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Amphetamine users and crime in Western Australia, 1999–2009

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Foreword | *Statistics consistently highlight a higher prevalence of the use of amphetamines in Western Australia compared with other Australian drug markets. It is the third most commonly used drug in Western Australia behind cannabis and ecstasy.*

Using data collected by Drugs Use Monitoring Australia (DUMA) program at the East Perth watch-house, researchers from Edith Cowan University explore the relationship between amphetamine use and the crimes committed by detainees who have used this drug.

Findings include that amphetamine users are more likely to commit property, robbery and weapons offences than users of other drugs. However, users are no more prone to violent offences, which supports other studies of amphetamine users and their criminal behaviours.

It is also concluded that the failure to reduce the use of amphetamines has a cumulative social and health cost to the community.

Adam Tomison
Director

Amphetamines have been increasingly available on Australian drug markets since the early 1990s (National Drug Research Institute 2007). Clandestine laboratory detections increased from 50 in 1996 to 250 in 2002 (Ministerial Council on Drugs Strategy 2004), although use decreased slightly in the general population between 2004 (3.2%) and 2007 (2.3%) (Australian Institute of Health and Welfare 2008). There has also been an increase in the amount of high-grade amphetamine detected by Customs and the Australian Federal Police (AFP). Amphetamine use has been associated with psychological, physical and social harm, criminal behaviour and violence (Dyer & Cruickshank 2005; Lynch, Kemp, Krenske, Conroy & Webster 2003; Wickes 1993). The Drug Use Monitoring in Australia (DUMA) project has collected data since 1999. This current study aims to examine the relationship between amphetamine use and crime among police detainees in Western Australia. Further, the study provides a brief profile of detainee amphetamine users and compares this with the profile of a non-user.

Background

The 2010 National Drug Strategy Household Survey (NDSHS) indicated that 7 percent of Australians aged 14 years and over had 'ever' used amphetamines/methamphetamines (AIHW 2011). Use was most common in the 20–29 year old age group, with 5.9 percent reporting use in the 'preceding 12 months'. These figures made amphetamines the third most common illicit drug used in the Australian community in 2010, behind cannabis (10.3%) and ecstasy (3.0%) (AIHW 2011).

The Amphetamines in Queensland (AIQ) project examined the views and experiences of 665 amphetamine users in both rural and urban Queensland (Lynch, Kemp, Krenske, Conroy & Webster 2003). The most common types of amphetamine used were powder (85.2%) and base (72.3%), which were used at a younger age (18.5 and 19 years, respectively) compared with ice, amphetamine liquid and dexamphetamines (21, 21 and 20 years, respectively) (Lynch et al. 2003). The majority of respondents (54.4%) described their use as 'recreational', whereas 20.8 percent reported being 'binge' users, and 13.3 percent

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described themselves as 'dependent' (Lynch et al. 2003). Dependent users were more likely than the general population to experience mental health problems that resulted in moderate to severe disability. (Lynch et al. 2003). Because the majority of amphetamine use began as a result of someone offering the drug to the participant (74%), initiation into amphetamine use appears opportunistic and potentially preventable through social education of the associated harms.

Of the Australian states and territories, Western Australia has the highest prevalence of amphetamine use (AIHW 2008). In 2007, 4.2 percent of Western Australians surveyed in the NDSHS had used amphetamines in the previous 12 months compared with 2.3 percent nationally (AIHW 2008). Data from the Drug Use Monitoring in Australia (DUMA) project show that the East Perth site in Western Australia also has the highest prevalence of amphetamine use among police detainees (35%) (Gaffney, Jones, Sweeney & Payne 2009). The other DUMA sites include Alice Springs and Darwin, which reported less than 2 percent of detainees testing positive for amphetamines, Bankstown (9%), Parramatta (16%), South Port (19%); Footscray (22%), Brisbane (23%) and Adelaide (28%).

To combat the high prevalence of amphetamines in Australia, the Attorney-General's Department (AGD) funded in the 2003–04 budget the National Strategy to Prevent the Diversion of Precursor Chemicals into Illicit Drug Manufacture (AGD 2006). This strategy introduced an online recording system within Australian pharmacies ('Project STOP'), which aims to prevent the purchase of pseudoephedrine for the manufacture of methamphetamines. Pharmacists involved in the project record personal information from photographic identification provided when pseudoephedrine is purchased, as well as details about the quantity of drug sold. This enables pharmacists to identify individuals who are purchasing pseudoephedrine for an illegitimate purpose, refuse sale of the precursor drug and provide intelligence to police (AGD n.d.; Miller 2009). In 2008, 56.5 percent of all Australian pharmacies were registered for Project STOP (Miller 2009).

Amphetamines and crime

Of all the illicit drugs, amphetamines are of particular concern to crime prevention bodies because of the illicit and harmful nature of the manufacture, possession and trafficking of these drugs (Turnbull 1993). For the criminal justice system, amphetamines are associated with a range of criminal justice and public safety issues, including organised crime, illicit drug markets, clandestine drug laboratories, violence associated with its use, illegal importation and precursor drug access. There is also the potential for an increase in identity fraud to obtain precursor chemicals used in the manufacture of amphetamines (Australian Crime Commission 2008).

McGregor and Gately (2008) examined DUMA data collected between January 2007 and March 2008 and found that significantly more detainees with amphetamine-positive urine test results (46.2%) were detained for theft and related offences compared with detainees with amphetamine-negative urine (33.5%). Significant results were also found for illicit drug offences (59.3% of detainees with amphetamine-positive urine compared with 38.7% with amphetamine-negative urine); prohibited and regulated weapons and explosives offences (46.9% with amphetamine-positive urine compared with 34.5% with amphetamine-negative urine); and traffic and vehicle regulatory offences (29% with amphetamine-positive urine compared with 17.1% with amphetamine-negative urine).

However, after controlling for age and gender, illicit drug offences (principally possession or use and dealing or trafficking) and road traffic and regulatory vehicle offences (principally driving without a licence) were the most significant positive predictors of having amphetamine-positive urine tests (McGregor & Gately, 2008). Further analysis was warranted to investigate the relationship between drug use, drug offences and specific non-drug offences in a larger sample.

Amphetamines and violence

There has been particular interest around the links between amphetamine use and crimes of violence. However, the evidence remains unconvincing. Collins and Lapsley (2008, p.42) suggest that 'of all violent offences for which prisoners are incarcerated, 24 per cent are estimated to be causally attributable to the consumption of illicit drugs and 15 per cent causally attributable to alcohol'. The AIQ project found that 6.6 percent of participants reported being violent toward strangers on more than two occasions and 5.1 percent were perpetrators of violence against their partners (on more than two occasions), as a direct result of their amphetamine use (Lynch et al. 2003).

In a United Kingdom study, 47 percent of amphetamine users interviewed had committed a violent crime, and half of them associated the violence with their amphetamine use (Wright & Klee 2001). In addition, 62 percent reported ongoing problems with aggression that were related to their amphetamine use. Significant associations between violence and the frequency of cocaine and amphetamine use have also been identified in other populations such as Canadian high school students (Smart, Mann & Tyson 1997). In the United States, 11 percent of a large forensic sample was assessed as being amphetamine-dependent (Kalechstein, Newton, Longshore, Anglin, van Gorp et al. 2000). Furthermore, 43 percent of a large treatment-seeking sample of amphetamine users reported a history of violent behavioural problems (Zweben, Cohen, Christian, Galloway, Salinardi et al. 2004).

Recent research in Australia has failed to identify a clear association between amphetamine use and violence. Smith and Rodwell (2009) concluded that offenders who had been convicted of an amphetamine offence were no more likely than those without a prior drug offence to be later charged with a violent offence. However, the authors suggested caution in interpreting the results as there were no measures of the frequency or intensity of amphetamine use among the offenders. Further, they noted that research was needed to identify the relationship between these factors and violence to clearly delineate any links between amphetamine use and violent offending (Smith & Rodwell 2009).

Present study

An efficient method of examining the pattern of detainees is by using existing data collections. The DUMA project has been operating since 1999 and therefore offers a unique opportunity to identify relationships and analyse pat-terns in illicit drug use and crime in Australia over time. The present study was designed to examine the relationship between amphetamine use and crime among police detainees at the East Perth Watch House (DUMA site) over an 11 year period between 1999 and 2009. As well as describing the characteristics of amphetamine users among the detainee population, the project identified the types of crime for which amphetamine users were detained.

Methodology

This study utilised the DUMA quarterly data covering the period from 1999 to 2009. These data were used to examine amphetamine use and to analyse relationships between amphetamine use indicators and detainee characteristics and their classes of crime.

The DUMA program, coordinated by the Australian Institute of Criminology, commenced in 1999 and provides a quarterly collection of information from police detainees in nine sites (police stations or watch houses) across Australia. East Perth in Western Australia is one of the nine sites at which data are collected. This dataset provides in-formation in two parts. The first part provides a combination of self-reported data collected via personal interviews, and objective data provided by police. The interviews are conducted by trained personnel who are independent of the police. The second part provides objective data from an analysis of urine samples that are tested for a range of drugs. The data used for this study included detainee offences, self-reported demographic and drug use information, and urinalysis results for WA detainees for the period from Quarter 1, 1999 to Quarter 2, 2009 (a total of 42 quarters). This dataset yielded a total of 6,993 cases for which there was demographic information and self-reported drug use information. Of those 6,993 cases, urinalysis data were available for approximately 70 percent. The remaining 30 percent of detainees refused or were unable to provide a urine sample for analysis. Overall, for most variables of interest, missing data were less than 10 percent.

Results

Reliability of self-reported data

This project examined six different indicators of amphetamine use including self-reported use (in the previous 12 months, in the previous 48 hours, the number of days used in the previous 30 days and), self-reported dependency and self-reported user status. Self-reported use in the previous 30 days defined a detainee as a drug user or non-user. Positive amphetamine urinalysis results were also examined.

Although the levels of usage differed across the different indicators (see Figure 1), the general pattern of variation in the indicators was relatively consistent. The amphetamine use indicators were also correlated, both with each other and with an amphetamine-positive urinalysis, and showed moderate to strong correlations (Cohen 1988, 1992) at a level of significance of less than .001 (see Table 1). These findings indicate that the self-reported data were reliable.

Overall offence patterns of detainees

Slightly more than one-third (35%) of all detainees had allegedly committed property offences (classed under the Australian Standard Offence Classification (ASOC) as unlawful entry with intent/burglary, break and enter; and theft and related offences). Just over one-quarter of all detainees had allegedly committed offences that were classed as crimes against the person (homicide and related offences; acts intended to cause injury; and robbery). The highest incidence of offences were for theft and related offences (23%), road traffic and vehicle regulatory offences (23%), acts intended to cause injury (17%), public order offences (15%) and illicit drug offences (15%) (see Table 2).

Drug use patterns of detainees

An examination of the various self-report measures indicated that the most heavily used illegal drugs were cannabis and amphetamines, and that many detainees used multiple drugs. The proportion of all detainees interviewed who self-reported using alcohol and illegal drugs in the past 30 days (separately and/or in combination) was 59 percent for alcohol; 62 percent cannabis; 43 percent amphetamines; 13 percent heroin; 11 percent ecstasy; and 10 percent illegal benzodiazepines. Those who reported using amphetamines (n=2,997) were then isolated for further analysis. Self-reported use in the previous 30 days defined a detainee as a drug user or non-user.

Characteristics of detainee amphetamine users

Of the 2,997 detainees who had used amphetamines in the preceding 30 days, 79.4 percent were male and 20.6 percent were female. The majority of amphetamine

Figure 1 A comparison of trends in amphetamine use indicators over 42 DUMA quarters in WA

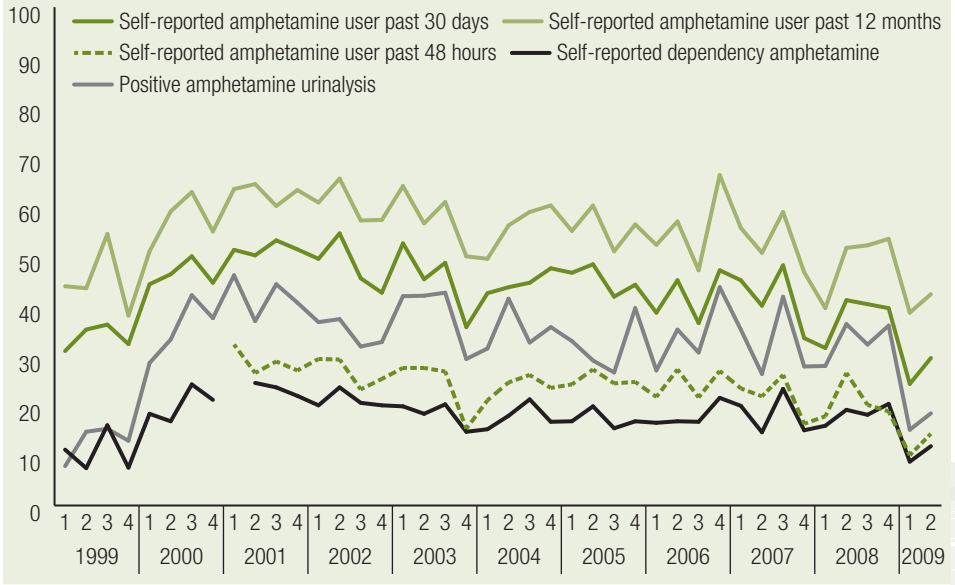

Table 1 Correlations between six different indicators of amphetamine use

Variables	Self-reported use in past 12 months	Self-reported use in past 48 hours	Self-reported amphetamine dependency	Self-reported # days used in past 30	Self-reported user/ non-user[a]	Positive urinalysis result
Self-reported use in past 12 months	–					
Self-reported use in past 48 hours	.503***	–				
Self-reported amphetamine dependency	.428***	.420***	–			
Self-reported # days used in past 30	.687***	.657***	.489***	–		
Self-reported user/non-user[a]	.792***	.628***	.446***	.862***	–	
Positive urinalysis result	.491***	.649***	.360***	.567***	.567***	–

*** p <0.001

a: An amphetamine user was defined as a person who had self-reported using amphetamines at least one day in the previous 30 days.

Table 2 Summary of the crime categories for which amphetamine users and non-users were charged.

	Sample Size	Amphetamine Users[a]	Amphetamine Non-users[a]	All Detainees[a]
ASOC Crime Categories				
Homicide and related offences	6922	0.1%	0.3%	0.2%
Acts intended to cause injury	6922	15.9%	17.6%	16.9%
Sexual assault and related offences	6922	0.6%	2.3%***	1.6%
Dangerous and negligent acts endangering persons	6922	3.2%	3.6%	3.4%
Abduction, harassment and other offences against the person	6922	2.1%	3.5%***	2.9%
Robbery, extortion and related offences	6923	8.9%***	5.7%	7.1%
Unlawful entry with intent/burglary, break and enter	6922	10.8%***	5.6%	7.9%
Theft and related offences	6923	30.5%***	16.7%	22.6%
Fraud, deception and related offences	6922	6.8%***	4.9%	5.7%
Illicit drug offences	6924	22.3%***	8.7%	14.5%
Prohibited and regulated weapons and explosives offences	6922	6.1%***	2.9%	4.3%
Property damage and environmental pollution	6922	5.0%	6.0%	5.5%
Public order offences	6922	11.5%	17.4%***	14.8%
Road traffic and vehicle regulatory offences	6924	23.6%	22.0%	22.6%
Broad Crime Categories				
Crimes against the person	6930	25.6%	27.9%	26.9%
Crime against property	6930	43.1%***	28.4%	34.7%

a: Multiple offences possible

***Proportion significantly larger between users and non-users (p<.0031)

users were aged 25–34 years (41.7%), followed by 18–24 years (40.8%), 35–44 years (15.1%) and 45+ years (2.4%). Most amphetamine users identified as non-Indigenous (75.1%). The majority had completed a schooling level of year 10 or less (57.9%), followed by completion of TAFE or university (15.4%), and completion of year 11 or 12 (15%). Amphetamine users were most likely to report their marital status as 'single and never married' (61.6%) or defacto (26%), and were not likely to have dependent children at home (68.7%). The majority were unemployed (55.4%), employed fulltime (17.9%) or a workforce non-participant (17.9%). Most amphetamine users reported living in private accommodation (60.8%), either at the home of another person (52.4%) or renting/owning their own home (33.2%).

When comparing detainees who used amphetamines with detainees who did not use amphetamines, the users included a higher proportion of females ($\chi^2(1) = 15.52$, p=.000; 20.6% compared with 16.9%) and only a smaller pro-portion of Indigenous detainees ($\chi^2(1) = 9.20$, p=.002; 24.9% compared with 28.0%). Furthermore, amphetamine users generally were:

- younger (t(6991) =12.65, p=.000; $\bar{x}$=27.6 years *c/f* 30.4 years;);
- less educated ($\chi^2(5) = 61.90$, p=.000; 49.5% completed year 10 or less compared with 57.9%);
- more likely to be single ($\chi^2(1) = 20.94$, p=.000; 56.0% compared with 61.6%);
- less likely to live in a house they own or rent ($\chi^2(1) = 59.70$, p=.000, 33.2% *c/f* 43.0%);
- more likely to be unemployed ($\chi^2(1) = 94.19$, p=.000, 55.4% *c/f* 42.7%);
- more likely to have been first arrested before 18 years old ($\chi^2(1) = 149.46$, p=.000, 77.5% *c/f* 60.9%);
- more likely to have first drunk alcohol before the age of 18 years ($\chi^2(1) = 187.90$, p=.000, 95.8% *c/f* 85.9%);

- more likely to have first drunk 5+/3+ alcoholic drinks in the same day before the age of 18 years ($\chi^2(1) = 27.58$, $p = .000$, 64.5% *c/f* 57.7%);
- less likely to be a high consumer of alcohol now (i.e. less likely to have drunk 5+/3+ alcoholic drinks in the same day in the past 12 months), ($\chi^2(1) = 181.10$, $p = .000$, 72.1% *c/f* 75.4%);
- More likely to have first tried amphetamines before the age of 18 years ($\chi^2(1) = 874.64$, $p = .000$, 57.2% *c/f* 25.6%);
- more likely to have tried other drugs (cannabis: $\chi^2(1) = 493.87$, $p = .000$, 98.2% *c/f* 80.8%; heroin: $\chi^2(1) = 941.34$, $p = .000$, 60.4% *c/f* 24.0%; cocaine: $\chi^2(1) = 900.09$, $p = .000$, 56.0% *c/f* 21.2%; illegal morphine/opiates: $\chi^2(1) = 404.56$, $p = .000$, 48.5% *c/f* 17.8%; street methadone: $\chi^2(1) = 282.15$, $p = .000$, 20.0% *c/f* 6.6%; illegal benzodiazepines: $\chi^2(1) = 620.64$, $p = .000$, 44.1% *c/f* with 16.9%; ecstasy: $\chi^2(1) = 1102.75$, $p = .000$, 72.6% *c/f* 32.5%; hallucinogens: $\chi^2(1) = 912.87$, $p = .000$, 68.0% *c/f* 31.5%);
- more likely to have first tried these other drugs before 18 years of age (cannabis: $\chi^2(1) = 635.51$, $p = .000$, 91% *c/f* 65%; heroin: $\chi^2(1) = 285.77$, $p = .000$, 25.9% *c/f* 10.5%; illegal benzodiazepines: $\chi^2(1) = 316.86$, $p = .000$, 24% *c/f* 8.5%); ecstasy: $\chi^2(1) = 289.98$, $p = .000$, 27.5% *c/f* 11.5%; and
- more likely to have used other drugs in the past 30 days (cannabis: $\chi^2(1) = 60.40$, $p = .000$, 79.3% *c/f* 49.8%; ecstasy: $\chi^2(1) = 30.83$, $p = .000$, 52.0% *c/f* 37.7%; illegal benzodiazepines: $\chi^2(1) = 20.07$, $p = .000$, 17.9% *c/f* 3.9%).

Offence patterns of amphetamine users

Chi-square tests were conducted to detect any significant differences in the pattern of offences by amphetamine users and amphetamine non-users. Because of the potential for familywise error occurring due to making multiple comparisons on the same data, a Bonferroni correction was used. Thus using an overall 5 percent level of significance and allowing for 16 comparisons, a 0.0031 percent level of significance was used to assess significant differences on each of the individual tests.

The Chi-square test indicated that there were a significantly greater proportion of amphetamine users who committed offences relating to:

- robbery, extortion and related offences (1.6 times non-amphetamine user rate; $\chi^2(1) = 25.98$, $p = .000$);
- unlawful entry with intent/burglary, break and enter (1.8 times non-amphetamine user rate; $\chi^2(1) = 62.60$, $p = .000$);
- theft and related offences (1.8 times non-amphetamine user rate; $\chi^2(1) = 185.12$, $p = .000$);
- fraud, deception and related offences (1.4 times non-amphetamine user rate; $\chi^2(1) = 10.98$, $p = .001$);
- illicit drug offences (2.6 times non-amphetamine user rate; $\chi^2(1) = 253.27$, $p = .000$);
- prohibited and regulated weapons and explosive offences (2.1 times non-amphetamine user rate; $\chi^2(1) = 43.65$, $p = .000$); and
- crime against property (1.5 times non-amphetamine user rate; $\chi^2(1) = 162.08$, $p = .000$).

The differences were especially large for the general category of crime against property; specifically for illicit drug offences, theft and related offences, and unlawful entry with intent/burglary, break and enter.

In contrast, amphetamine non-users were found to have a significantly greater proportion of detainees committing offences relating to:

- public order offences (1.5 times amphetamine user rate; $\chi^2(1) = 46.21$, $p = .000$);
- sexual assault and related offences (3.8 times amphetamine user rate; $\chi^2(1) = 33.69$, $p = .000$); and
- abduction, harassment and other offences against the person (1.67 times amphetamine user rate; $\chi^2(1) = 12.53$, $p = .000$).

Conclusion

The aims of this project were to identify the typical characteristics and offence types of amphetamine user detainees in Western Australia.

Relative to detainee amphetamine non-users, the typical profile of a detainee amphetamine user (defined as use within the past 30 days) emerged as including a higher proportion of females; non-Indigenous, 24–28 years of age, single with no dependent children, unemployed, educated to year 10 or lower, living at the home of another person, and first arrested before the age of 18. In regard to other substance use, a typical detainee amphetamine user, when compared with detainee non-users was more likely to have tried alcohol before the age of 18 but less likely to have drunk at risky levels in the previous 30 days; more likely to have used cannabis, heroin, illegal benzodiazepines and amphetamines before the age of 18; and more likely to have used cannabis, heroin and illegal benzodiazepines in the previous 30 days than amphetamine non-users.

This profile suggests that failure to reduce amphetamine use in Western Australia may have financial ramifications through unemployment costs such as Centrelink payments, as well as public health costs as a result of poly-drug use. The profile also indicates a transient lifestyle and reduced ability of users to find employment because of lower education and current substance use. There may also be an increased risk in this population for mental health complaints either as a result of substance use or the lifestyle it coincides with. Further, there is a vulnerability associated with the young age and gender of amphetamine users, and it is not unreasonable to anticipate problems for these females if they become pregnant.

In regards to offence types, the study determined that amphetamine users were more likely than amphetamine non-users to commit property offences, robbery and related offences, illicit drug offences, fraud offences and weapons offences. These results support the findings of the Amphetamines in Queensland project by Lynch et al. (2003), although the present study did not find a high prevalence of assault charges within this population. This difference may be explained by the type of data collected. Lynch et al. (2003) used a community sample that self-reported

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previous offences, whereas the current project measured offence types based on current police charges at the time of data collection. The current findings are also consistent with those of McGregor and Gately (2008), who reported that amphetamine users were more likely to be charged with theft, illicit drug and weapons offences. These findings identify common patterns in crimes committed by amphetamine users in Australia.

Of particular note, amphetamine users were no more likely to commit violent offences than amphetamine non-users, even when considering the frequency of amphetamine use. This supports and extends the findings of Smith and Rodwell (2009), who also found no association between amphetamine use and violent crime. This provides further evidence against a relationship between amphetamine use and violence.

In summary, amphetamine users present a significantly different profile to amphetamine non-users in Western Australia. Insufficient research is available to determine if a similar profile occurs in amphetamine users in other states. This project contributes to a growing body of knowledge on amphetamine use in Australia and presents implications to government, health and community organisations.

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