

# **A Local Pilot of the New Zealand Arrestee Drug Abuse Monitoring (NZ-ADAM) System**

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## Acknowledgements

The local pilot of the New Zealand Arrestee Drug Abuse Monitoring (NZ-ADAM) system was funded by the Accident Compensation Commission (ACC) of New Zealand. The development of NZ-ADAM was commissioned by the New Zealand Police and completed by SHORE researchers in 2003 (*A Scoping Report on NZ-ADAM*, Wilkins and Rose, 2003). The SHORE development team and pilot project was lead by Dr. Chris Wilkins. The statistical analysis for the local pilot was completed by Dr. Megan Pledger and Arier Lee. Rachel Adams and Emily Rose assisted in the preparation of the report. We would like to thank the police officers and staff at Papakura Police Station for their assistance and cooperation during the study. Special thanks to Senior Sergeant Colin McPherson and Inspector Dave Simpson for the knowledge they shared in regard to police watch-house systems. The quality of the data collected depended on the dedication of the SHORE interviewer team (Rachel Adams, Nathan Cowie, Leah Ebbers, Hope Munro, John Robinson, Stephen Schaapveld, and Lesley Taylor). Last but not least we acknowledge the time and willingness of the participant arrestees without whom this research could not have taken place.

## Executive Summary

Overall the local pilot of NZ-ADAM can be judged a great success. During the three weeks of the study the interviewers completed 62 interviews with arrestees, achieving a response rate of 70%. Ninety-five percent of arrestees agreed to participate in the study once they had been introduced to the interviewers. Ninety-seven percent of the arrestees interviewed provided an alcohol breath sample and 57% provided a urine sample. Interviews and census data were collected on arrestees during all three police watch-house shifts for 21 consecutive days. The census data allowed the sample to be statistically ‘weighted’, so as to be representative of all arrestees brought to the watch-house during the three weeks of the study. The interviewing of arrestees proceeded smoothly and without incident. No issues arose around the privacy and confidentiality of the interviews or the ethical requirements of the study.

Arrestees reported high levels of drug use and high levels of involvement in purchasing and selling illicit drugs. Alcohol, cannabis and amphetamine/methamphetamine were the drug types arrestees reported using most often just before their arrest and the drug types most often reported as contributing to the activities they were arrested for. Amphetamine/methamphetamine and crystal methamphetamine were reported by arrestees using them as the substances most likely to make them feel angry. Cannabis and alcohol were the drug types that arrestees were most often under the influence of when driving. Half of the arrestees had purchased an illicit drug and 15% had sold one in the last month. Just over half of the arrestees who used cannabis felt they were dependent on it. Arrestees spent an average of \$300 a month on illicit drugs. Those arrestees involved in drug dealing reported an average monthly income from drug selling of \$1,900.

Two areas of the methodology were identified where improvements could be made. Firstly, it may be possible to increase the response rate. While the response rate achieved is comparable with other drug and alcohol surveying in New Zealand, an increase in response rate would add further value to the research by reducing any bias related to non-response. Most refusals to participate in the study occurred at the point where police officers invited arrestees to meet the interviewers. While most refusals at this stage appeared to be unrelated to the nature of the study, such as the arrestee was ‘tired’ or ‘sleeping’ (see Appendix 1), further effort around the invitation process may yield enhanced levels of positive response. Secondly, improvements are likely to be possible in the proportion of arrestees providing urine samples. While nearly 60% of the arrestees provided a urine sample, this is a lower level than that was achieved in ADAM studies overseas. Factors that may account for the lower provision of urine samples in

NZ-ADAM include: less popular experience in New Zealand of providing urine samples; Maori cultural norms against providing body fluids; and the process used to invite arrestees to provide a urine sample. Further exploration of these causes and the investigation of ways of reducing their negative influence should lead to an increase in the provision of urine samples and consequently strengthen the depth of analysis possible.

## Key Findings

The small sample size of the pilot limited the statistical analysis that was possible and for this reason the pilot findings should be treated with caution. A full national wave of NZ-ADAM will comprise four sites and hence provide approximately four times the sample size. NZ-ADAM will also be conducted quarterly each year, which will increase the annual sample size by four fold again. A larger sample size will facilitate more detailed and reliable statistical comparison of sub-groups of arrestees.

### Demographics

- Eighty-six percent of the arrestees were male and the average age was 28 years
- Fifty percent of the arrestees identified as Maori
- Forty-two percent of the arrestees had no school qualifications
- Fifty percent of the arrestees had received some kind of government income assistance in the last year

### Arrest history

- Twenty-one percent of the arrestees had been arrested three times or more in the previous year
- Five percent of the arrestees had served time in prison, and 3% had served time in prison for a drug offence, in the last year
- Six percent of the arrestees had been arrested for the first time before the age of 10 and 35% had been arrested for the first time by age 15
- Seventeen percent of arrestees indicated they had a friend who had been arrested for an amphetamine/methamphetamine offence in the last 30 days

### Drug use

- Sixty-three percent of the arrestees had used cannabis in the last year and 41% had used amphetamine/methamphetamine in the last year
- The drug types most often reported used in the time leading up to arrest were alcohol (45% of arrestees), cannabis (22%) and amphetamine/methamphetamine (9%)

- Those who had drunk alcohol in the 48 hours prior to arrest (i.e. 64% of arrestees), had consumed an average of 14 standard drinks (maximum 38 standard drinks)

### **Urinalysis drug test results**

- Urine test results indicated that 17% of those who tested positive for recent cannabis use had failed to self-report use in their face-to-face interview
- Thirteen percent who tested positive for recent amphetamine/methamphetamine use failed to self-report use in their face-to-face interview

### **Drug use and criminal offending**

- For property offences, 46% of arrestees reported using alcohol just before their arrest, 27% reported using cannabis just before their arrest and 19% reported using amphetamine/methamphetamine just before their arrest
- For those who reported using alcohol prior to their arrest, 32% were arrested for a violent offence, 25% for an alcohol/drugs offence, 22% for a miscellaneous offence and 21% for a property offence
- Alcohol and amphetamine/methamphetamine use were most often considered by arrestees to have contributed to the activities they were subsequently arrested for
- Fifty-one percent of those who had used crystal methamphetamine, and 32% of those who had used amphetamine/methamphetamine, indicated the use of these substances was ‘more likely’ or ‘much more likely’ to make them angry

### **Drug use and driving**

- Twenty-six percent of last year cannabis users reported they had done ‘all’ or ‘most’ of their driving in the last year while under the influence of cannabis
- Fourteen percent of arrestees had done ‘all’ or ‘most’ of their driving while under the influence of alcohol
- Sixteen percent of amphetamine/methamphetamine users, and 34% of ice users, had done ‘some’ of their driving while under the influence of these substances

### **Buying illicit drugs**

- Fifty percent of arrestees had purchased an illicit drug in the last month
- Amphetamine/methamphetamine buyers contacted their dealers by ‘calling or texting on a mobile phone’ or ‘through a third party’. Cannabis buyers were more likely to visit a ‘private residence’ or approach the seller in ‘public’
- Cannabis purchases were more likely than amphetamine/methamphetamine purchases to be made in the suburb where the arrestee lived (54% vs. 21%)
- Forty percent of cannabis buyers reported being able to purchase cannabis in less than 10 minutes. A third of amphetamine/methamphetamine buyers required a day to make an amphetamine purchase

### **Selling illicit drugs**

- Fifteen percent of arrestees had sold an illicit drug in the last month
- Sixty-five percent of those who sold cannabis had sold to 11 or more different buyers in the last month. No amphetamine/methamphetamine sellers had sold to more than 5 buyers in the last month
- Amphetamine sellers limited their sales to ‘close friends and family members’. In contrast, 35% of cannabis sellers sold ‘most’ of their cannabis to ‘casual acquaintances’ and 12% sold ‘some’ of their cannabis to ‘complete strangers’
- Twenty percent of the arrestees who had sold cannabis had used threats and intimidation to settle a dispute with a rival drug dealer in the last month

### **Drug treatment**

- Of those who had ever tried any drug, 45% had wanted help to reduce their level of drug use but had not received it
- Fifty-eight percent of arrestees who had used cannabis in the last year felt they were dependent on the drug

### **Violence and illicit drug markets**

- Nearly three quarters of arrestees described the illicit market for amphetamine/methamphetamine as ‘very violent’
- There was some polarisation of opinion about the level of violence in the illicit market for cannabis with 32% of arrestees describing it as ‘very violent’ and 30% describing it as ‘not at all violent’.

### **Income sources**

- As self-reported by arrestees, based on average monthly income, the most financially rewarding illegal activities were ‘drug manufacture/cultivation’ (\$20,000), followed by ‘drug dealing’ (\$1,900) and ‘car theft’ (\$1,400)
- Arrestees spent an average of \$309 each on illicit drugs in the last month (maximum \$5,000)
- Of those arrestees who had committed offences to obtain money, 31% had committed at least ‘some’ offences to obtain money to purchase drugs

## Chapter 1 Introduction

This report presents the findings of the local pilot of the New Zealand Arrestee Drug Abuse Monitoring system (NZ-ADAM). The aim of the local pilot of NZ-ADAM was to conduct a small scale trial of the methodology under actual police watch-house conditions to evaluate the research design and protocols and to demonstrate the value of the data collected. The local pilot of NZ-ADAM was conducted in collaboration with New Zealand Police at Papakura police watch-house in South Auckland over three weeks in late May 2004.

NZ-ADAM was developed to provide ongoing intelligence on drug use, drug related harm, illicit drug markets, criminal offending and the drug treatment needs of arrestees in New Zealand (Wilkins and Rose, 2003). NZ-ADAM was adapted and extended from the Arrestee Drug Abuse Monitoring (ADAM) system developed in the United States during the late 1980s (Hart, 2003). ADAM programmes are now conducted in fourteen countries around the world (Taylor, 2002), including Australia (Makkai and McGregor, 2003) and England and Wales (Bennett, 2000). NZ-ADAM was designed to be compatible with these studies and in particular with the Australian DUMA (Drug Use Monitoring in Australia). The core methodological features of the ADAM methodology are: (i) the interview of arrestees about their drug use while held at a police watch-house by researchers independent from the police and (ii) the verification of this self reported drug use through the analysis of a urine sample from the arrestee. NZ-ADAM extended the drug testing regime to include alcohol breath testing to examine the alcohol use of arrestees and the role alcohol plays in criminal and violent offending. Drawing on the most recent extension of the ADAM methodology (Hunt and Rhodes, 2001), NZ-ADAM was designed to collect a representative sample of all the arrestees brought to a police watch-house during the three weeks of the study. Sections of the NZ-ADAM interview were also extended to more clearly identify the role drug use played in violent crime and driver impairment, and to identify any barriers arrestees were experiencing in gaining access to alcohol and drug treatment services. An entirely new section of the questionnaire was added on arrestees drug selling experience.

Studying the drug use of the criminal population can provide valuable information concerning drug use, drug-related harm, drug-related violence, illicit drug markets and emerging drug types. The criminal population is a sentinel population in regards to drug use and the sale of drugs. Studies overseas have found that, as a population, arrestees have higher levels of drug use and greater exposure to drug trafficking than the wider population (Taylor, 2002, Bennett, 2000, Makkai and McGregor, 2003). The criminal population is also sometimes directly

involved in the cultivation, production, trafficking, and sale of drugs as well related activities, such as collecting drug debts and settling disputes over drugs. The knowledge gained from the study of the drug use of the criminal population can usefully inform the response of a range of government and non-government agencies concerned with drug use and its impact on individuals and wider society.

Studying the drug use of the criminal population can also illuminate the relationship between drug use and violent crime. Drug use has been conceptualised as being linked to violent crime in three broad ways: (i) psychopharmacological – an intoxicated drug user commits a violent crime, such as homicide or domestic violence; (ii) economic-compulsive – a drug user engages in criminal offending and violence to obtain money to purchase drugs, such as street robbery or car theft; and (iii) systemic – violence is used as part of the process of carrying out ‘business’ in the illicit drug market, such as threatening drug debtors or assaulting rival drug dealers (Goldstein, 1989). Empirical research of drug use and crime collected within this tripartite framework can enhance the understanding of the role drug use plays in criminal offending and violence and so contribute to the development of strategies which minimise both drug use and related crime and violence.

## Chapter 2 Method

### Sample design

Interviewers completed eight hour shifts of interviewing each day for twenty-one consecutive days. To represent all the arrestees processed at the watch-house over an entire 24 hour period, interviewers sampled from the arrestees who were brought to the watch-house while they were present (the 'flow') and from those who had been processed and held during the preceding two shifts (the 'stock'). Interviewers were present during afternoon shifts (3pm-11pm), night shifts (11pm-7am) and day shifts (7am-3pm). To be eligible to be interviewed an arrestee must have been in custody for less than 48 hours and be aged 17 years or older. Census information on the arrestee population, including the date and time of booking and details of the charge, were collected at each shift and used to weight the final sample. A response rate of 70% was achieved.

### Weighting

The data was weighted in two stages. The first stage was to adjust for the probability of selection. At very busy times at the watch-house only a relatively small proportion of the participants in the strata who were 'flow' would be selected for interview. They were given more weight to represent the people from that strata not selected. At slow times a relatively large proportion of the participants who were 'flow' would be selected to be interviewed. They were given less weight to reflect the fewer people from that stratum that they represented. Participants from the 'stock' were weighted similarly. The second stage of weighting was a post stratification by type of offence. Every person selected to participate from the 'flow' had the details of their offending noted even if they weren't eventually interviewed. After the first level of weighting this sample was used to give an indication of the relative proportion of each type of offending. This represents the general level of offending. The participants who were interviewed had their weights adjusted so that their relative proportions of types of offending matched the general level. The ability to capture an arrestee for an interview depended on the time they spent at the watch-house (i.e. being processed) and this was related to the type of offence they were charged for. The weightings adjusted the data for the time bias by using offence type.

## **Interview**

Interviewers worked in pairs from a dedicated interview room within the police watch-house. Police officers escorted the arrestees back and forth from the holding cells to the interview room but did not remain in, or around, the interview room when an interview was being conducted. Arrestees deemed unfit to be interviewed due to alcohol or drug intoxication, violent behaviour, unfit mental state, illness or physical injury were not interviewed. The arrestees were informed that everything they said was confidential and nothing they said would have any impact on their legal situation. Arrestees were provided with a participant information sheet with this commitment in writing signed by the Deputy Police Commissioner and the Director of SHORE. The names of arrestees were not recorded on either their completed questionnaire or breath and urine samples. A generic barcode was used to match the questionnaire and test results up at a later stage for the purposes of analysis.

## **Questionnaire**

The questionnaire consisted of six sections: (i) demographics; (ii) drug use patterns; (iii) drug treatment; (iv) drug procurement; (v) new drugs and risks of drug selling, and; (vi) income sources and arrest history. The questionnaire was developed and adapted from the Australian DUMA questionnaire to allow inter-country comparisons. An entirely new section was added to the NZ-ADAM questionnaire on drug selling. New questions were also included to more clearly illuminate the relationship between drug use and violence, the impact of drug use on driver impairment and to identify barriers to accessing alcohol and drug treatment services.

## **Drug testing**

Most illicit drug types can be detected in the urine for at least 24 hours after ingestion. Chronic cannabis use (>5 joints per day) can be detected in the urine for up to 20 days after use. Amphetamine can be detected anywhere between 1 to 4 days. The urine analysis consisted of an initial immunoassay screening test of the six main drug groups (i.e. amphetamines, benzodiazepines, cannabinoids, cocaine, methadone and opiates). If the initial screen was positive, a gas chromatography mass spectrometry or liquid chromatography mass spectrometry confirmation test was used to identify the specific drug type involved. The 'cut off' levels used to indicate the presence of these substances are part of a joint New Zealand/Australian standard (AS/NZS 4308:2001). All analysis was carried out by the Institute of Environmental Science and Research (ESR).

## Chapter 3 Results

### Introduction

The statistical analysis of the pilot findings was limited in many instances by the small sample size of the pilot sample. For this reason some of the findings of the pilot study should be treated with caution. A full national wave of the NZ-ADAM study will comprise of interviewing at four sites and hence approximately four times the sample size. NZ-ADAM will also be conducted quarterly each year which will increase the annual sample size four fold again. The larger sample will facilitate more detailed and reliable statistical analysis and testing, and comparison of sub-groups of the sample.

The sample consisted of 62 arrestees from the Papakura police watch-house in South Auckland. Ninety-seven percent of the arrestees interviewed provided an alcohol breath sample. Fifty-seven percent provided a urine sample.

### Demographics

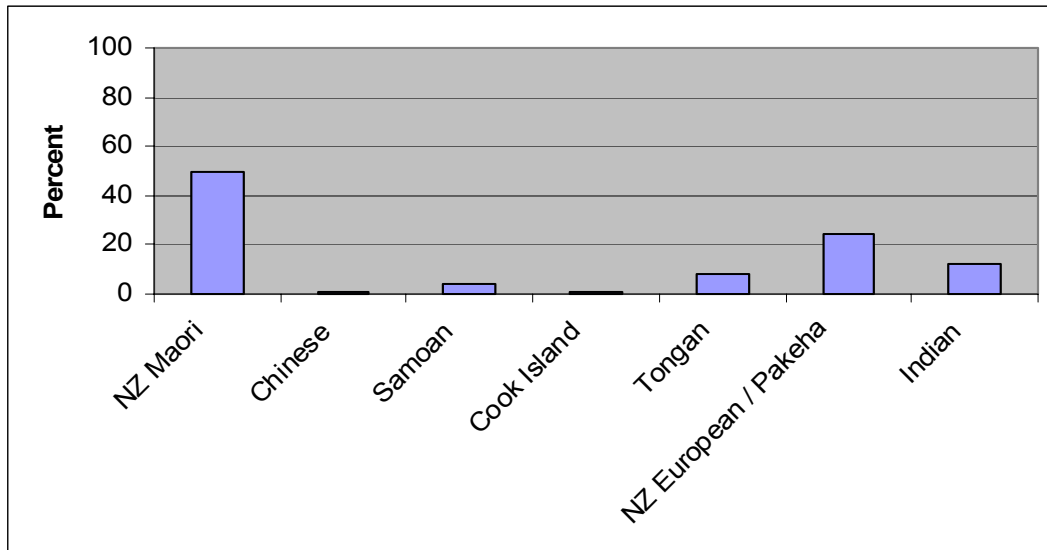
Eighty-six percent of the sample was male. The mean age of the arrestees was 28 years (range 17-59 years) (Table 1).

*Table 1: Age and sex of arrestees*

| <b>Gender</b> | <b>%</b> | <b>min</b> | <b>mean</b> | <b>max</b> |
|---------------|----------|------------|-------------|------------|
| Male          | 86       | 17         | 29          | 59         |
| Female        | 14       | 17         | 24          | 42         |
| All           | 100      | 17         | 28          | 59         |

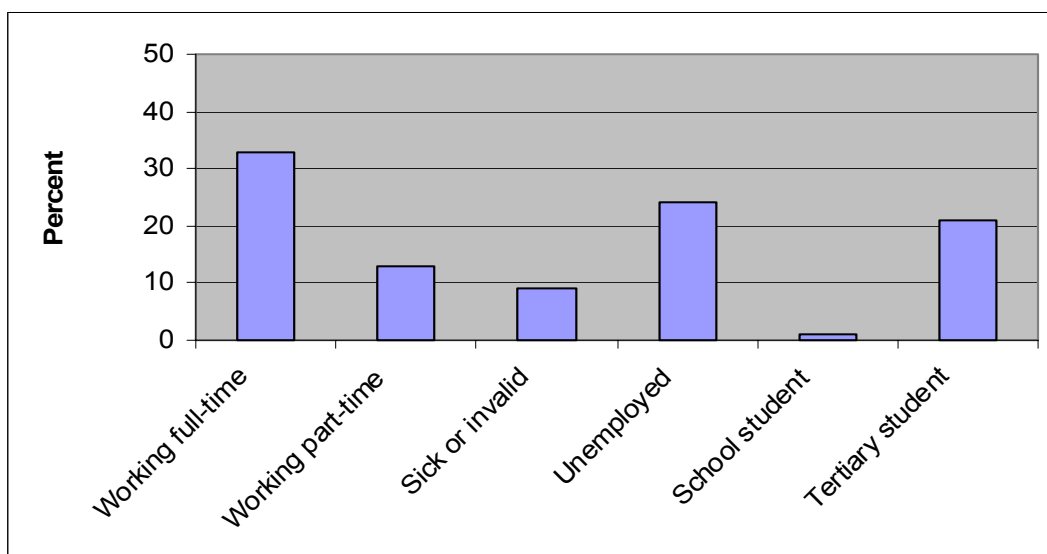
Fifty percent of the sample identified as Maori and 13% were from one of the Pacific Islands (Figure 1). Twenty-four percent of arrestees were European.

Figure 1: Ethnicity of arrestees



Forty-six percent of the arrestees were in paid employment (full or part-time) and 24% were unemployed (Figure 2).

Figure 2: Current employment status of arrestees



Arrestees were asked what their highest level of education was, including courses they were currently completing. Forty-two percent of arrestees had no school qualifications (Table 2). Twenty-one percent had at least one school certificate subject or NCEA level 1. Eleven percent were either studying for or had completed a university degree.

*Table 2: Current educational achievement of arrestees*

| <b>Educational achievement</b>   | <b>%</b> |
|--|----------|
| None   | 42       |
| School Certificate in 1 or more subjects or NCEA Level 1                     | 21       |
| Trade or technical certificate which took more than 3 months full time study | 7        |
| Sixth form certificate in one or more subjects or NCEA Level 2               | 12       |
| NZ University Entrance before 1986 in 1 or more subjects                     | 2        |
| NZ Higher School Certificate or Higher leaving certificate                   | 1        |
| Bachelors Degree e.g. BA, BSc, LLB   | 11       |
| Other  | 5        |

Fifty-three percent of the arrestees were single and had never married. Twenty-seven percent were living in a de facto relationship and 5% were married. Fifteen percent were separated or divorced. Twenty-nine percent of arrestees had dependent children.

Fifty percent of arrestees had received some kind of government income assistance in the last year (Table 3).

*Table 3: Government income assistance to arrestees in last 12 months*

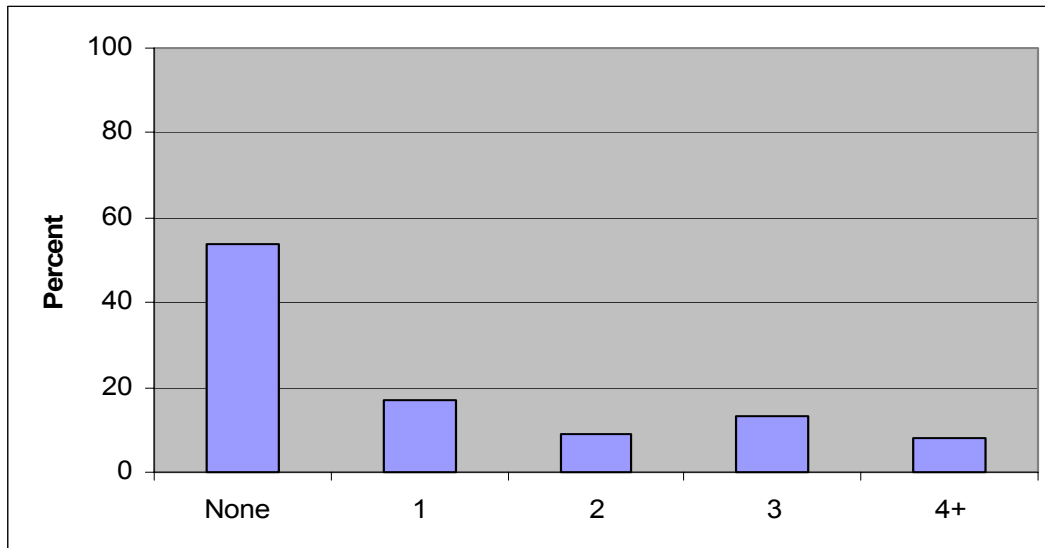
| <b>Type of government Assistance</b> | <b>%</b> |
|--------------------------------------|----------|
| Family support                       | 1        |
| Unemployment benefit                 | 22       |
| Domestic purposes benefit            | 5        |
| Sickness or invalids benefit         | 1        |
| Student allowance                    | 6        |
| Other government benefits            | 3        |
| None of the above                    | 50       |

Forty-three percent of arrestees had taken prescription or over-the-counter medications in the past fortnight. Eleven percent of arrestees indicated they were taking Ritalin for ADHD.

### Arrest history

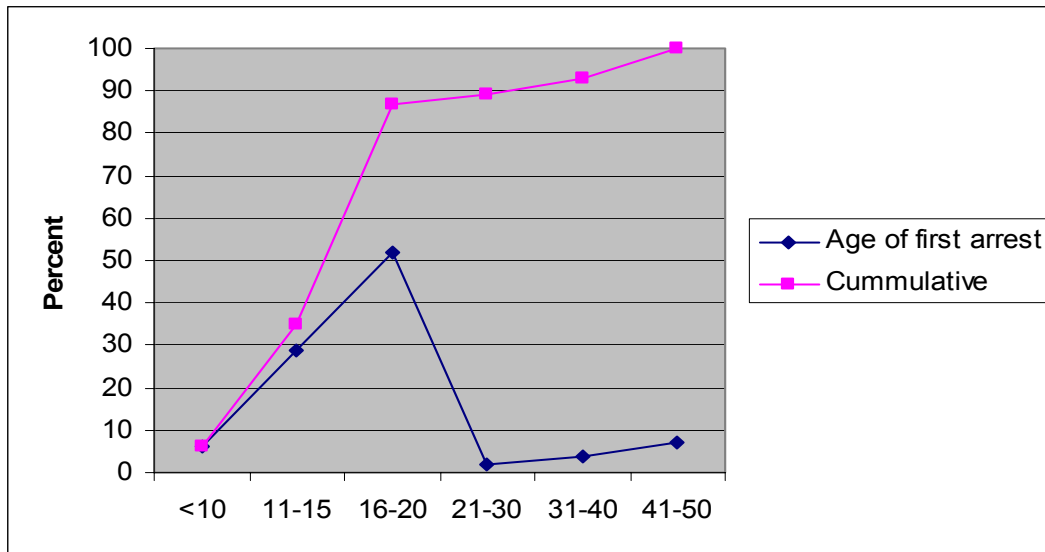
Arrestees were asked how many times they had been arrested in the last 12 months. The results are presented in Figure 3. Twenty-one percent of arrestees had been arrested 3 times or more in the previous year. Of those arrestees who had been arrested in the last 12 months, the mean number of arrests was 3.6 times (max. 15 times). Five percent of the arrestees had served time in prison in the last 12 months and 3% had served time in prison for a drug offence in the last year.

Figure 3: Number times arrestees arrested in last 12 months



Arrestees were asked at what age they had first been arrested. The age of first arrest of the sample is presented in Figure 4. Six percent of arrestees had been arrested before the age of 10. Thirty-five percent had been arrested by age 15. The average age of first arrest was 19 years (range 8-45 years old).

Figure 4: Age of first arrest



### Drug use by offence category

Arrestees were grouped into four broad categories of offending based on the first charge on their charge sheets (i.e. 'property', 'violence', 'alcohol/drugs' and 'miscellaneous'). The miscellaneous category was made up of arrests for a range of offences including 'breach of bail', 'driving while disqualified' and 'failed to appear'. The arrestees self-reported drug use just before their arrest was then examined for each broad offending class.

Figure 5 shows the proportion of arrestees committing an offence who used a drug type just before being arrested. For property offences, 46% of arrestees reported using alcohol just before their arrest, 27% reported using cannabis just before their arrest and 19% reported using amphetamine just before their arrest.

Figure 5: Level of self-reported drug use just before arrest by offence category

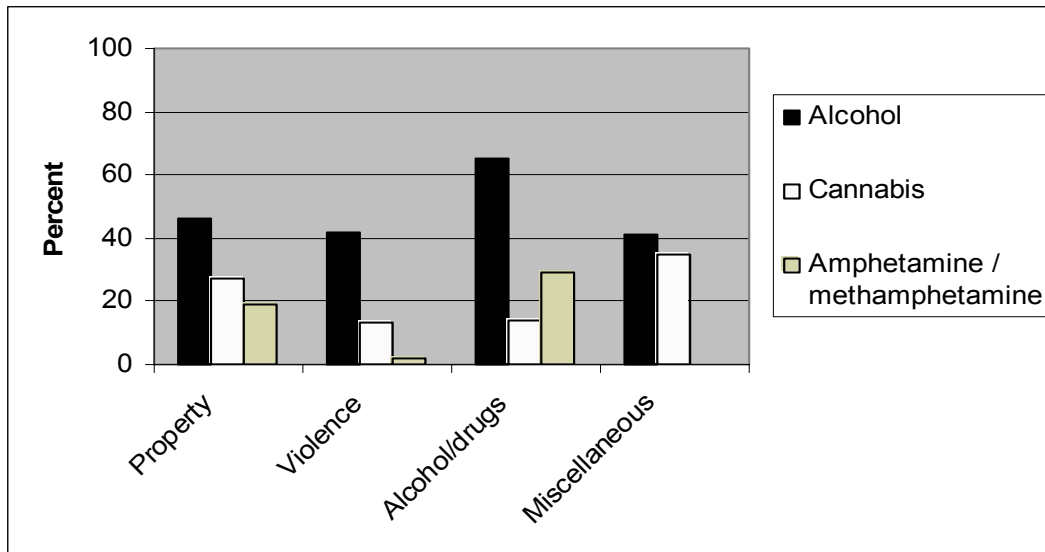
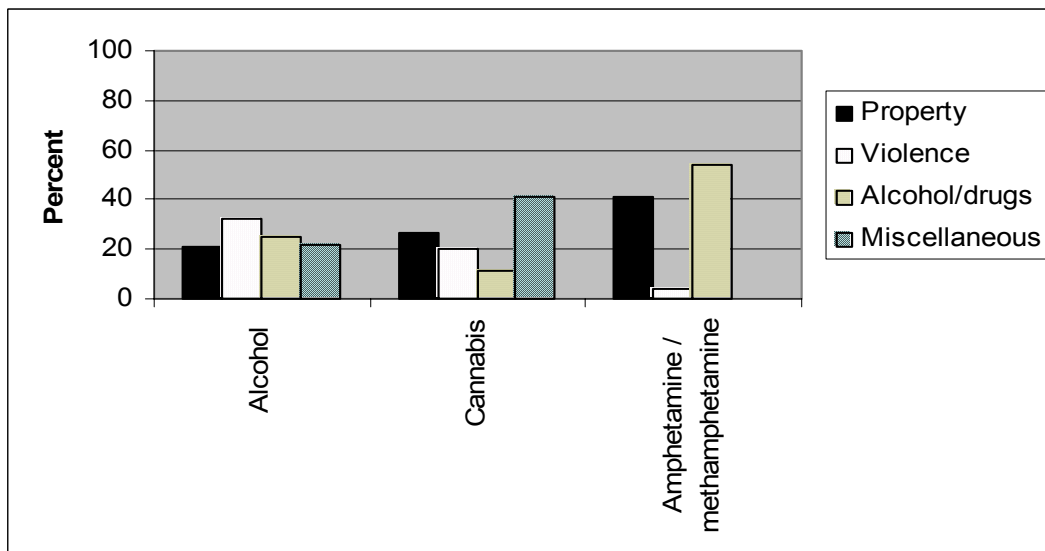


Figure 6 shows the proportion of arrestees who had used a drug just before their arrest by the offence type they were arrested for. For those who reported using alcohol just before arrest, 32% were arrested for a violent offence, 25% for an alcohol/drugs offence, 22% for a miscellaneous offence and 21% for a property offence.

Figure 6: Type of offence by those who self reported the use of a drug in the last 48 hours



## Drug use patterns

Arrestees were asked a series of questions about their patterns of drug use, including if they had ever tried a drug, their age of first use, whether they had used a substance in the last year, and the typical occasion quantity they used (Table 4). Nearly all the arrestees had tried alcohol and cannabis. One-half of the arrestees had tried amphetamine and one-third had tried crystal methamphetamine. Sixty-three percent of arrestees had used cannabis in the last year and forty-one percent had used amphetamine in the last year. Arrestees drank an average of eleven standard drinks on a typical occasion.

Table 4: Self-reported drug use experience of arrestees

| Drug type                     | Ever tried | Age First use | Used last year | Typical occasion quantity |                       |                       |
|-------------------------------|------------|---------------|----------------|---------------------------|-----------------------|-----------------------|
|                               | %          | mean          | %              | min                       | mean                  | max                   |
| Alcohol                       | 99         | 11            | 92             | 13.4ml/1 std drink        | 159.6ml/11 std drinks | 568.0ml/38 std drinks |
| Cannabis                      | 91         | 16            | 63             | 0.2g                      | 3.0g                  | 56.0g                 |
| Cocaine                       | 15         | 21            | 7              | 0.2g                      | 6.7g                  | 28.0g                 |
| Heroin/Morphine/Opiates       | 6          | 21            | 2              | -                         | -                     | -                     |
| Street methadone              | 2          | 23            | 1              | -                         | -                     | -                     |
| Amphetamine/Methamphetamine   | 49         | 21            | 41             | 0.1g                      | 0.3g                  | 2.0g                  |
| Ice (Crystal methamphetamine) | 32         | 22            | 11             | 0.1g                      | 0.1g                  | 0.3g                  |
| Tranquilliser (Illegal use)   | 1          | 20            | 0              | -                         | -                     | -                     |
| Ecstasy (MDMA)                | 27         | 20            | 7              | 1 pill                    | 1 pill                | 1 pill                |
| Hallucinogens (LSD)           | 40         | 16            | 11             | 1 tabs                    | 2 tabs                | 2 tabs                |

Table 5 presents the drug types used by the arrestees in the last 30 days, last 48 hours and just before they were arrested. None of the arrestees had used ‘Heroin/Morphine/Opiates’, ‘street methadone’ or ‘tranquillisers’ in the last 30 days. On average, cannabis was used most frequently (11 days), followed by alcohol (10 days), amphetamine (6 days) and crystal methamphetamine (5 days) during the previous 30 days. Those who had drunk alcohol in the 48 hours preceding their arrest (i.e. 64% of arrestees) consumed an average of 14 standard drinks. The drug types most often reported used in the time leading up to arrest were alcohol (45% of arrestees), cannabis (22%) and amphetamine (9%).

Table 5: Self-reported recent drug use

| Drug type                     | Used in the last 30 days % | Number of days used drug in the past month |      |     | Used drug in the past 48 hours % | Quantity used in the last 48 hours |                       |                       | Used before offence % |
|-------------------------------|----------------------------|--|------|-----|----------------------------------|------------------------------------|-----------------------|-----------------------|-----------------------|
|                               |                            | min  | mean | max |                                  | min                                | mean                  | max                   |                       |
| Alcohol                       | 87                         | 1  | 10   | 30  | 64                               | 21.3ml/<br>1 std drink             | 216.7ml/14 std drinks | 568.0ml/38 std drinks | 45                    |
| Cannabis                      | 57                         | 1  | 11   | 30  | 43                               | 0.2g                               | 2.1g                  | 10.0g                 | 22                    |
| Cocaine                       | 2                          | 1  | 2    | 4   | 1                                | -                                  | -                     | -                     | 1                     |
| Amphetamine/Metamphetamine    | 21                         | 1  | 6    | 15  | 11                               | 0.1g                               | 0.3g                  | 0.5g                  | 9                     |
| Ice (Crystal methamphetamine) | 3                          | 2  | 5    | 8   | 1                                | 0.1g                               | 0.2g                  | 0.3g                  | 0                     |
| Ecstasy (MDMA)                | 2                          | 3  | 3    | 3   | 0                                | -                                  | -                     | -                     | 0                     |
| Hallucinogens (LSD)           | 4                          | 2  | 3    | 4   | 2                                | 10.0 tabs                          | 10.0 tabs             | 10.0 tabs             | 0                     |

Table 6 compares the self-reported levels of cannabis use in the last 48 hours with the results from the urine analysis for those who provided a urine sample. Sixty-five percent of those who provided a urine sample tested positive for recent cannabis use. Eleven percent of those who provided a urine sample tested positive for recent cannabis use but did not self-report they had used cannabis in the last 48 hours. Of those who tested positive for cannabis, 83% had self reported the use of cannabis in the last 48 hours. This equates to an under-reporting level of 17%.

Table 6: Comparison of positive urinalysis of recent cannabis use and self reported use of cannabis in the last 48 hours

| Percentage |       | Self reported last 48 hours |     |       |
|------------|-------|-----------------------------|-----|-------|
|            |       | No                          | Yes | Total |
| Tested +ve | No    | 33                          | 2   | 35    |
|            | Yes   | 11                          | 54  | 65    |
|            | Total | 44                          | 56  | 100   |

Table 7 compares the self-reported levels of amphetamine use in the last 48 hours with the results from the urine analysis for those who provided a urine sample. Fifteen percent of those who provided a urine sample tested positive for recent amphetamine use. Two percent of those who provided a urine sample tested positive for recent amphetamine use but did not self-report they had used amphetamine in the last 48 hours. Of those who tested positive for amphetamine, 87% had self reported the use of amphetamine in the last 48 hours. This equates to an under-reporting level of 13%.

*Table 7: Comparison of positive urinalysis of recent amphetamine use and self reported use of amphetamine in the last 48 hours*

| Percentage |       | Self reported last 48 hours |     |       |
|------------|-------|-----------------------------|-----|-------|
|            |       | No                          | Yes | Total |
| Tested +ve | No    | 80                          | 5   | 85    |
|            | Yes   | 2                           | 13  | 15    |
|            | Total | 82                          | 18  | 100   |

### **Impact of drug use on criminal offending**

Those who reported using a drug in the 48 hours before their arrest were asked to assess how much their use of the drug contributed to the activities they were subsequently arrested for. The results exclude those arrested for drug offences only. The small number of arrestees who had used particular drug types in the last 48 hours limited this analysis to alcohol, cannabis and amphetamines. About 50% of those who had used cannabis in the 48 hours before their arrest indicated that their use of this substance did not contribute ‘at all’ to the activities they were subsequently arrested for (Table 8). In contrast, 41% of those who had used alcohol in the 48 hours prior to their arrest reported alcohol was responsible for ‘all’ of the activities they were subsequently arrested for. Those who had used amphetamine in the 48 hours before their arrest were most likely to say their recent amphetamine use had at least ‘some’ impact on the activities they were arrested for with none saying it had ‘little’ or ‘no’ effect.

Table 8: Self-reported extent drug use contributed to the activities arrested for

| Drug type                   | All | A lot | Some | A little | Not at all |
|-----------------------------|-----|-------|------|----------|------------|
| Alcohol                     | 41  | -     | 33   | 18       | 8          |
| Cannabis                    | 13  | -     | 25   | 14       | 48         |
| Amphetamine/Methamphetamine | 25  | 4     | 71   | 0        | 0          |

### Drug use and anger

All the arrestees who had used a drug in the last 12 months were asked about the effect their use of the drug had on their likelihood to get angry. Fifty-one percent of those who had used crystal methamphetamine, and 32% of those who had used amphetamine, indicated these substances were ‘more likely’ or ‘much more likely’ to make them angry. Ecstasy and cannabis were the drug types least likely to make users angry, with 77% and 75% of last year users respectively indicating they were ‘less likely’ or ‘much less likely’ to become angry after using them.

Table 9: Effect of drug on likelihood to get angry

| Drug type                     | Much less likely | Less likely | No effect | More likely | Much more likely |
|-------------------------------|------------------|-------------|-----------|-------------|------------------|
| Alcohol                       | 32               | 15          | 28        | 16          | 9                |
| Cannabis                      | 46               | 29          | 18        | 1           | 6                |
| Amphetamine/Methamphetamine   | 18               | 16          | 33        | 8           | 24               |
| Ice (Crystal methamphetamine) | 0                | 19          | 30        | 51          | 0                |
| Ecstasy                       | 77               | 0           | 23        | 0           | 0                |
| Hallucinogens                 | 34               | 29          | 37        | 0           | 0                |

### Drug dependency

Those arrestees who had used a drug in the last year were asked if they ever felt they needed or were dependent on the drug. Only last year users of alcohol, cannabis and amphetamine reported any dependency. The highest proportion of dependant users were found among cannabis users (58% of last year users), followed by alcohol users (30%) and amphetamine users (15%). No arrestees had used tranquillisers in the last year.

Table 10: Proportion of last year users reporting dependency

| Drug type                     | Reporting dependency % |
|-------------------------------|------------------------|
| Alcohol                       | 30                     |
| Cannabis                      | 58                     |
| Cocaine                       | 0                      |
| Heroin/Morphine/Opiates       | 0                      |
| Street methadone              | 0                      |
| Amphetamine/Methamphetamine   | 15                     |
| Ice (Crystal methamphetamine) | 0                      |
| Ecstasy                       | 0                      |
| Hallucinogens                 | 0                      |

### Drug use and driving

Those arrestees who had used a drug in the last year were asked how much driving they had done while under the influence of the drug in the last 12 months. Those who indicated they did not drive are not included in the results. Cannabis was the drug that arrestees most often indicated they were under the influence of while driving, with 26% of last year cannabis users reporting they had done ‘all’ or ‘most’ of their driving while under the influence of cannabis (Table 11). Fourteen percent of arrestees had done ‘all’ or ‘most’ driving while under the influence of alcohol. Sixteen percent of amphetamine users and 34% of ice users had done ‘some’ of their driving under the influence of these substances.

Table 11: Driving done under the influence of a drug in the last year

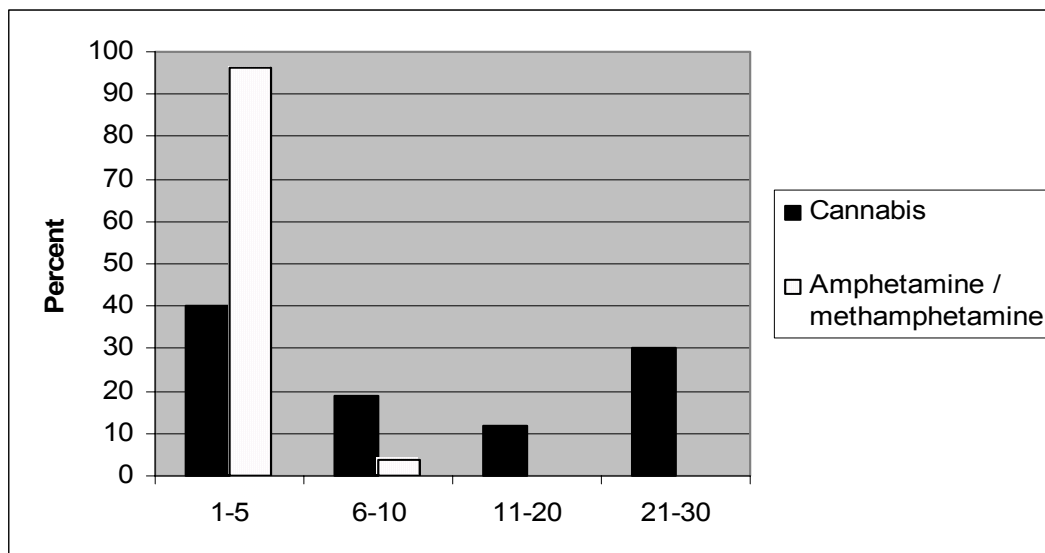
| Drug type                     | All | Most | Some | Hardly any | None |
|-------------------------------|-----|------|------|------------|------|
| Alcohol                       | 4   | 10   | 12   | 14         | 61   |
| Cannabis                      | 11  | 9    | 27   | 21         | 33   |
| Amphetamine/Methamphetamine   | -   | -    | 16   | 29         | 55   |
| Ice (Crystal methamphetamine) | -   | -    | 34   | 23         | 43   |
| Ecstasy                       | -   | -    | -    | 48         | 52   |
| Hallucinogens                 | -   | -    | -    | -          | 100  |

## Purchasing drugs

Fifty percent of arrestees had purchased an illegal drug in the last 30 days. The drug types most commonly purchased were cannabis (44% of arrestees) and amphetamine (9%).

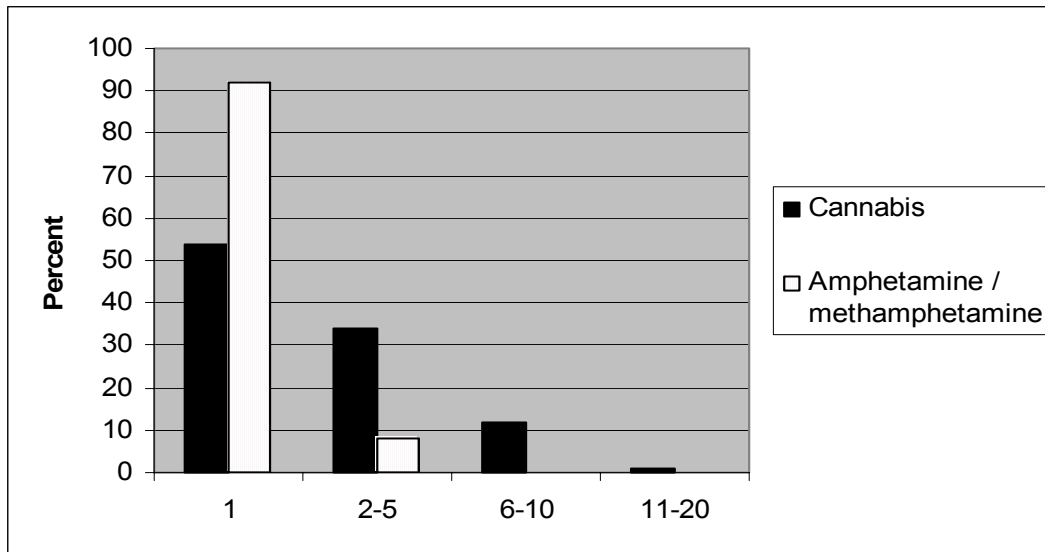
Figure 7 presents the number of days on which those who had purchased one of these substances had done so in the last month. Figure 7 shows that amphetamine was purchased less frequently than cannabis with only 4% of amphetamine buyers compared to 60% of cannabis buyers purchasing more than five times in the last month.

Figure 7: Number of days purchased a drug in the last month



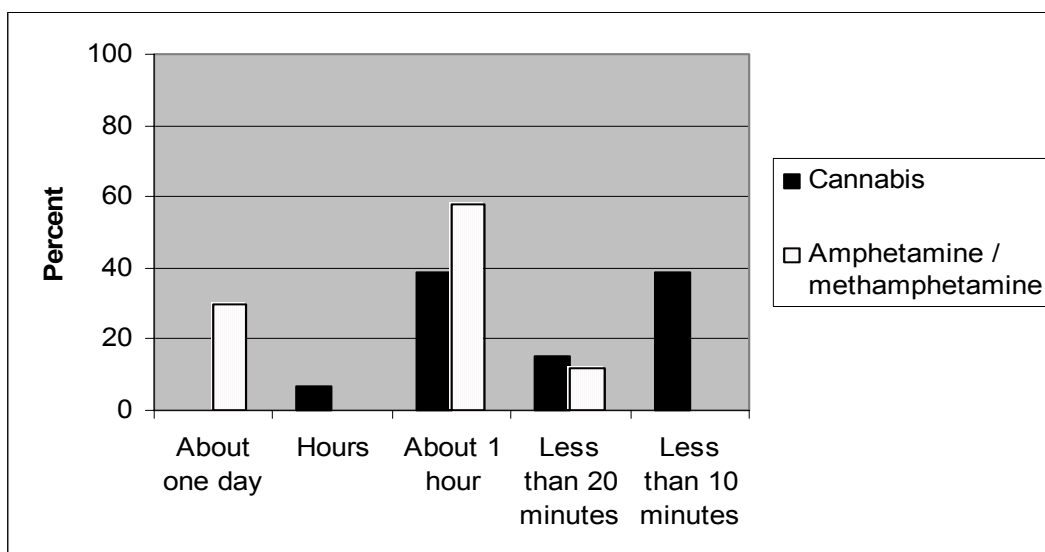
Those who had purchased a drug in the last month were asked how many different sellers they had purchased these substances from in the last month. Figure 8 presents the results for cannabis and amphetamine. Those purchasing amphetamine overwhelmingly used just one seller in the last month. In contrast, about one-half of those purchasing cannabis used more than one seller in the last 30 days. Just over 10% of cannabis buyers used six or more sellers in the last 30 days.

Figure 8: Number of different sellers used in the last month



Those who had purchased a drug in the last month were asked how long it usually took them to purchase it. The answers for cannabis and amphetamine are presented in Figure 9. Figure 9 shows that buyers can generally purchase cannabis quicker than amphetamine. Forty percent of cannabis buyers could purchase cannabis in less than 10 minutes. In contrast, no-one reported being able to purchase amphetamine in this timeframe. Nearly a third of amphetamine buyers took a day to make a purchase of amphetamine while no cannabis buyers reported taking this long to purchase cannabis.

Figure 9: Time taken to make a purchase of a drug type



Those who had purchased a drug type in the last month were asked the typical quantity they purchased and dollar amount they spent. The median cannabis purchase was 1.5 grams (a ‘tinny’) (Table 12). The median dollar amount spent on cannabis was \$20. For amphetamine, the median quantity purchased was 0.5 grams. The median dollar amount spent on amphetamine was \$350.

Table 12: Typical drug purchase of arrestees

|         | Cannabis              |                   | Amphetamine/<br>Methamphetamine |                   |
|---------|-----------------------|-------------------|---------------------------------|-------------------|
|         | Qty purchased (grams) | Dollar spent (\$) | Qty purchased (grams)           | Dollar spent (\$) |
| Minimum | 1.5                   | 15                | 0.1                             | 50                |
| Mean    | 8.0                   | 79                | 0.9                             | 461               |
| Median  | 1.5                   | 20                | 0.5                             | 350               |
| Maximum | 56.0                  | 500               | 1.6                             | 1600              |

Arrestees who had purchased a drug in the last 30 days were also asked what proportion of their drug purchases they would usually sell on to others. Twelve percent of cannabis buyers indicated they sold at least some of their cannabis purchases on to others. Fifty-six percent of amphetamine buyers sold at least some of their amphetamine purchases on to others.

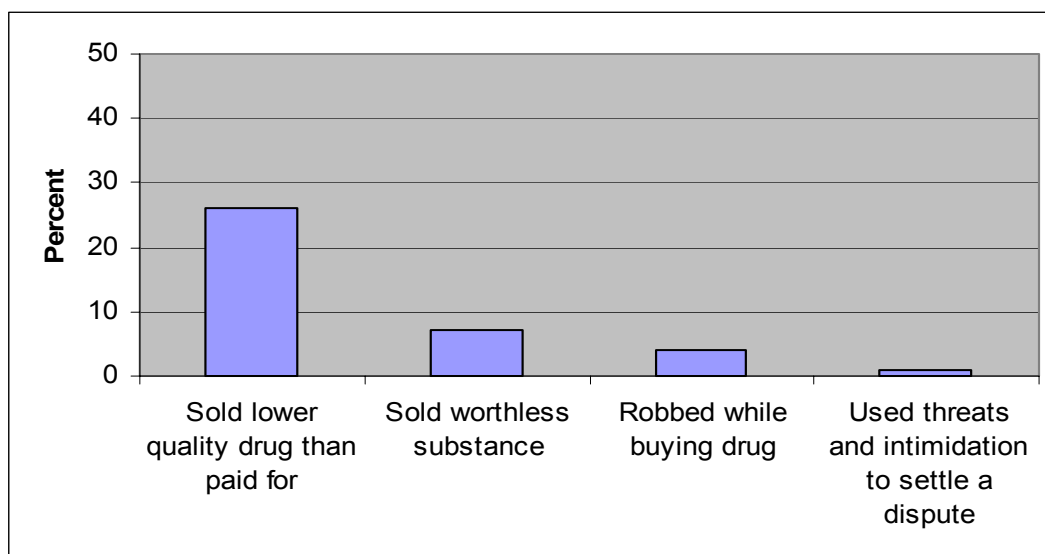
Those who had purchased a drug in the last 30 days were asked a series of questions about the characteristics of their last drug purchase, including how they contacted the seller and where they made the purchase. The results for cannabis and amphetamine are presented in Table 13. Those buying cannabis were most likely to purchase from a ‘tinny house’ or ‘private residence’. Those purchasing amphetamine were more likely to purchase from a private house or from an outdoor area such as on a public street. Amphetamine buyers contacted their dealers by ‘calling or texting on a mobile phone’ or ‘through a third party’, while cannabis buyers were more likely to visit a ‘private residence’ or approach the seller in ‘public’. Cannabis purchases were more likely than amphetamine purchases to be made in the suburb where the arrestee lived (54% vs. 21%).

Table 13: Characteristics of most recent drug purchase.

|   | <b>Cannabis<br/>%</b> | <b>Amphetamine/<br/>Methamphetamine<br/>%</b> |
|---|-----------------------|---|
| <b>Drug purchasing location</b>                   |                       |   |
| Private house/flat                                | 39                    | 49  |
| Tinny house                                       | 51                    | 5   |
| Public building                                   | 0                     | 0   |
| Pub   | 3                     | 0   |
| Street/outdoor area                               | 2                     | 46  |
| Delivered in person                               | 4                     | 0   |
| <b>Purchased in the suburb<br/>where you live</b> | 54                    | 21  |
| <b>Method used to contact the<br/>seller</b>      |                       |   |
| Call/text on mobile                               | 6                     | 46  |
| Call on landline                                  | 4                     | 0   |
| Visit house or flat                               | 65                    | 17  |
| Page on a beeper                                  | 0                     | 0   |
| Approach in public                                | 20                    | 0   |
| Through third party                               | 0                     | 37  |
| Already with seller                               | 4                     | 0   |
| <b>Relationship to seller</b>                     |                       |   |
| Regular source                                    | 46                    | 57  |
| Occasional source                                 | 40                    | 43  |
| New source  | 14                    | 0   |
| <b>Does the seller sell other<br/>drugs</b>       | 81                    | 95  |

Those who had purchased an illicit drug in the last 30 days were asked a series of questions about any victimisation they may have experienced when purchasing the drug and about instances where they had used threats or intimidation to settle disputes over drug transactions. The results for cannabis are presented in Figure 10. Thirty-seven percent of the arrestees purchasing cannabis had experienced some kind of victimisation in the last 30 days. The most common type of victimisation was economic, involving quality or product fraud. Four percent had being robbed during a cannabis transaction in the last month. One percent had used threats or intimidation to settle a dispute over drug transaction in the last 30 days.

Figure 10: Victimization and use of threats and intimidation during cannabis transactions in the last 30 days



### Receiving drugs without paying cash

Forty-five percent of arrestees had obtained an illicit drug without paying cash for it in the last 30 days. Table 14 presents the different ways that arrestees obtained cannabis and amphetamine without paying cash for them. For both cannabis and amphetamine, the most common way the arrestees received these substances without paying cash for them was by having someone ‘sharing them’ with them. Cannabis and amphetamine were also received as ‘gifts’ or in ‘exchange for stolen property’.

Table 14: Different ways drugs obtained without paying cash for them in the last 30 days

| Way drug obtained without paying cash | Cannabis % | Amphetamine/ Methamphetamine % |
|---------------------------------------|------------|--------------------------------|
| Produce/cultivate                     | 3          | 0                              |
| Credit for personal use               | 8          | 13                             |
| Credit to sell to others              | 0          | 0                              |
| Trade for other drugs                 | 3          | 0                              |
| Trade for own property                | 4          | 10                             |
| Trade for stolen property             | 17         | 12                             |
| Transport drugs                       | 0          | 0                              |
| Steal drug                            | 3          | 0                              |
| Shared with you                       | 43         | 43                             |
| Trade for sex                         | 3          | 0                              |
| Receive as gift                       | 35         | 31                             |
| Exchange for precursors               | 0          | 0                              |

## Selling drugs

Fifteen percent of the arrestees had sold an illicit drug in the last month. The drugs most commonly sold were cannabis (12%) and amphetamine (5%). Those arrestees who had sold a drug in the last 30 days were asked how many different people they sold drugs to in the last 30 days. Figure 11 shows that cannabis was sold more widely than amphetamine with 65% of those who sold cannabis selling to 11 or more different buyers in the last month. No amphetamine sellers sold to more than 5 buyers.

Figure 11: Number of different buyers sold to in last month

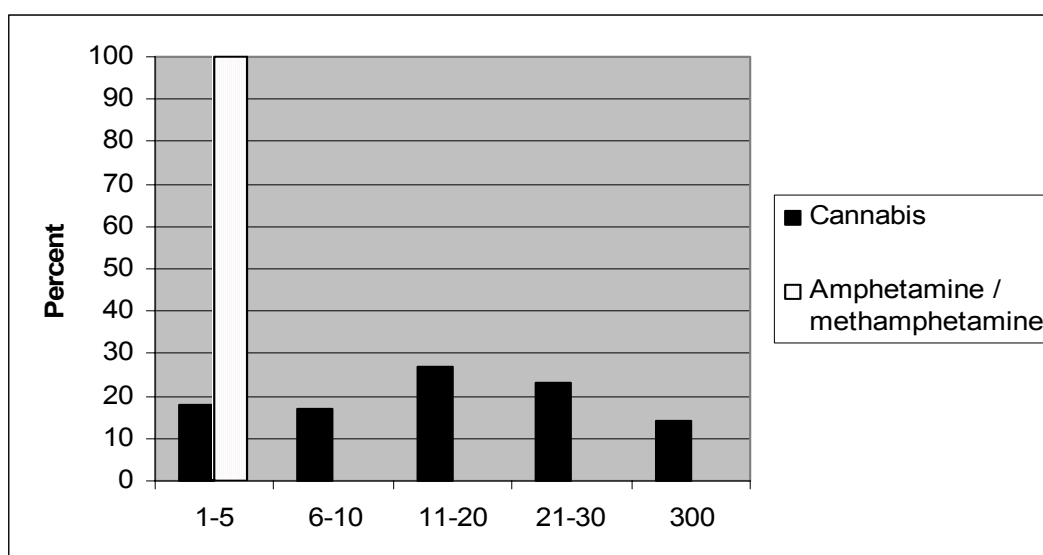


Table 15 presents the typical quantity of a drug the arrestees sold. Cannabis sellers typically sold about 3 grams or the equivalent of two ‘tinnys’ of cannabis. Amphetamine sellers typically sold 0.1 grams of amphetamine (the equivalent of a ‘point’).

Table 15: Typical quantity sold

|                                    | Quantity sold (grams) |      |        |       |
|------------------------------------|-----------------------|------|--------|-------|
|                                    | min                   | mean | median | max   |
| <b>Cannabis</b>                    | 1.5                   | 74.3 | 3      | 454.0 |
| <b>Amphetamine/Methamphetamine</b> | 0.1                   | 0.1  | 0.1    | 0.1   |

Those arrestees who had sold a drug in the last 30 days were asked a series of questions about their relationship to the people they had sold too. Table 16 shows that the amphetamine sellers limited their sales to ‘close friends and family members’. In contrast, 35% of cannabis sellers sold ‘most’ of their cannabis to ‘casual acquaintances’ and 12% sold ‘some’ of their cannabis to ‘complete strangers’.

Table 16: Relationship to buyer

| Description of relationship to buyer   | Cannabis | Amphetamine/<br>Methamphetamine |
|--|----------|---------------------------------|
| <b>Close friends or family members</b> |          |                                 |
| All                                    | 67       | 100                             |
| Most                                   | 14       | 0                               |
| Some                                   | 12       | 0                               |
| Hardly any                             | 0        | 0                               |
| None                                   | 7        | 0                               |
| <b>Friends or friends of friends</b>   |          |                                 |
| All                                    | 15       | 0                               |
| Most                                   | 38       | 0                               |
| Some                                   | 0        | 0                               |
| Hardly any                             | 27       | 0                               |
| None                                   | 21       | 100                             |
| <b>Casual acquaintances</b>            |          |                                 |
| All                                    | 0        | 0                               |
| Most                                   | 35       | 0                               |
| Some                                   | 14       | 0                               |
| Hardly any                             | 0        | 0                               |
| None                                   | 50       | 100                             |
| <b>Complete strangers</b>              |          |                                 |
| All                                    | 0        | 0                               |
| Most                                   | 0        | 0                               |
| Some                                   | 12       | 0                               |
| Hardly any                             | 31       | 0                               |
| None                                   | 57       | 100                             |

Those who had sold a drug in the last 30 days were asked about any victimisation they had experienced when selling the drug or instances where used threats or intimidation to settle a dispute over a drug debt or with a rival drug dealer. The answers for cannabis dealers are summarised in Table 17. Twenty percent of the arrestees who had sold cannabis had used threats and intimidation to settle a dispute with a rival drug dealer in the last month.

*Table 17: Victimization and use of threats and intimidation by cannabis sellers in the last 30 days*

|  | <b>Cannabis %</b> |
|--|-------------------|
| Threaten when selling drug   | 15                |
| Robbed when selling drug   | 0                 |
| Used threats or intimidation to get money owed by drug purchases       | 0                 |
| Used threats and intimidation to settle dispute with rival drug dealer | 20                |

### **Drug treatment experience and demand for drug treatment**

Twenty-seven percent of the arrestees had been in a drug treatment programme at some time in their lives and 3% were currently in a drug treatment programme. Eleven percent had been a patient in a psychiatric facility overnight or longer. Of those who had ever tried any drug, 45% had wanted help to reduce their level of drug use but had not got it. These arrestees were asked what barriers they had encountered in trying to find help. The results are presented in Table 18. ‘Didn’t know where to go’, ‘Fear of law/police’ and ‘no time/too busy’ were the reasons most often mentioned as barriers to getting help for drug use.

Table 18: Barriers experienced in trying to get help to reduce level of drug use

| Type of barrier  | %  |
|--|----|
| Didn't know where to go                                      | 30 |
| Fear of the law/police                                       | 31 |
| No time/too busy   | 30 |
| Fear of losing friends                                       | 19 |
| Services too expensive                                       | 5  |
| Transport problems   | 20 |
| Social pressure to keep using                                | 10 |
| Fear of what might happen once made contact with the service | 12 |
| No local services available                                  | 6  |
| Services weren't ongoing                                     | 3  |
| Services weren't appropriate for my type of drug use         | 0  |
| Lack of places   | 9  |
| Too much pride to ask for help                               | 25 |

### New drugs and risks of drug selling

All arrestees were asked whether they had heard about any new drug types being used. Thirty-one percent of the arrestees reported they had heard about a new drug type. The drugs mentioned are listed in Table 19.

Table 19: New drug types reported on the streets

| New drugs               |
|-------------------------|
| 'P' + cannabis combined |
| 'P' + heroin combined   |
| 'P' water               |
| 'P', amphetamine        |
| Smack                   |
| Ice                     |
| Fantasy                 |
| Pearl Asia              |
| Pills                   |
| Microdots               |
| Glue                    |
| Rivinal                 |
| Magic mushrooms         |

## Arrests for drug offences

All arrestees were asked how many of their friends had been arrested for drug offences in the last 30 days. Table 20 presents the proportion of arrestees who indicated they had had a friend arrested for a drug offence in the last 30 days, and the average number of friends reported arrested in the last 30 days, by drug type. Seventeen percent of arrestees indicated they had a friend who had been arrested for an amphetamine offence and 14% reported they had a friend who had been arrested for a cannabis offence in the last 30 days.

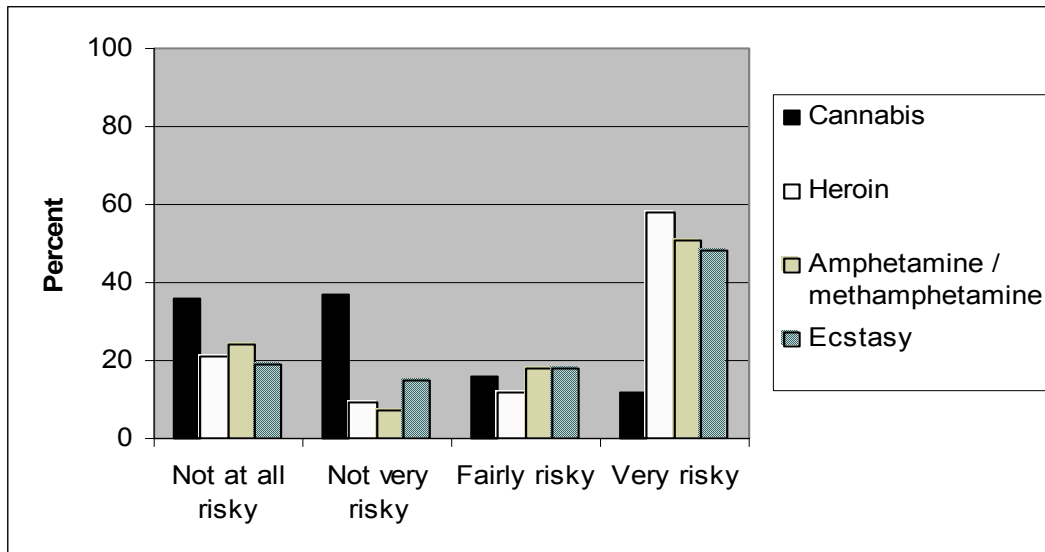
Table 20: Number of friends arrested for a drug offence in the last 30 days

| Drug type                       | Any friends arrested % | Average number arrested |
|---------------------------------|------------------------|-------------------------|
| Cannabis                        | 14                     | 2.5                     |
| Heroin                          | 1                      | -                       |
| Amphetamine/<br>Methamphetamine | 17                     | 2                       |
| Ecstasy                         | 1                      | -                       |

## Perceived risk of buying and selling drugs

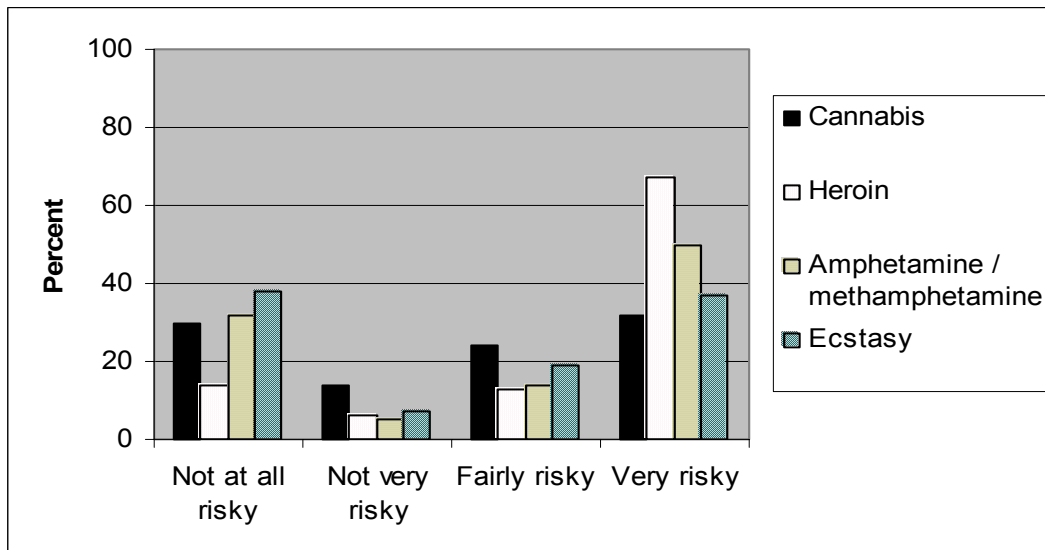
All arrestees were asked to rank how risky they thought it was to buy and sell different illicit drug types in the area where they live. The results are presented in Figure 12 and 13. About one-half of the arrestees described buying heroin, amphetamine or ecstasy as ‘very risky’. However, about one-fifth of arrestees described buying these drug types as ‘not at all risky’. About three quarters of arrestees believed buying cannabis to be ‘not very risky’ or ‘not risky at all’.

Figure 12: Perceived risk of buying different drug types



Two-thirds of the arrestees described selling heroin as 'very risky' (Figure 13). One-half of arrestees described selling amphetamine as 'very risky'. However, about one-third of arrestees described selling cannabis, amphetamine or ecstasy as 'not at all risky'. Nearly half of arrestees believed selling cannabis to be 'not very risky' or 'not risky at all'.

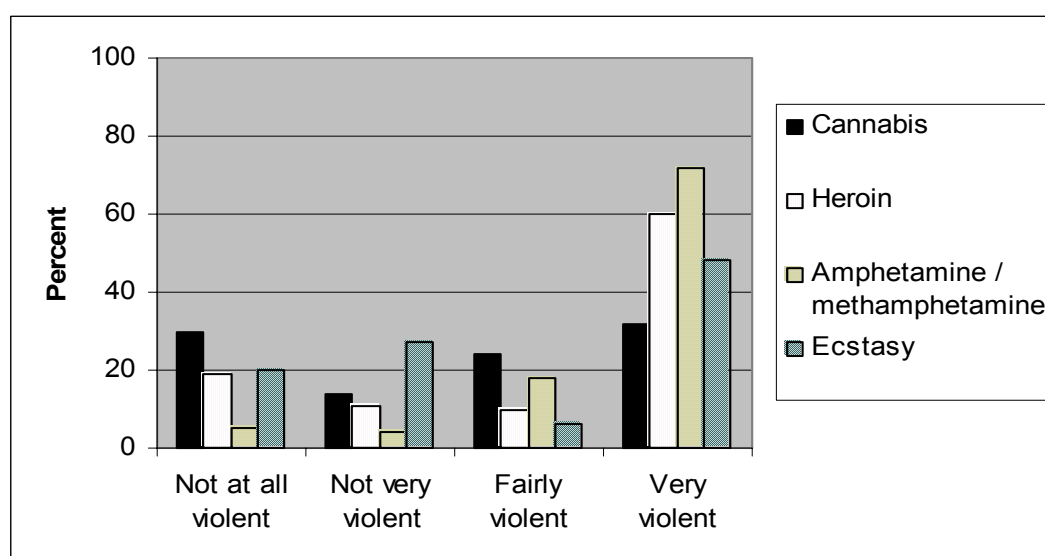
Figure 13: Perceived risk of selling different drug types



## Perceived level of violence in illicit drug markets

All arrestees were asked how violent they thought the illicit market for different drugs was at present. The illicit market for amphetamine was most clearly identified as violent with nearly three quarters of arrestees describing it as ‘very violent’ and only 5% describing it as ‘not at all violent’ (Figure 14). There was some polarisation of opinion about the illicit market for cannabis with 32% of arrestees describing it as ‘very violent’ and 30% describing it as ‘not at all violent’.

Figure 14: Perceived violence in the illicit market for different drug types



## Income sources

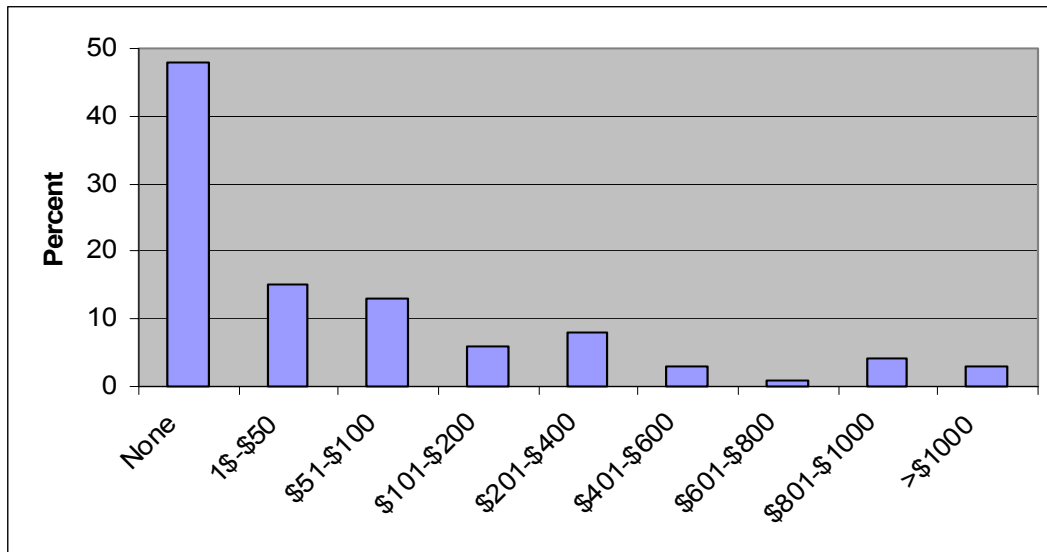
Arrestees were asked about all the different kinds of things they did to obtain money in the last 30 days. Table 21 presents the proportion of arrestees who received income from various legal and illegal sources in the last 30 days and the dollar amounts received in the last 30 days. The most common sources of income were ‘family and friends’ and ‘welfare and government benefits’. The most common sources of illegal income were ‘drug dealing’ and ‘car theft’. By average monthly income, the most financially rewarding illegal activities were ‘drug manufacture/cultivation’, followed by ‘drug dealing’ and ‘car theft’.

Table 21: Sources of income in the last 30 days

| Source of income                | Different sources % | Dollar amount received (\$) |           |            |         |
|---------------------------------|---------------------|-----------------------------|-----------|------------|---------|
|                                 |                     | Min(\$)                     | Mean (\$) | Median(\$) | Max(\$) |
| Family or friends               | 41                  | 20                          | 1382      | 400        | 10,000  |
| Welfare or government benefits  | 39                  | 130                         | 767       | 720        | 1,608   |
| Full-time work                  | 29                  | 600                         | 3,567     | 2,400      | 9,000   |
| Part-time work                  | 26                  | 38                          | 2,090     | 300        | 35,000  |
| Sex work                        | 1                   | 3,000                       | 3,000     | 3,000      | 3,000   |
| Shoplifting                     | 4                   | 90                          | 278       | 200        | 500     |
| Drug dealing                    | 12                  | 50                          | 1,932     | 1,600      | 4,000   |
| Manufacturing/cultivating drugs | 1                   | 20,000                      | 20,000    | 20,000     | 20,000  |
| Burglary                        | 4                   | 400                         | 547       | 400        | 2,000   |
| Car theft                       | 8                   | 150                         | 1,415     | 1,500      | 4,000   |
| Theft                           | 5                   | 1,000                       | 1,000     | 1,000      | 1,000   |
| Robbery                         | 3                   | 100                         | 100       | 100        | 100     |
| Fraud                           | 2                   | 450                         | 450       | 450        | 450     |
| Other                           | 1                   | 1000                        | 1,000     | 1,000      | 1,000   |

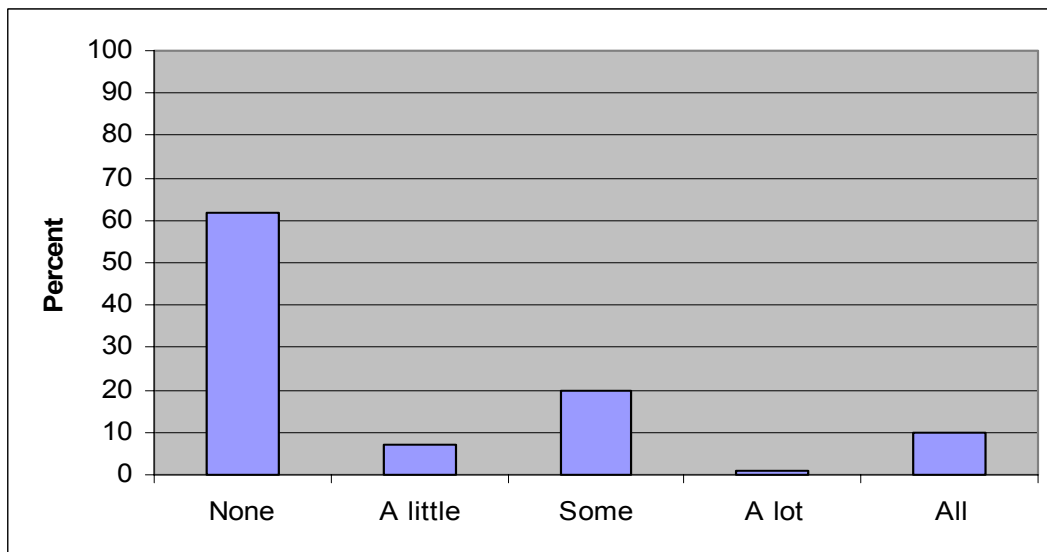
Arrestees were asked how much they had spent on illicit drugs in the last 30 days. The dollar amounts spent are presented in Figure 15. The mean dollar amount spent per arrestee who purchased drugs in the last month was \$309 (max. \$5,000).

Figure 15: Dollar amount spent on illicit drugs in the last 30 days



Arrestees were asked to estimate how much of their criminal offending was motivated by the need to obtain money to buy illicit drugs. Fifty-one percent of arrestees had committed no offences to obtain money. Of those who had committed offences to obtain money, 31% had committed at least some offences to obtain money to purchase drugs (Figure 16). Ten percent of these arrestees reported that ‘all’ of their offending was motivated by the need to obtain money for drugs.

Figure 16: Level of offending to obtain money for illicit drugs



## Chapter 4 Conclusion

The aim of the local pilot of NZ-ADAM was to evaluate the research design and protocols and to demonstrate the value of data collected using the NZ-ADAM methodology. Overall, the research design and protocols proved effective and facilitated the successful completion of the interviewing and breath and urine sampling. During the three weeks of data collection the interviewers completed interviews with 62 arrestees, achieving a response rate of 70%. Ninety-five percent of arrestees agreed to participate in the study once they had been introduced to the interviewers. Ninety-seven percent of the arrestees interviewed provided an alcohol breath sample and 57% provided a urine sample.

A central aim of the research design of NZ-ADAM was to collect a representative sample of all the arrestees brought to the watch-house during the three weeks of the study. The research procedures developed to select arrestees for interview and to collect census data from the wider arrestee population meant the sample collected could be statistically weighted to achieve this goal. This was a challenging proposition given the great variation in the number and type of offenders who are processed at a police watch-house at different times of the day and at different days of the week. Achieving a representative sample of arrestees greatly enhances the value of the research by eliminating any (unknown) bias in regard to the type of arrestees interviewed for the study due to the interviewers only being present at the watch-house on particular days or at particular times of the day. This is an acknowledged limitation with the present DUMA programme in Australia. The capacity of NZ-ADAM to collect a representative sample of arrestees puts it at a level of sophistication equal to the re-designed ADAM programme currently operating in the United States. More importantly, it means the data collected with NZ-ADAM will provide unbiased information concerning the arrestee population in New Zealand, to reliably inform strategic response and the development of policy.

Another important goal of the NZ-ADAM pilot was to ensure the safe interviewing of arrestees and the protection of arrestees' confidentiality and privacy. These areas were crucial to ensuring the research was sustainable and could be conducted on an ongoing basis. A range of interview protocols and data storage procedures were developed to ensure interviewing was conducted safely and arrestees' privacy and confidentiality protected. These procedures were reviewed and approved by the Massey University Human Subjects Ethics Committee before the commencement of the pilot. The interviewers received intensive training on these procedures in the week preceding the commencement of interviewing and attended weekly

de-briefing sessions with the lead researcher to discuss any issues that arose during shifts. The interview protocols and confidentiality protections all worked well. All the interviews went smoothly and without incident. Officers and staff at Papakura watch-house played an important role in achieving these positive outcomes. The high level of assistance and cooperation provided by police personnel were vital to the safe and ethical conduct of the study.

Two areas of the methodology were identified where improvements could be made. The first concerned response rate. While the response rate achieved was high, increasing it further would add value to the research by reducing any bias related to non-response. By way of broad comparison, population based alcohol and drug surveys in New Zealand typically achieve response rates of between 65%-75%, depending on the methodology employed. Most refusals to participate in NZ-ADAM occurred at the point where police officers invited arrestees to meet the interviewers. While most of these refusals appeared to be unrelated to the nature of the study, such as the arrestee was 'tired' or 'sleeping' (see Appendix 1), further effort could be dedicated to enhancing the success of the invitation process. This might involve further advice to officers about how to approach arrestees about the study. Officers were provided with an information sheet about the study and a brief written statement to use when inviting arrestees to participate. Further briefing of the police officers by the interviewers just before the commencement of an interviewing shift may improve the success of the invitation process. Alternatively, it may be the case that interviewers themselves should accompany the officers and make the invitation in person. This could make the arrestees feel more confident that the research was independent from the Police and that their confidentiality would be protected. Interviewers would then also be available to respond to any immediate concerns the arrestee might have which might otherwise result in the arrestee refusing the invitation to participate.

The second methodological issue was the proportion of arrestees agreeing to provide a urine sample. Nearly 60% of arrestees provided a urine sample but this is lower than what has been achieved in other ADAM studies overseas. There are likely to be subtle but important differences in the way ADAM studies overseas present the request to arrestees for a urine sample. New Zealand has very high ethical requirements in regard to requesting body samples from research participants and these ethical requirements may not be as strong in other countries. Factors that may account for the lower levels of provision of urine samples in NZ-ADAM include: less widespread experience of providing urine samples in New Zealand; Maori cultural norms against providing body fluids; and the process used to invite arrestees to provide a urine sample. Some of these factors are largely beyond the control of the

researchers. However, a more innovative approach to the requesting of urine samples within the required ethical requirements may yield positive results. This may include allowing greater flexibility about when the sample is requested from the arrestee and allowing longer time for the arrestee to produce a sample. Currently the request for a urine sample is made at the end of the interview and in a number of cases arrestees were willing to provide a sample but unable to produce one at the time. It may be feasible within a given timeframe, to recall a willing arrestee to provide a sample after the completion of their interview, when they were naturally able to. A number of female arrestees raised the issue of the difficulties of females providing samples with the vessels provided by the ESR. The ESR indicated this had not been a problem in the past with females but this could be investigated further. Maori did not disproportionately refuse to provide a urine sample, but their high representation in the sample meant they made up 50% of the refusals to provide a urine sample. It may be the case that cultural protocols which will increase the willingness of Maori arrestees to provide a urine sample can be fitted into the current interview regime. Pacific Islanders did appear to have disproportionately higher levels of refusals to provide a urine sample (20%) while European/Pakeha had disproportionately lower levels of refusals (13%). A larger sample is required to more clearly identify the impact of ethnicity on the provision of urine samples.

In conclusion, overall the local pilot of NZ-ADAM should be judged a great success. Detailed development of the interview protocols, and intensive training of the interview team by experienced drug researchers and drug interviewers, ensured the research was conducted effectively and safely and within the required ethical guidelines. The project was completed within the required timeframe and within the financial budget available. The findings presented in this report demonstrate the scope and potential of the data that can be collected by the NZ-ADAM methodology. The findings of the local pilot of NZ-ADAM suggest a bright future for this type of research in New Zealand.

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## APPENDIX 1: Detailed breakdown of selection outcomes

Table A1: Outcome of initial selection and invitation

| Response   | %   |
|--|-----|
| Agreed to be meet interviewers   | 20  |
| Not available - declined to Police   | 8   |
| Not available - watchhouse constraints   | 1   |
| Not available - taken to court   | 33  |
| Not available - released/bailed  | 20  |
| Not available - medical reasons  | 2   |
| Not interviewed - violent or uncontrollable behaviour/ security risk/too intoxicated | 2   |
| Not interviewed - language problem   | 0   |
| Not interviewed - under 17 years old   | 2   |
| Not interviewed - booked over 48 hours ago   | 0   |
| Not interviewed - other  | 12  |
| Total  | 100 |

Table A2: Explanation given for not interviewed (others) or not available to be interviewed (declined to Police)

| Reason                          | %   |
|---------------------------------|-----|
| Too sleepy/tired                | 68  |
| Mental health services          | 2   |
| Time constraints (end of shift) | 15  |
| Transported to other location   | 2   |
| Taken to Hospital               | 4   |
| Alcohol/drug detoxification     | 7   |
| Too violent                     | 2   |
| Immigration                     | 2   |
| Total                           | 102 |

Table A3: Outcome of preamble by interviewers to participate

| Outcome  | %  |
|--|----|
| Agreed to be interviewed   | 94 |
| Declined to be interviewed   | 5  |
| Terminated - watchhouse constraints  | 0  |
| Terminated - taken to court/detention  | 0  |
| Terminated - released/bailed   | 0  |
| Terminated - medical reasons   | 0  |
| Terminated - violent or uncontrollable behaviour/security risk/too intoxicated | 0  |
| Terminated - language problem  | 2  |
| Terminated - booked over 48 hours ago  | 0  |
| Terminated - under 17 years old  | 0  |
| Terminated - other   | 0  |