Tobacco Smoking and Illicit Drug Use in Australia

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Outline of Talk

• Long term smoking trends: 1945-2010
• Recent trends: 1980-2010
  • Convergence in prevalence men and women
  • Social class trends in prevalence
  • Mental health and smoking
• Tobacco use among illicit drug users
  • Party drug users and tobacco smoking 2001-2010
• Explaining these relationships
  • Patterns of illicit drug involvement
  • Are party drugs going downmarket?
  • Smoking as a marker of rebellion and risk taking
• What should be done?
Smoking prevalence in Australia 1945-2010
Trends in young adult smoking prevalence 1980-2010
Daily smoking rates by birth cohort
Average number of cigs per day among smokers 18-29 years, 1980-2010
What policies have reduced smoking?

- Taxation increases on tobacco:
  - per stick since 1992
- Restrictions on smoking
  - Workplaces late 1980s; public places, 1990s
- Bans on advertising and promotion
- Quit lines & media campaigns: Cancer councils
- Most cost effective policies:
  - Taxation
  - Advertising bans
  - Smoking bans in workplaces and public places
Trends in tobacco consumption and public health policies
Relationship between tobacco sales and prices. 1970-2005
Smokers’ characteristics 1997-2007
Mathews et al, 2010

• National Surveys of Mental Health and Well-Being
  • Household surveys in 1997 and 2007
• In both surveys smokers were more likely to:
  • Be socially disadvantaged
  • Less well educated
  • Report symptoms of psychological distress
  • Have anxiety and affective disorders
  • Have an alcohol or other drug use disorder
Have smokers “hardened” 1997-2007?

- Have smokers become more:
  - nicotine dependent
  - social disadvantaged
  - mental distressed?

- Very little evidence of hardening:
  - Small increase in social disadvantage
    - But not for dependence or comorbid disorders
  - Average N cigs per day has decreased
  - No increase in psychological distress
  - No increase in prevalence of other mental disorders
Smoking and illicit drug use 2001-2010

• How are smoking and illicit drug use related?

• Have these relationships changed 2001-2010?

• Used NDS surveys for 2001 and 2010 to examine:
  • Prevalence of smoking in young adults
  • Relationship to illicit drug use
  • Adjusting for sociodemographic differences
Analyses

• National Drug Strategy Household Survey
  • 27,000 respondents across Australia
  • Weighted to Australian population

• Analysis of smoking rates in Surveys in:
  • 2001 and 2010
  • Among young adults (18 – 29 years old)

• 3 categories of illicit drug user
  1. Party drug users (excluding injectors)
  2. Other illicit drug users (including injectors)
  3. Non users
Drug use categories

• ‘Party’ drug users: 10.5% of young adults
  • Any ecstasy, cocaine or GHB use in the last 12 months
  • never injected drugs

• ‘Other’ illicit drug users: 6.5% of young adults
  • Any use in last 12 months of:
    • meth/amphetamines, inhalants, heroin, pain killers, tranquillisers, methadone, hallucinogens, and opiates
  • not used party drugs in last 12 months

• Non users of illicit drugs: 83% of young adults
  • Not used any illicit drugs in the last 12 months
  • Never injected drugs
## Drug user characteristics

<table>
<thead>
<tr>
<th>SES</th>
<th>2001</th>
<th>2010</th>
<th>2001</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non users (%)</td>
<td>Party drugs (%)</td>
<td>Other illicits (%)</td>
<td>Non users (%)</td>
</tr>
<tr>
<td>Lowest</td>
<td>17</td>
<td>9</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>Second</td>
<td>27</td>
<td>19</td>
<td>29</td>
<td>19</td>
</tr>
<tr>
<td>Third</td>
<td>20</td>
<td>22</td>
<td>18</td>
<td>20</td>
</tr>
<tr>
<td>Fourth</td>
<td>14</td>
<td>16</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>Highest</td>
<td>23</td>
<td>34</td>
<td>16</td>
<td>21</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>51</td>
<td>42</td>
<td>47</td>
<td>51</td>
</tr>
<tr>
<td>Male</td>
<td>49</td>
<td>58</td>
<td>53</td>
<td>49</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor+</td>
<td>21</td>
<td>24</td>
<td>13</td>
<td>26</td>
</tr>
<tr>
<td>Year 12</td>
<td>32</td>
<td>33</td>
<td>24</td>
<td>31</td>
</tr>
<tr>
<td>Cert/dip</td>
<td>33</td>
<td>31</td>
<td>38</td>
<td>31</td>
</tr>
<tr>
<td>&lt; year 12</td>
<td>15</td>
<td>11</td>
<td>25</td>
<td>11</td>
</tr>
</tbody>
</table>
Sociodemographic Trends

• Majority of party drug users male

• Party drug users higher SES and more education than:
  • Nonusers of illicit drugs and
  • Users of other illicit drugs

• Patterns consistent from 2001 to 2010
Proportion of drug users who smoke daily

<table>
<thead>
<tr>
<th></th>
<th>Non user</th>
<th>Party drugs</th>
<th>Other illicits</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>20</td>
<td>40</td>
<td>50</td>
<td>30</td>
</tr>
<tr>
<td>2010</td>
<td>10</td>
<td>30</td>
<td>40</td>
<td>20</td>
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</tbody>
</table>
Demographic correlates of daily smoking

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR (95% CI)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SES</td>
<td>0.92 (0.87-0.97)</td>
<td>.001</td>
</tr>
<tr>
<td>Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>0.65 (0.56-0.75)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Drug use category</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non user</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Party drugs</td>
<td>4.26 (3.45-5.26)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Other Illicits</td>
<td>3.57 (2.79-4.57)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1.14 (0.99-1.32)</td>
<td>.079</td>
</tr>
<tr>
<td>Highest education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor or higher</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Year 12</td>
<td>1.99 (1.55-2.55)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Cert/Dip</td>
<td>3.41 (2.69-4.33)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>&lt; year 12</td>
<td>5.70 (4.36-7.44)</td>
<td>&lt; .001</td>
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</tbody>
</table>
Proportion of drug users who use cannabis at least monthly

- Non user
- Party drugs
- Other illicits
- Overall

2001
2010
## Predictors of daily smoking

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR (95% CI)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 2 - including cannabis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SES</td>
<td>0.93 (0.88-0.98)</td>
<td>.007</td>
</tr>
<tr>
<td><strong>Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>0.68 (0.59-0.79)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td><strong>Drug use category</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non user</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Party drugs</td>
<td>2.42 (1.90-3.08)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Other Illicits</td>
<td>2.41 (1.85-3.14)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1.02 (0.88-1.18)</td>
<td>.823</td>
</tr>
<tr>
<td><strong>Highest education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor or higher</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Year 12</td>
<td>1.88 (1.46-2.42)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>Cert/Dip</td>
<td>3.31 (2.60-4.22)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td>&lt; year 12</td>
<td>5.26 (4.00-6.91)</td>
<td>&lt; .001</td>
</tr>
<tr>
<td><strong>Cannabis use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never/infrequent</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>At least monthly</td>
<td>4.19 (3.35-5.25)</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>
Explanations

• Natural history of drug involvement
  • Cigarettes, alcohol, cannabis and other illicit drugs

• Shared social trajectory
  • Smoking and party drugs both going down market?

• Smoking as a social marker of rebellion
  • Back to the future
Patterns of Drug Involvement

• “Gateway” sequence of involvement
  • Alcohol &/or tobacco precede cannabis
  • Cannabis use precedes pills and powders
  • Pills and powders precede heroin and IDU

• Predictors of progression
  • Early initiation of any drug
  • Heavier use of any drug predicts progression

• Earlier drug use patterns usually retained
  • Later drugs usually added to repertoire
  • Producing a Guttman scale of drug involvement
Patterns of Drug Involvement

• Key role for cigarette smoking
• “Gateway” to cannabis use:
  • Route of administration effect
  • Reverse gateway now seen in Australia
• Cannabis use and other illicit drug use
  • Heavier users more likely to use party drugs
• This pattern predicts:
  • Higher rates of smoking among party drug users
Are party drugs going down market?

• Cigarette smoking
  • Has been going down market for over 20 years
  • reduced uptake and higher cessation among higher SES

• What about party drugs?
  • First used by better educated, often during higher education

• Social trajectory of cannabis, LSD, & cocaine
  • \textit{avant garde} $\rightarrow$ college students $\rightarrow$ middle class $\rightarrow$ blue collar

• Little evidence of this between 2001-2010:
  • SES and education remained stable for party drug users
Cigarette smoking as a marker of rebellion

• In the 1890s and 1900s
  • Cigarettes, larrikinism & antisocial behaviour
  • Strongly disapproved of by male pipe smokers

• The World Wars and acceptance of smoking:
  • WW-I normalised RYO smoking
  • WW-II did the same for manufactured cigarettes

• As smoking prevalence has declined:
  • Renewal of smoking as mark of rebellion?
  • Drug used by risk takers and sensation seekers
  • Who are more likely to use illegal drugs
What should be done?

• Should we pay more attention to cigarette and cannabis smoking among illicit drug users?
• If so, how?
  – Advice on the risks of smoking?
  – Promotion of smoking cessation aids?
  – Tobacco harm reduction advice?
  – Cannabis harm reduction advice?
Acknowledgements

• Coral Gartner and Doug Fraser
  • Data analyses and help with paper
• Kate Morley
  • Converging smoking prevalence in males and females
• Rebecca Mathews and Coral Gartner
  • Tests of the hardening hypothesis
• Michelle Scollo and Margaret Winstanley
  • Information on smoking trends in Australia