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Criminal activity among regular ecstasy users in Australia: Prevalence and predictors.

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KEY FINDINGS

- From 2003-2011, the prevalence of criminal activity has fluctuated among regular ecstasy users (REU) in Australia. In 2011, it was found that over two-thirds (38%) of REU had committed some form of crime in the month preceding interview.
- Selling drugs for cash profit remains the most common crime committed by REU, although the prevalence of property offences has more than doubled over this time frame (from 7% in 2003 to 18% in 2011). Fraud and violent crime remain low among this sample.
- The use of drugs and/or alcohol was heavily implicated in the commission of property and violent offences. More specifically, in 2011, 37% of those who had committed a property crime – and 74% of those who had committed a violent crime - reported being under the influence of drugs and/or alcohol at the time of their last offence. Alcohol was the primary drug involved in both offence categories.
- There were a number of demographic, drug use and lifestyle variables that were found to be significantly associated with past month criminal activity. After conducting a logistic regression analysis, the variables that remained significant were age, frequent cannabis use and a higher score on the Kessler Psychological Distress Scale (K10). That is, ecstasy users who were younger, used cannabis at least weekly and who had higher levels of psychological distress were more likely to have engaged in past month criminal activity.

INTRODUCTION

The relationship between drug use and crime has been studied extensively over the past few decades, with both international and Australian studies showing that drug users are more likely to engage in crime than those who do not use drugs (AIHW 2011; Bennett et al. 2008). Indeed, a meta-analysis of studies published between 1980 and 2003 found that the odds of offending were three to four times greater for drug users than non-drug users - with the odds of offending being highest among crack users and lowest among recreational drug users (Bennett at al. 2008). In addition it has been well-established that, among those who use drugs, frequency of use is positively correlated with prevalence of crime (Nurco et al 2001; French et al 2000).

There are several theories which exist to explain this relationship, however it remains unclear how much of a drug user's offending can be attributed directly to their substance use. This question was most recently addressed by the Australian Institute of Criminology (AIC), which has been running the Drug Use Monitoring in Australia (DUMA) program for more than 13 years. Through this program the AIC found that nearly half of 1,884 police detainees across Australia attributed their current offending to alcohol or drugs. Interestingly, more detainees attributed their offending to alcohol than to all other drugs combined; however, of the illicit drugs, heroin users were the most likely to attribute their offending to drug use, while ecstasy users were among the least likely (Payne & Gaffney 2012).

Whilst the above study captured the use of ecstasy, the majority of criminological research has traditionally focused on users of heroin, cocaine and methamphetamine - with relatively little attention paid to those who use ecstasy (Hendrickson & Gerstein 2005; Yacoubian et al 2004). In addition, those studies which have specifically examined the nexus between ecstasy use and crime appear to have focused on the

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use of ecstasy among offenders or police detainees, rather than examining the prevalence of crime among those who use ecstasy.

With this in mind, this paper aims to examine criminal activity among regular ecstasy users (REU) in Australia. More specifically, this paper will:

1. Examine the prevalence of criminal activity among regular ecstasy users in Australia, from 2003-2011.
2. Examine the extent to which drugs and/or alcohol were involved in criminal activity among REU in 2011.
3. Determine what factors were predictive of criminal activity among this population in 2011.

METHOD

The Ecstasy & Related Drugs Reporting System (EDRS) is an annual monitoring system that has been conducted in every capital city across Australia since 2003. It is funded by the Department of Health & Ageing, and acts as an early warning system for emerging illicit drug problems – primarily focusing on ecstasy and other 'party drugs', such as methamphetamine, cocaine, GHB and ketamine. The study uses a triangulation of three data sources including: a survey of current regular ecstasy users, a survey of key experts who work in the drug and alcohol field, and analysis of indicator data from health and law enforcement sectors. In examining the prevalence of criminal activity among REU, this paper will be using the national data collected from interviews with regular ecstasy users from 2003-2011 (n=6665). However, when addressing the final two research aims, analysis will be limited to the most recent year of data collection (2011; n=574). Please note that for the purposes of this paper, regular ecstasy use is defined as at least six days of use in the preceding six months (i.e. ≥ monthly use).

The Regular Ecstasy Users Questionnaire (REUQ) covers a range of topics, and from its inception it has measured crime using the Opiate Treatment Index (OTI). The Criminality Scale of the OTI gathers self report data on four types of crime including property crime, dealing, fraud and violent crime. More specifically, participants were asked how often they committed each of these crimes in the month preceding interview. Previous research has shown that self reports of drug users are sufficiently reliable and valid to provide information about drug use and related problems (such as criminality) (Darke 1998).

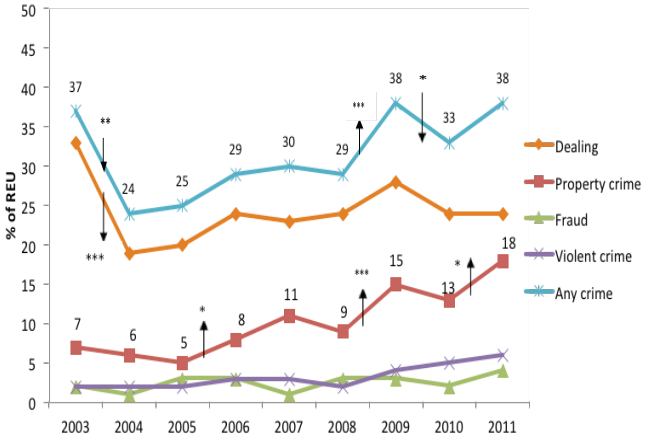
RESULTS

Prevalence of crime

The prevalence of criminal activity among REU has fluctuated considerably over the history of the EDRS (2003-2011). In the first year of national data collection, over a third of the sample (37%) reported that they had engaged in some form of criminal activity in the month prior to interview. This dropped significantly in 2004 ($p<0.001$), and remained relatively stable until 2008 (see Figure 1). From 2008 onwards, prevalence rates fluctuated widely with rates reaching their highest points in both 2009 and 2011.

As can be seen in Figure 1, drug dealing has remained the primary crime committed by participants across all years of the EDRS. However, it is interesting to note that over the years there have been a number of significant increases in the commission of property crimes, such as shoplifting, break and enter, and receiving stolen goods. Indeed, the gap between dealing and property offences has continued to narrow over the past nine years. From 2003-2011, there were overall significant increases in the prevalence of fraud and violent crime ($p=0.037$ & $p=0.0002$ respectively), although both remain low among this sample.

Figure 1: Prevalence of past month criminal activity among REU, 2003-2011



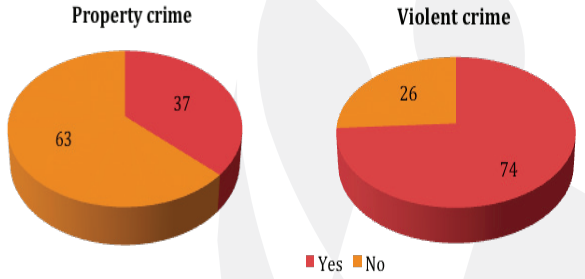
Note: the arrows denote when there were significant changes (for dealing, property crime & any crime only).
***p<0.001; *p<0.05

Extent of drug and/or alcohol use in criminal activity

Whilst the EDRS does not ask participants whether they attribute their offending to drugs, in 2011 it did gather self report data on whether offenders were under the influence of drugs and/or alcohol the last time they committed a property or violent crime. As can be seen in Figure 2, thirty-seven percent of those

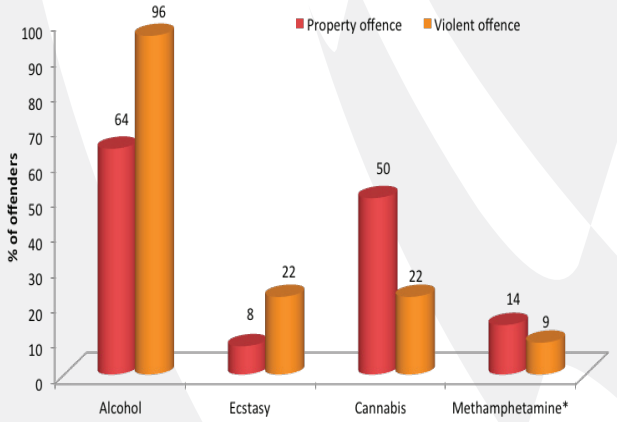
who had committed property crime (n=102), and 74% of those who had committed a violent crime (n=32), reported that they were under the influence of drugs and/or alcohol the last time they committed an offence.

Figure 2: Under the influence of drugs and/or alcohol last time committed an offence, 2011



It was found that the majority of participants reported being under the influence of alcohol the last time they committed a property or violent crime (64% and 96% respectively). Of the illicit drugs, cannabis was the most common drug involved in property offences, whilst for violent offences ecstasy and cannabis were equally involved. Interestingly, the proportion of offenders who reported being under the influence of methamphetamine at the time of last offence was low for both property and violent offenders (Figure 3).

Figure 3: Substances participant was under the influence of at time of last offence, 2011



*includes speed, base and crystal methamphetamine

Predictors of criminal activity

As mentioned above, the criminality scale of the OTI measures four different types of crime: dealing, fraud, property crime and violent crime. While it would be interesting to examine the individual predictors for each of these categories of crime, there are time and space restrictions to consider, and hence this paper will only report those factors that were found to be predictive of 'any' criminal activity in the month preceding interview. The variables that were found to be significantly associated with crime will be divided into three groups: demographic, drug use and lifestyle variables.

Demographic predictors

There were very few demographic variables that were found to be significantly associated with criminal activity in the month preceding interview. The strongest predictor was age, followed by whether the participant had completed any courses after leaving school. More specifically, those who had committed a crime in the preceding month were more likely to have been younger (median age of 21 vs. 24; p=0.000) and less likely to have completed any post school education (38.5% vs 50.3%; p=0.006).

Drug use predictors

The REUQ gathers a wide array of data on the participant's lifetime and recent use of drugs, as well as their experience of drug related problems. Table 1 shows those variables that were found to be significantly associated with criminal activity. As can be seen, those who had recently used LSD, nitrous oxide, cannabis, heroin, buprenorphine, mushrooms, steroids and DMT were more likely to have engaged in criminal activity in the month preceding interview. In addition, participants who reported past month criminal activity were more likely to have tried and started using ecstasy regularly at a younger age; recently binged on stimulants (i.e. used for ≥48 hours without sleep); and to have used a greater number of drug classes within the preceding six months. Not surprisingly, those who reported past month criminal activity were also more likely to report that their drug use had caused them social, legal, risk and responsibly problems.

As mentioned earlier, previous research has shown that frequency of drug use is associated with crime. For this reason, frequent users of ecstasy, methamphetamine, cannabis and alcohol were compared to their counterparts - with 'frequent use' being defined as weekly use or more (i.e. ≥24 days of use in the past six months). Table 1 shows that frequent users of ecstasy, cannabis and methamphetamine were more likely to have committed crime than non-frequent users, whilst there was no significant difference for alcohol.

Lifestyle predictors

In the 2011 EDRS survey, participants were asked a range of questions which related to their mental health; sleep patterns; and their quality of life (QOL), happiness and pleasure. This provides a fairly unique opportunity to examine which lifestyle factors, if any, may be associated with criminal behaviour among REU.

Table 1: Drug use predictors of past month criminal activity, 2011

	Past month criminal activity		
	No (n=354)	Yes (n=220)	p value
'Recent' (past six month) use of: (%)			
Cannabis	82.8	89	0.04
LSD	40.8	53	0.004
Mushrooms	26	34.5	0.028
Nitrous oxide	20.5	33.3	0.001
DMT	19.2	30.7	0.02
Heroin	5.4	10.6	0.021
Buprenorphine	2.8*	6.8*	0.022
Steroids	0.9*	3.7*	0.018
Frequent (weekly) use of: (%)			
Cannabis	51.7	69.4	0.000
Ecstasy	23.4	34.1	0.005
Methamphetamine	10	18.7	0.003
Age first tried ecstasy (median)	18	17	0.000
Age of regular** ecstasy use (median)	19	18	0.000
Number of drug classes used in past six months (mean)***	8	9	0.000
Binged on stimulants# (%)	36.5	47.9	0.007
Drug use caused#: (%)			
Social problems	20.7	39.5	0.000
Legal problems	4.7*	9.6	0.025
Risk problems	35.8	56	0.000
Responsibility problems	31.8	46.6	0.001

*n≤15
**regular=monthly use
***rounded up to nearest whole number
#in past six months

In regards to quality of life, happiness and pleasure, participants were asked about the contribution of 15 life aspects to each of these three concepts. For example, on a scale of 0-100 (with zero being nil and 100 being a lot), participants were asked to rate how much pleasure they got from being with their family. As can be seen in Table 2, those who had engaged in past month criminal activity were less likely to gain pleasure from their work/education, being with family or from personal achievements. Indeed those who had engaged in crime in the preceding month attributed less importance to all of the pleasure, happiness and QOL aspects listed in Table 2. The only exception to this was taking drugs, with participants who had engaged in past month criminal activity reporting that taking drugs contributed more to their feelings of happiness and quality of life.

In addition, participants were asked a range of questions regarding their sleep patterns. Sleep patterns were assessed using the Pittsburgh Sleep Quality Index (PSQI) which asks participants to self rate seven areas of sleep. Meta-analyses have shown that patients suffering from sleep disorders score at least five on the PSQI and healthy controls at least two. Whilst the overall EDRS sample reported a mean PSQI score greater than five, it can be seen in Table 2 that those who reported past month criminal activity had higher PSQI scores (i.e. had worse sleep) than those who hadn't committed any crime.

Participants who reported past month criminal activity were also more likely to report that they had suffered from a mental health problem in the preceding six months and more likely to score higher on the Kessler Psychological Distress Scale (thereby indicating higher levels of psychological distress).

Table 2: Lifestyle predictors of past month criminal activity, 2011

	Past month criminal activity		
	No (n=354)	Yes (n=220)	p value
How much pleasure do you get from:*			
Personal achievement	76.95	72.6	0.023
Being with family	69.6	61.3	0.000
Work/education	60.7	55.5	0.023
How much do the following contribute to feelings of happiness?*			
Personal achievements	77.2	70.8	0.002
Being with family	68.7	59.7	0.000
Taking drugs	64.2	73.1	0.000
Exercise	64.9	59	0.024
How much do the following contribute to quality of life?*			
Personal achievements	75.99	69.2	0.002
Being with partner	72.1	65.8	0.041
Work/education	71.8	64.3	0.003
Being with family	71.7	63.6	0.001
Exercise	71.4	65.1	0.019
Taking drugs	49.3	54.4	0.045
PSQI score (mean)	6.5	7.5	0.000
K10 score (mean)**	18.5	20.4	0.001
Mental health problems (%)	24.7	39.7	0.000

*mean score from 0-100
**K10 score of 10-15=low psychological distress; 16-21=moderate psychological distress; 22-29=high psychological distress; ≥30=very high psychological distress

Regression analysis

In summary, there were a number of variables that were found to be significantly associated with past month criminal activity among REU. However, it is important to note that these are merely correlations and obviously cannot be determined as causal relationships. It is unlikely, for example, that past six month use of LSD and nitrous oxide are true predictors of criminal activity – rather they are probably indicative of higher levels of poly drug use, which in turn may increase the risk of criminal offending. Thus, in order to account for the interrelationships between variables, a multiple logistic regression analysis was conducted. The variables included in this model were: gender; age; age first started using ecstasy regularly; frequent use of methamphetamine, cannabis and ecstasy; number of drug classes used in the preceding six months; K10 score; and whether participant had binged on stimulants in the preceding six months. After conducting this analysis it was found that only three variables remained significant: age, frequent cannabis use and the K10 score (Table 3). That is, REU who reported past month criminal activity were more likely to be younger, use cannabis on a weekly basis and to have higher levels of psychological distress.

Table 3: Overall predictors past month criminal activity, 2011: results of logistic regression

	Adjusted Odds Ratio	95% CI	p value
Age	0.943	.900-0.989	0.015
Frequent cannabis use	1.610	1.078-2.405	0.020
K10 score	1.036	1.004-1.068	0.026

It is also important to note that most of the pleasure, happiness and QOL variables outlined in Table 2 lost significance when poly-drug use (i.e. number of drug classes used in preceding six months) was controlled for. In fact, the only one that retained its significance was the contribution of taking drugs to feelings of happiness (p=0.001; 95% CI: 1.01-1.03). The mean PSQI score also lost significance when poly drug use was taken into account.

CONCLUSION

The Australian criminological literature is replete with evidence of associations between illicit drugs and crime, and so it was not surprising to find that substantial portions of regular ecstasy users had engaged in criminal behaviours. The prevalence of past month criminal activity remained relatively high across 2003-2011, ranging from a quarter (24%) to over two-thirds (38%) of the sample. Interestingly, in more recent years, the prevalence of crime among regular ecstasy users has been comparable to that of people who inject drugs. That is, in 2011, the Illicit Drug Reporting System (IDRS) found that 39% of people who inject drugs reported past month criminal activity – compared to 38% of regular ecstasy users (Stafford & Burns 2012). This is surprising given that people who inject drugs have generally been thought to have higher rates of criminal activity than their non-injecting peers (although it is important to note that there were differences in sample sizes: IDRS=868 vs. EDRS=574).

In addition, data from the 2011 EDRS found that the use of drugs and/or alcohol at the time of last offence was common among REU. More specifically, 37% of participants who had committed a property crime, and 74% of those who had committed a violent crime, reported that they were under the influence of drugs and/or alcohol at the time of their last offence. Alcohol was the primary drug involved in both offence categories - although it was substantially more common in the commission of violent crimes. As mentioned earlier, a recent study by the Australian Institute of Criminology found that nearly half of all police detainees attributed their current offending to alcohol or drugs, with alcohol being more frequently attributed to by detainees than all other drugs combined (Payne & Gaffney 2012). In consideration of these findings - and given that there is stronger evidence for a direct link between alcohol use and crime (Weatherburn 2001) - it is interesting that media discussion continues to be dominated by the influence of illicit drugs on criminal activity.

There were several demographic, drug use and lifestyle factors that were found to be significantly associated with past month criminal activity. Participants who were younger, and who had not completed any post-school education, were more likely to have engaged in criminal behaviours. This is largely consistent with the existing literature, with studies showing that persons with lower academic performance are more likely to offend (Weatherburn 2001). Not surprisingly it was also found that REU with more problematic drug use patterns were more likely to report past month criminal activity. More specifically, participants who first tried ecstasy at a younger age, started using ecstasy regularly at a younger age, had binged on stimulants in the preceding six months, and who reported greater levels of poly drug use, were more likely to have engaged in past month criminal activity. Frequent use of ecstasy, cannabis and methamphetamine were also positively correlated with criminal activity, which is again consistent with the existing literature.

In terms of lifestyle factors, preliminary analysis found that REU who attributed less importance to life aspects such as being with family, personal achievement and their work/education/study were more likely to have engaged in past month criminal activity. Participants who scored higher on the Pittsburgh Sleep Quality Index (indicating poorer sleep) were also more likely to have engaged in recent criminal behaviours. However, when placed in a regression model it was found that these predictors lost significance and were in fact associated with greater levels of poly drug use. In fact, in conducting a multiple logistic regression analysis it was found that the most significant predictors of criminal activity among regular ecstasy users were age, frequent cannabis use and a higher K10 score. That is, participants who were younger, used cannabis weekly or more, and who had higher levels of psychological distress were more likely to have engaged in past month criminal activity.

REFERENCES

Australian Institute of Health & Welfare (AIHW), 2011. 2010 National Drug Strategy Household

Survey Report, Drug statistics series no. 25. Cat. no. PHE 145. Canberra: Australian Institute of Health & Welfare.

Bennett, T., Holloway, K. & Farrington, D. 2008. The statistical association between drug misuse and crime: A meta-analysis, Aggression and Violent Behavior, 13, pp. 107–118.

Darke, S. 1998. Self report among injecting drug users: A review, Drug & Alcohol Dependence, 51 (3), pp. 253-263

French, M.T., McGeary, K.A., Chitwood, D.D., McCoy, C.B., Inciardi, J.A. & McBride, D. 2000. Chronic drug use and crime, Substance Abuse, 21 (2), pp. 95-109.

Hendrickson, J.C. & Gerstein , D.R. 2005. Criminal involvement among young male ecstasy users. Substance Use & Misuse, 40, pp. 1557–1575.

Nurco, D.N., Hanlon, T.E. & Kinlock, T.W. 1991. Recent research on the relationship between illicit drug use and crime, Behavioral Sciences & the Law, 9 (3), pp. 221–242.

Payne, J. & Gaffney, A. 2012. How much crime is drug or alcohol related? Self-reported attributions of police detainees. Trends & Issues in Crime and Criminal Justice, No. 439. Canberra: Australian Institute of Criminology.

Stafford, J. and Burns, L. 2012. Australian Drug Trends 2011. Findings from the Illicit Drug Reporting System (IDRS). Australian Drug Trend Series No. 73. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.

Weatherburn, D. 2001. What causes crime? Crime and Justice Bulletin: Contemporary Issues in Crime and Justice, No. 54. Sydney: NSW Bureau of Crime Statistics and Research.

Yacoubian, G.S., Wish, E.D., Choyka, J.D., Boyle, C.L., Harding, C.A. & Loftus, E.A. 2004. Examining the prevalence and perceived harm of ecstasy and other drug use among juvenile offenders, Journal of Ethnicity in Substance Abuse, 3 (2), pp. 95-105.

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