested for STI</td>
<td>0.77 (0.50, 1.20)</td>
<td>1.39 (1.02, 1.89)</td>
</tr>
<tr>
<td>Not tested for HIV</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tested for HIV</td>
<td>0.89 (0.56, 1.41)</td>
<td>1.72 (1.26, 2.35)</td>
</tr>
<tr>
<td>Not tested for HCV</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tested for HCV</td>
<td>0.67 (0.41, 1.09)</td>
<td>1.46 (1.06, 2.01)</td>
</tr>
</tbody>
</table>
Key Findings

- **Frequent users of methamphetamine** were more likely to have **not completed high school**

- Significant issues in **LGBTI** communities in terms of **frequent** methamphetamine use

- Both **Frequent and non-frequent** users were more likely to engage in **risky sexual behaviour**

- **Frequent users** were more likely to have screening checks up **STI, HIV and HCV**
Key messages

• Further research to look into the behaviours of **to Methamphetamine** (frequent vs non-frequent)

• Possibility of people who use methamphetamines accessing **sexual health services**

• No significant differences in methamphetamine use across urban vs regional/remote

• Significant methamphetamine use among
  • LGBTI
  • Older age groups (25+)
  • Lower levels of education
I would also like to acknowledge those from SAHMRI and the University of Adelaide who helped me in writing my thesis

- Dr Jianjun Xiang, University of Adelaide
- Dr Rachel Reilly, SAHMRI
- Dr Simon Gunn, SAHMRI
- Prof. Peng Bi, University of Adelaide


6. Sexual Health and relationships in young Aboriginal and Torres Strait Islander people: Results from the first national study assessing knowledge, risk practices and health service use in relation to sexually transmitted infections and blood borne viruses. James Ward, Joanne Bryant, Handan Wand, Marian Pitts, Anthony Smith, Dea Delaney-Thiele, Heather Worth, John Kaldor.


10. HIV and methamphetamines. Canadian group describes link between crystal meth and HIV. AIDS Policy Law. 2006;21(10):4