

SA Party Drug Trends 2000



Findings of the Illicit Drug Reporting System (IDRS) Party Drugs Module

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LIST OF ABBREVIATIONS

| | |
|------------------|--|
| ABCI | Australian Bureau of Criminal Intelligence |
| ADIS | Alcohol and Drug Information Service |
| AFP | Australian Federal Police |
| DASC | Drug and Alcohol Services Council |
| GBH (GBH) | Gamma-hydroxy-butyrate ('grievous bodily harm', 'fantasy') |
| IDRS | Illicit Drug Reporting System |
| IDU | Injecting drug user(s) |
| KI | Key informant(s) |
| LSD | Lysergic acid diethylamide |
| MDA | 3,4-methylenedioxyamphetamine |
| MDMA | 3,4-methylenedioxymethamphetamine |
| NDARC | National Drug and Alcohol Research Centre University of New South Wales |
| NDS | National Drug Strategy |
| NSP | Needle and syringe program |
| SAPOL | South Australian Police |
| SD | Standard Deviation |

EXECUTIVE SUMMARY

The 2000 IDRS was expanded from previous years to examine the feasibility of monitoring trends in the market for party drugs using the extant IDRS methodology. This study successfully accessed the appropriate sentinel population of party drug users in South Australia, who were able to provide information about the price, purity and availability of ecstasy and other party drugs, along with self-reported patterns of drug use and associated harms. Key informants who, through the nature of their work or through personal and social contacts, have regular contact with ecstasy users, were also identified. They were able to provide information about these users that was used to validate and contextualise the users' reports. Extant indicator sources relating to ecstasy were identified and accessed, including seizure purity data, telephone alcohol and drug information service data, and National Drug Strategy Household Survey data. Although there are not as many relevant indicator data sources for ecstasy as there are for drugs such as heroin and cannabis, the sources that were identified were successfully triangulated against the reports of users and key informants to provide a comprehensive snapshot of the market for party drugs. Thus, this study demonstrated that the IDRS can successfully monitor illicit drug markets other than those which it has previously been used to monitor, namely heroin, amphetamine, cocaine and cannabis.

The results of the party drugs module of the IDRS indicated that party drug users - a population defined in this study by regular use of tablets sold as 'ecstasy', tend on the whole to be young, well-educated, heterosexual, from English speaking backgrounds and likely to be employed or engaged in studies. Most subjects had not had contact with police or other social authorities and did not come from socially deprived backgrounds, and few engaged in crime other than drug dealing. None were currently in treatment for a drug-related problem, and only one had a prior criminal conviction.

Subjects typically began to use ecstasy in their late teens, and frequency of use varied from once per month to three days per week, with 34% of the sample using ecstasy at least once per week. Over half (54%) had recently binged on ecstasy, defined as continuous use for more than 48 hours. Thirty percent of the sample had used more than four tablets in a single use episode in the last six months, and 44% reported that they 'typically' used more than one tablet. Consistent with other reports, use of ecstasy was primarily through oral routes, but a substantial minority (16%) had injected ecstasy.

This sample could accurately be described as extensive polydrug users, 40% of whom nominated ecstasy as their favourite drug. The average number of drugs ever tried by subjects (including ecstasy) was 11.5, and an average of 8.5 drugs had been used in the last six months. Substantial percentages of the sample regularly used drugs such as cannabis, amphetamine, methamphetamine, tobacco, nitrous oxide, and alcohol concurrently with ecstasy, and drugs such as cannabis, nitrous oxide, alcohol, amphetamine and methamphetamine to ease the 'come down' or recovery period following acute ecstasy intoxication.

On average, subjects reported 10.6 recent physical and 4.5 recent psychological side-effects which they perceived as due, at least in part, to their use of ecstasy. The physical symptoms that were solely attributed to ecstasy use included blurred vision, vomiting, tremors or shakes and stomach pains. Psychological symptoms were generally not attributed solely to ecstasy use. However, the most commonly reported ones included depression, paranoia and anxiety. These side-effects were consistent with those described in earlier reports of ecstasy users, although current Australian research reports a higher incidence of side-effects among users than earlier research conducted internationally (e.g., Hayner & McKinney, 1986; Cohen, 1995; Curran & Travill, 1997; van Laar & Spruit, 1997). Ecstasy-related occupational, relationship and financial problems were also reported relatively frequently by the present sample, and although many of these were minor, some constituted significant disruptions to functioning, including loss of employment, ending of relationships, and an inability to pay for food or rent.

All subjects in this sample were able to comment on the price, purity and availability of ecstasy. The current standard price of a single tablet of ecstasy in Adelaide is \$45, and this price has generally remained stable or decreased in the last six months. Ecstasy is reported as very easy or easy to obtain, and is readily available from a number of sources, usually friends, acquaintances or dealers.

Many subjects in this sample were also able to comment on the price, purity and availability of other party drugs, including LSD, methamphetamine and MDA, and to a lesser degree, ketamine and GHB. The results indicated that these drugs are readily available in Adelaide, that the price of these drugs has remained fairly stable, and that the purity of these drugs ranges from medium to high.

In conclusion, patterns of extensive polydrug use and substantial rates of drug-related harm were reported by this sample of ecstasy users, and these reports were confirmed and validated by the information obtained from key informants. The results of this study also indicate that there is a wide range of drugs on the market in Adelaide, which are reasonably pure and easy to obtain. These results highlight the importance of continued monitoring of such a dynamic market, which can lead to significant financial, social and health-related problems for users, both currently and in the future.

1.0 INTRODUCTION

The Illicit Drug Reporting System (IDRS) is an ongoing project funded by the Commonwealth Department of Health and Aged Care (CDHAC) that has been conducted on an annual basis in NSW since 1996, in SA since 1997, and in all states and territories of Australia since 1999. To date, the purpose of the IDRS has been to provide a coordinated approach to the monitoring of the use of illicit drugs, in particular, amphetamine, cannabis, cocaine and heroin. It is intended to serve as a strategic early warning system, identifying emerging trends of local and national concern in various illicit drug markets. The study is designed to be sensitive to such trends, providing data in a timely fashion, rather than to describe phenomena in detail, such that it will provide direction for more detailed data collection on specific issues.

The IDRS data collection consists of three components: interviews with illicit drug users, interviews with professionals who work with illicit drug users, and indicator or secondary data sources, such as national drug use household surveys, customs data, arrest data and hospital accident and emergency data. These three data sources are triangulated against each other in order to minimise the biases and weaknesses inherent in each one, to ensure that only valid emerging trends are documented.

In June 2000, the National Drug Law Enforcement Research Fund (NDLERF), administered by the Australasian Centre for Policing Research (ACPR), funded a two year, two state trial of the feasibility of monitoring emerging trends in the markets for ecstasy and other party drugs using the extant IDRS methodology. For the purposes of the IDRS, the term 'party drug' is considered to include any drugs that are routinely used in the context of entertainment venues such as nightclubs or dance parties but are not already monitored by the main IDRS. This includes drugs such as ecstasy, LSD, ketamine, MDA (3,4-methylenedioxyamphetamine) and gamma-hydroxy-butyrate (GHB or 'GBH' for 'grievous bodily harm').

The sites chosen for the trial of the party drugs component of the IDRS were New South Wales and Queensland. In addition, the Drug and Alcohol Services Council (DASC) of South Australia agreed to provide funding to allow the trial to proceed in this state. It was decided that consistency should be maintained between the main IDRS and the party drugs component wherever possible. Therefore, like the main IDRS, the focus of the party drugs component was on the capital cities of the participating states, as new trends in illicit drug markets are more likely to emerge in large cities rather than regional centres or rural areas.

The data described in this report represent a summary of the trends in ecstasy and other party drug use found in Adelaide in 2000. These trends have been extrapolated from three data sources:

1. Face-to-face interviews with 50 current ecstasy users recruited in Adelaide;
2. Face-to-face or telephone interviews with 12 key informants who, through the nature of their work, or their personal and social networks, have regular contact with ecstasy users in Adelaide; and

3. Indicator data sources such as prevalence data drawn from the National Drug Strategy (NDS) Household Surveys, and information from the Australian Bureau of Criminal Intelligence (ABCI) on the price and purity of ecstasy.

1.1 Study aims

The specific aims of the party drug module of the SA IDRS 2000 were:

1. To describe the characteristics of a sample of ecstasy users in Adelaide;
3. To examine the patterns of ecstasy and other drug use among a sample of current ecstasy users;
4. To document the current price, purity and availability of ecstasy and other party drugs in Adelaide;
5. To examine subjects' perceptions of the incidence and nature of ecstasy-related harm, including physical, psychological, financial, occupational, social and legal harms; and
6. To identify emerging trends in the party drug market which require further investigation.

2.0 METHOD

A triangulated approach was used for this study, using information obtained from three primary sources. The three sources were as follows:

- A survey of ecstasy users;
- A qualitative survey of key informants (KI) who work in the drug and alcohol area or a related field, and have regular contact with ecstasy users;
- Existing and current indicators relating to drugs, drug use and drug-related issues.

2.1 Survey of ecstasy users

2.1.1 Recruitment

A total of 50 ecstasy users were interviewed in August and September 2000 for the party drugs component of the IDRS. Subjects were recruited through a purposive sampling strategy (Kerlinger, 1986), which included advertisements on noticeboards at Adelaide University, peer interviewer contacts, and 'snowball' procedures (Biernacki & Waldorf, 1981). 'Snowballing' is a means of sampling 'hidden' populations which relies on peer referral, and is widely used to access illicit drug users both in Australian studies (e.g., Boys *et al.*, 1997; Ovendon & Loxley, 1996; Solowij *et al.*, 1992) and international studies (e.g., Dalgarno & Shewan, 1996;

Forsyth, 1996; Peters *et al.*, 1997). Initial contact was established through the advertisements placed around the University and the peer interviewers' personal contacts. Following interviews, subjects were asked if they would be willing to tell friends who they thought might be able to provide the desired information about the study.

2.1.2 Procedure

Subjects contacted the researchers by telephone and were screened for eligibility. To meet entry criteria, subjects had to be at least 16 years of age (due to ethical constraints), they must have used ecstasy at least six times over the last six months, and they must have been a resident of the Adelaide metropolitan region for at least 12 months. Given that ecstasy is undoubtedly the most widely used of the so-called party drugs, it was decided that regular ecstasy use should define the sentinel population of party drug users that the study sought to recruit. There is an extant market for ecstasy (tablets sold purporting to contain 3,4-methylenedioxymethamphetamine) in Australia that has existed for more than a decade. In contrast, the other drugs used by this population have either declined substantially in popularity since the appearance of ecstasy in this country (e.g., LSD), fluctuate widely in availability (e.g., 3,4-methylenedioxymethamphetamine [MDA]), or are relatively new in the market and are yet to be as widely used as ecstasy (e.g., ketamine and gamma-hydroxy-butyrate [GHB]).

Subjects were assured that all information they provided was strictly confidential and anonymous, and that the study would involve a face-to-face interview that would take between 30 and 60 minutes to complete. All subjects were volunteers who were reimbursed AUD\$30 for their participation. Interviews took place in varied locations convenient to the person being interviewed, and were conducted by one of two interviewers who were trained before data collection on how to use the survey instrument. The nature and purpose of the study was explained to subjects before informed consent to participate was obtained.

The structured interview schedule was based on previous research conducted at the National Drug and Alcohol Research Centre (see Darke *et al.*, 1992, 1994). Sections on demographics, patterns of ecstasy use and use of other drugs, price, purity and availability of ecstasy and other drugs (e.g. heroin, amphetamine, cocaine and cannabis), crime, risk-taking, health and general trends were included. Participants were also asked to consider changes to the above parameters over the last six or 12 months. Descriptive and inferential statistics were collated and analysed using SPSS for Windows, Version 10.1.0.

2.1.3 Measures

Subjects were administered a structured interview schedule based on a national study of ecstasy users conducted by NDARC in 1997 (Topp *et al.*, 1998; 1999), which itself incorporated items from a number of previous NDARC studies of ecstasy (Solowij *et al.*, 1992) and amphetamine (Darke *et al.*, 1994; Hando & Hall, 1993; Hando, Topp & Hall, 1997) users. The interview schedule focussed primarily on the

six months preceding the interview, and assessed sample characteristics; ecstasy and other drug use history, including frequency and quantity of use and routes of administration; physical and psychological side-effects of ecstasy, other ecstasy-related problems, including relationship, financial, legal and occupational problems; price, purity and availability of a number of different party drugs; and general trends within this market, such as new drug types, new drug users and police activity.

2.1.4 Data Analysis

For continuous, normally distributed variables, *t*-tests were employed and the means reported. Where continuous variables were skewed, medians were reported and the Mann-Whitney *U*-test, a non-parametric analogue of the *t*-test (Siegel & Castellan, 1988), was employed. Categorical variables were analysed using χ^2 or Fisher's exact test. Gender and age differences were noted when significant. All analyses were conducted using SPSS for Windows, Version 10.1.0.

2.2 Survey of key informants

To maintain consistency with the main IDRS, the eligibility criterion for key informant (KI) participation in the party drug component was regular contact, in the course of employment, with a range of ecstasy users throughout the last six months. This consisted of average weekly contact with at least 10 ecstasy users over the time period. Twelve key informants (KI) from various metropolitan regions of Adelaide reported on their experiences with ecstasy users in the six months preceding the interview. Key informants were recruited from previous IDRS surveys and from recommendations made by existing key informants and colleagues. Potential KI were contacted by telephone and assessed for suitability according to the criteria. Interviews were carried out between September and October 2000. The majority of interviews were carried out face-to-face, and the others by telephone.

In total, 12 KI were interviewed (seven females and five males). All KI had contact with ecstasy users through their professions, and four of them also through personal and social networks. Six of the KI worked in the health sector as drug treatment workers, two of these dealing specifically with youth and one with injecting drug users. Two were police officers working in the Drug and Organised Crime Unit. One was a youth adviser for the Youth Advisory Forum. One worked as a 'rave safe' worker, providing information on ecstasy and promoting safe behaviour at raves. This person dealt specifically with ecstasy users. The final KI worked as a bouncer at rave parties, and also had regular contact with users through working in a surf shop.

The criteria for selecting KI were not always met, as it was difficult to find a substantial number who fit these specific criteria. In their work, eight of the 12 KI, on average, saw more than 10 users per week. The remaining four saw less than 10 users per week. Nine KI spent one day per week with users on average, although five of these said that the number of days varied considerably. The remaining three reported seeing users 2-3 days per week. However, four KI had regular contact with users on a personal and social basis outside of their work environment, thus meeting

the criteria in this way. These KI were either part of the 'clubbing' scene in Adelaide, or had friends who used the drug regularly.

The information obtained from the KI was mostly presented in a qualitative fashion, by identifying the common themes and discussing them. Any major differences found between the KI reports were also reviewed. No personal information was collected on any of the ecstasy users that KI had been in contact with.

3.0 RESULTS

3.1 Demographic characteristics of ecstasy users

3.1.1 Ecstasy users

Table 1 presents the demographic characteristics of this sample of ecstasy users. Just over half of the sample was male (54%). The mean age was 23.2 years (SD 2.9; range 18-32), and there was no difference in mean age between males (23.4 years) and females (23 years). The majority (86%) nominated their sexual identity as heterosexual, although gay males (2%) and bisexuals (12%; one male and five females) were also represented. All but one subject spoke English as their main language at home. This one subject was of Chinese descent. The subjects resided in a wide range of metropolitan regions in Adelaide, including the central and eastern suburbs (28%), the northern suburbs (30%), the southern suburbs (16%) and the western suburbs (8%). In 18% of cases, subjects had no fixed address.

The mean number of school years completed by the sample was 12.6 (SD 2.5; range 10-18). More than half (54%) had completed courses after school, with 36% possessing a trade or technical qualification, and 18% having completed a university degree or college course. A further 44% were presently employed full-time, and a slightly smaller percentage (38%) were employed on a part-time or casual basis. Only 6% were presently unemployed, 12% were full-time students, and 4% were active sex industry workers. None were currently in treatment for a drug problem, and only one subject had a previous criminal conviction for which a custodial sentence was served.

Table 1: Demographic characteristics

| Variable | Total (n=50) |
|-------------------------------|---------------------|
| Mean age (in years) | 23.2 |
| % male | 54 |
| % English speaking background | 98 |
| % ATSI | 0 |
| % heterosexual | 86 |
| Mean number school years | 12.6 |
| % tertiary qualifications | 54 |
| % employed full-time | 44 |
| % full-time students | 12 |
| % unemployed | 6 |
| % with a previous conviction | 2 |

3.1.2 Key informants

The KI descriptions of the ecstasy users with whom they had recent contact were broadly consistent with the characteristics of the present sample of ecstasy users. Nine KI reported that ecstasy use was evenly distributed between males and females. Two KI reported a slightly higher prevalence of use among males (between 60 and 65%), but stated that in recent times the number of females who use ecstasy is increasing. One KI observed that females are reluctant to be under the influence of ecstasy in public, and thus are more likely to use the drug in a private environment. All KI reported that ecstasy users tend to be in their late teens and early twenties, and that the majority of ecstasy users are in their 20s, with an estimated age range of 18-36 years. The KI believed that ecstasy users are predominantly Caucasian from English speaking backgrounds. They reported very little contact with Asians, who, in their experience, prefer to use opiates or cocaine. Only one KI stated that he had recent contact with an ecstasy user of Aboriginal or Torres Strait Islander descent, and stated that this group does not tend to use ecstasy.

Generally, KI considered the ecstasy users with whom they had recent contact to be a well-educated group. They generally have at least a high school education, and are predominantly full-time workers, or university students who also work part-time. The two police officers referred to ecstasy users as “cleaner” clientele that are more educated than other drug user groups such as those using cannabis or heroin. They likened them to cocaine users, reporting that these two groups have similar characteristics.

In contrast, there was no agreement between the KI as to the sexual orientation of ecstasy users. Seven KI did not know, two believed they were predominantly

heterosexual, and the remaining three reported that ecstasy was frequently used by the homosexual and bisexual community. It is interesting that these three KI based their responses on their contact with ecstasy users on a personal and social level, suggesting perhaps that the users who seek advice and help from drug treatment and youth workers, or that come into contact with police, are mostly heterosexual.

All KI with experience in drug treatment agreed that ecstasy users do not tend to be in drug treatment programs. In addition, two KI said that these users do not speak of a physical dependence on ecstasy and do not see themselves as having a problem with the drug. There was also agreement that there is a low crime rate among ecstasy users, and that they are unlikely to have a previous prison history.

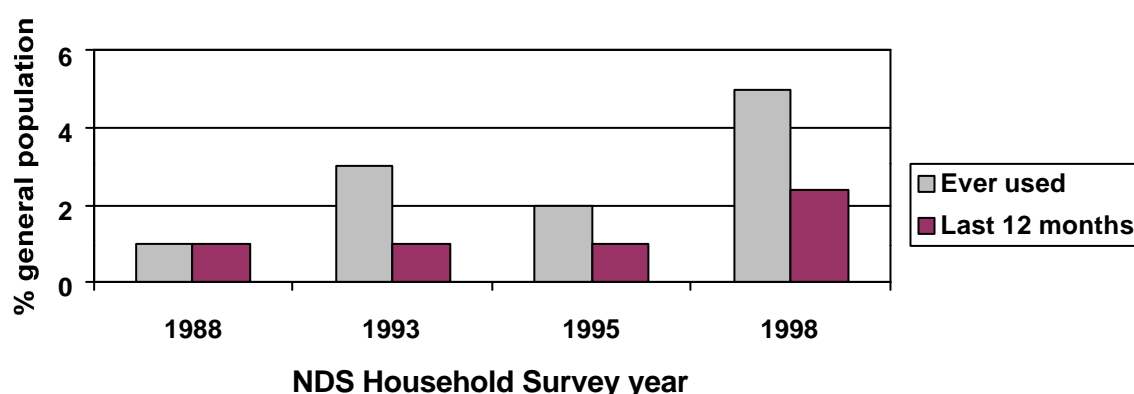
In summary, with the exception of the KI impressions relating to sexual orientation, the results reported for the 50 ecstasy users in this study were supported by the KI reports.

3.1.3 National Drug Strategy Household Surveys

Ecstasy was first included in the National Drug Strategy (NDS) Household Survey in 1988. Figure 1 shows that the lifetime prevalence of ecstasy use among the general population increased from 1988 to 1993, declined slightly in 1995, and increased to 4.8% in the latest survey (1998). In the 1998 survey, more than double the percentage of respondents reported ecstasy use in the last twelve months (2.4%) compared with the previous three surveys, in which recent use had remained stable at about 1%.

South Australian data from the 1998 Survey reported lower percentages than the national average. It was found that 2.8% of persons interviewed had a lifetime prevalence of ecstasy use, and 1% had used in the last 12 months. Among the general population, ecstasy had greater lifetime and 12 month use than heroin and cocaine. Ecstasy use among schoolchildren was greater than in the general population. The 1996 SA Schoolchildren's Survey reported that 2.6% of schoolchildren aged between 12 and 17 years had tried ecstasy, and 0.4% had used it in the week prior to the survey (Drug and Alcohol Services Council, 1999).

Figure 1: Prevalence of ecstasy use in Australia, 1988-1998



The prevalence of ecstasy use varies slightly according to gender, although differences are modest compared with other drugs. In the 1998 NDS Survey, 1.6% of females and 3.3% of males reported ecstasy use in the last 12 months (Higgins, Cooper-Stanbury & Williams, 2000). This is consistent with data from previous surveys; for example, in 1995, males reported a higher lifetime (3% versus 2%) and annual (2% versus 1%) prevalence than females (Commonwealth Department of Health and Family Services, 1996). South Australian data from the 1998 Survey found the same pattern, with 1.5% of males reporting recent use of ecstasy compared with 0.5% of females.

In the 1998 Survey, both lifetime prevalence and recent ecstasy use were most common among those aged 20-29 years. Approximately 18% of males and 10% of females in this age bracket reported lifetime ecstasy use, and 12% of males and 5% of females reported having used ecstasy in the last 12 months (Darke, Ross, Hando, Hall & Degenhardt, 2000). South Australian data also showed that ecstasy is most prevalent in the 20-29 year age group. Lifetime ecstasy use was reported by 10% of the sample in this age bracket, and recent use by 3.2%, percentages which were much higher than those in other age groups.

The availability of ecstasy increased between the 1995 and 1998 surveys. In 1995, 3% of the sample reported recent exposure to ecstasy, compared with 5% in the 1998 sample (Darke *et al.*, 2000). Of particular concern is the high prevalence of exposure among young adults (14-29 years). In 1995, 8% of this age group reported exposure to ecstasy in the last 12 months. In 1998 the percentage increased, with 10% of 14-19 year olds and 14% of 20-29 year olds reported having had the opportunity to use ecstasy.

3.1.4 Summary

- ❖ *Ecstasy use tends to be evenly distributed among males and females*
- ❖ *Ecstasy users tend to be young, mostly aged in their late teens or early twenties*
- ❖ *Ecstasy users tend to be from English speaking backgrounds, and the majority are heterosexual*
- ❖ *Ecstasy users are relatively well-educated, with the majority having completed high school and a substantial percentage having tertiary qualifications*
- ❖ *A high percentage of ecstasy users are either employed or studying*
- ❖ *Ecstasy users have little contact with the criminal justice system or drug treatment agencies*

3.2 Ecstasy use

3.2.1 Patterns of ecstasy use in the sample

The mean age at which subjects in the present sample had first used ecstasy was 19.7 years (range 14-31). All subjects had used ecstasy at least monthly at some time, at a mean age of 20.6 years (range 15-31). There were no gender differences in the age of initiation (19.4 years for males and 20 years for females).

Subjects had used ecstasy on a median of 17.5 days in the last six months (range 6-78 days). Thirty percent had used between monthly and fortnightly, 36% between fortnightly and weekly, and 34% had used ecstasy once per week or more. Ecstasy was nominated by 40% of the sample as their favourite or preferred drug. The next most preferred drug was cannabis, nominated by 32% of the sample, followed by tobacco (12%), amphetamine (8%) and methamphetamine (8%).

Table 2: Patterns of ecstasy use

| Variable | Total (n=50) |
|--|--------------|
| Mean age first used ecstasy (years) | 19.7 |
| Median no. days used ecstasy last six months | 17.5 |
| % ecstasy 'favourite' drug | 40 |
| % use ecstasy once per week or more | 34 |
| Mean no. ecstasy tabs in 'typical' session | 1.7 |
| Mean no. ecstasy tabs in 'heavy' session | 4.1 |
| % typically use >1 tablet | 44 |
| % binged on ecstasy (>48 hours) | 54 |

The mean number of ecstasy tablets taken in a 'typical' or 'average' use episode in the last six months was 1.7 (range 1.0-6.0). Less than half (44%) of the sample reported that they typically used more than one tablet, and 14% typically used three or more tablets in a session. In their 'heaviest' use episode in the last six months, subjects used a mean of 4.1 tablets (range 1-25); 30% had taken four or more tablets in a single episode.

Just over half (54%) of the sample had binged on ecstasy in the last six months, defined as using the drug on a continuous basis for more than 48 hours without sleep (Ovendon & Loxley, 1996). The mean length of the longest binge was 3 days (range 2-8 days). More than half (56%) of subjects who reported having binged on ecstasy in the last six months had also binged on amphetamine, methamphetamine, or both. A further 16% reported bingeing on either LSD or nitrous oxide.

Although a higher percentage of males had binged on ecstasy in the last six months (59% versus 48%), this difference was not statistically significant. There were also no significant differences in age between bingers and non-bingers. The mean age of those who had binged was 22.8 years, compared with 23.7 years for those who had not binged. However, there were differences in drug use between the two groups. Those who had binged had used ecstasy on a significantly greater number of days in the last six months (median 48 versus 14 days; $U=128$; $p<0.001$), and used significantly more ecstasy in both typical (median 2 versus 1 tablet; $U=184$; $p<0.01$) and heavy (median 3 versus 2 tablets; $U=183.5$; $p<0.05$) use episodes. Those who had binged on ecstasy in the last six months also had a more extensive lifetime polydrug use history than those who had not; they had used significantly more drugs overall (12.7 versus 10.1; $t_{48}=3.1$; $p<0.01$). However, it is interesting to note that the number of drugs used *in the last six months* was not significantly different between bingers and non-bingers (8.8 versus 8.1; $t_{48}=0.7$; $p>0.05$).

3.2.2 Routes of administration of ecstasy in the sample

One of the selection criteria for inclusion in this study was that subjects had used ecstasy at least six times in the last six months. The most common mode of administration was by swallowing the drug, with all subjects having done so at some point, including in the six months prior to being interviewed. Nearly two-thirds of subjects had ever snorted ecstasy, and 30% had snorted in the last six months. In contrast, much lower percentages had ever smoked or injected ecstasy: 38% and 16%, respectively. Similarly, only 12% and 6%, respectively had smoked or injected ecstasy in the last six months.

Subjects were also asked to nominate the *main way* they had used ecstasy in the last six months. Most subjects (94%) nominated oral ingestion as their main route of ecstasy administration, followed by 'half-and-half' (4%) and 'shelving' or anal administration (2%). Snorting or injecting were not reported by subjects as their main means of ecstasy use over the last six months.

Table 3: Routes of administration of ecstasy

| Variable | Total ($n=50$) |
|-------------------------------------|------------------|
| % ever swallowed ecstasy | 100 |
| % swallowed ecstasy last six months | 100 |
| % ever snorted ecstasy | 62 |
| % snorted ecstasy last six months | 30 |
| % ever smoked ecstasy | 38 |
| % smoked ecstasy last six months | 12 |
| % ever injected ecstasy | 16 |
| % injected ecstasy last six months | 6 |

One-fifth (20%) of the sample had ever injected a drug. The mean number of drugs ever injected by the whole sample was 0.74 (SD 2.0; range 0-12). A total of 16% had injected ecstasy at some time, and 6% had done so in the last six months. The mean age of first injection of ecstasy was 23.6 years (SD 2.0; range 21-27 years). Ecstasy was the first drug injected for only one subject, with most having commenced injecting with either amphetamine (80%; $n=8$) or methamphetamine (10%; $n=1$).

To ensure that intravenous polydrug or primary opiate users were not over-sampled and that this was primarily a sample of party drug users, a number of comparisons were drawn between those who had injected a drug at some time ($n=10$) and those who had not ($n=40$). There were no differences between the two groups in either age or gender. There was also no difference between the two groups in the number of school years completed, or their current employment status. Subjects who had injected drugs were no more likely to have been in prison, or to currently be in drug treatment. Finally, there was no difference in the areas of Adelaide in which the two groups lived.

Comparisons were also made between the two groups on factors relating to drug use. Although injectors had used ecstasy on a greater number of days in the last six months (median 25 days versus 15), the difference was not statistically significant. They had also used slightly more ecstasy both in a typical session (median 2 versus 1 tablet) and in their heaviest use episode (median 3 versus 2.8 tablets), but again this was not statistically significant. Subjects who had injected drugs used a slightly greater number of drugs in addition to ecstasy, both ever (11.9 versus 10.2) and in the last six months (7.9 versus 7.4). Again, the differences were not statistically significant. With the exception of MDA, there were no significant differences between the groups in the types of drugs used. Those who had injected a drug were significantly more likely to have used MDA, both ever (90% versus 33%; Fisher's exact $p<0.01$) and in the last six months (60% versus 20%; Fisher's exact $p<0.05$). A higher percentage of injectors had also used cocaine, both ever (80% versus 48%) or in the last six months (50% versus 28%), but the difference was not quite significant (Fisher's exact $p=0.085$). Heroin was only used by two subjects in each group, and no subjects were current users of the drug.

Overall, there was no evidence to indicate that those who had injected drugs differed from the rest of the sample. There were no significant differences between the injectors and non-injectors in either demographic characteristics or patterns of drug use. Therefore, subjects in this sample appeared to be primarily party drug users, and a representative population which meets the aims of the party drug component of the IDRS. No subjects had used methadone or heroin in the last six months, and none were in any form of drug treatment. No subjects nominated heroin as their favourite drug. Injectors were no more likely to have binged on ecstasy in the last six months, a variable that will later be shown to be consistently related to indices of ecstasy-related harm. There were no significant differences in the number of ecstasy-related side-effects between those who had injected a drug and those who had not (see section 3.5). In conclusion, the results pertaining to ecstasy-related harm cannot be accounted for by an over-sampling of intravenous polydrug users.

3.2.3 Key informants

Consistent with the reports of users, KI all agreed that the majority of ecstasy users administer the drug orally; only small minorities of users were considered to regularly snort or inject the drug. Those who inject ecstasy tend also to be intravenous users of other drugs. One KI mentioned that some users administer the drug anally or vaginally (practices referred to by users as 'shelving' or 'shafting'). Administration in this way appears to increase the duration of the effect of the drug, and users report that they feel less nauseous. Similarly, KI all reported that ecstasy was predominantly used in tablet form. The use of capsules is becoming more popular, although they are viewed by most users as "less safe" than tablets, as users are unsure of the contents of these capsules.

There was agreement on the frequency of ecstasy use, with all KI reporting that ecstasy is used recreationally once or twice per week, usually on Thursday, Friday and Saturday nights. Ecstasy is also used on holidays or special occasions, and is nearly always taken outside the home environment: at raves or dance clubs. The majority of KI considered that two tablets ('tabs') of ecstasy was an average quantity per 'typical' use episode, although estimates ranged from one to four tabs per episode. One KI commented that it is uncommon for people to only take one tab in a session. Interestingly, the KI who worked as a bouncer reported a much higher intake: between 5 and 15 tabs per session.

3.2.4 Summary

- ❖ *On average, ecstasy users start using the drug in their late teens*
- ❖ *There is a wide range of patterns of ecstasy use, but on average, the drug is used once per fortnight*
- ❖ *Over half of ecstasy users have recently binged on ecstasy, using the drug on a continuous basis for 48 hours or more*
- ❖ *On average, ecstasy users use 1.7 tablets in a typical session, although 44% usually use more than one tablet per session*
- ❖ *On average, ecstasy users use 4.1 tablets in a heavy session*
- ❖ *Nearly all ecstasy users (94%) consume the drug orally; snorting or injecting are not reported as a common means of ecstasy administration*
- ❖ *Only 16% of ecstasy users have ever injected ecstasy, and only 20% have ever injected any drug*

3.3 Other drug use

3.3.1 *Patterns of polydrug use in the sample*

The majority of subjects in this sample were polydrug users. All 50 subjects had tried at least one drug in addition to ecstasy, both at some point in their life-time and in the last six months. The mean number of drugs ever tried (including ecstasy) was 11.5 (SD 3.1; range 5-18), and a mean of 8.5 drugs (SD 3.3; range 2-16) had been used in the last six months. Over half (58%) of the sample had binged on one or more party drugs in the last six months, including amphetamine (32%), methamphetamine (26%) and nitrous oxide (12%). There were also three subjects (6%) who had binged on either LSD or cocaine. The longest binge during this time ranged from 2-8 days, with a mean of 3 days.

Most subjects (94%) reported that they normally used other drugs in combination with ecstasy, and in the 'come down' period (acute recovery) following ecstasy use (86%). 'Normal use' was defined as use on two-thirds or more occasions of ecstasy use in the last six months.

A mean of 3.2 other drugs were normally used in conjunction with ecstasy (SD 1.9; range 0-7). The most frequently used drugs were cannabis (62%), amphetamine (54%), tobacco (52%), nitrous oxide (50%), alcohol (49%) and methamphetamine (32%). A much smaller percentage reported normally using LSD (8%) or GHB (4%). Benzodiazepines, amyl nitrate or MDA were used by only one subject each. Of those who typically drank alcohol while using ecstasy, 83% usually consumed more than five standard drinks.

A mean of 2.1 other drugs were normally used during the acute recovery period following ecstasy use (SD 1.5; range 0-6). The most frequently used drugs were cannabis (68%), tobacco (46%), nitrous oxide (44%), alcohol (32%), amphetamine (12%) and methamphetamine (6%). Only one subject used benzodiazepines, and two subjects used vitamins and herbs.

3.3.2 *Key informants*

Patterns of extensive polydrug use among ecstasy users were also described by the KI. All agreed that heroin is not taken by this group, who predominantly take other party drugs. The KI emphasised that ecstasy is a very social drug that is not usually taken alone at home, but at parties, clubs, raves; with a large group of friends. The most commonly reported drug used in conjunction with ecstasy was amphetamine or methamphetamine. The KI reported that these drugs are much easier to obtain, and estimate that they are taken by between 60-70% of ecstasy users. The route of administration varies according to the individual's preference, either by injecting, snorting or adding the drug to drinks. All but one KI reported that cannabis use is highly prevalent in ecstasy users. Although it is often used while acutely intoxicated or recovering from ecstasy, many users also smoke cannabis daily. One KI commented that ecstasy users smoke cannabis to alleviate the feelings of depression that occur after taking ecstasy. Benzodiazepines are also used to 'come down' from ecstasy, but their use is much less prevalent than cannabis. Ten KI

reported a high level of alcohol intake among ecstasy users, one commenting that it is “almost a pre-requisite” to drink alcohol in conjunction with ecstasy. However, many of these observed that the use of alcohol in conjunction with ecstasy has declined over recent times. It has become more popular to drink bottled water, and to abstain from drinking alcohol altogether when taking ecstasy.

Three KI reported the use of LSD among this group, as it is believed by users to enhance the effects of ecstasy. Only two KI mentioned cocaine use, stating that the high price and short-term effects of this drug precludes use in most cases. One KI commented that cocaine is used as it compliments the effects experienced with ecstasy in increasing sexual freedom and feeling sociable. Only one KI mentioned the use of amyl nitrate, predominantly in the gay scene, and two mentioned the use of GHB (‘fantasy’).

Table 5 shows the quantity of use in the last six months of a range of other party drugs, both in typical use episodes and heaviest use episodes, among those who reported using the various drugs during this time frame.

3.3.3 Summary

- ❖ *Ecstasy users tend to have a lifetime prevalence of polydrug use and have recently used a wide range of drugs*
- ❖ *The most commonly used drugs are alcohol, amphetamine, nitrous oxide, methamphetamine, cannabis and LSD*
- ❖ *Nearly all ecstasy users (94%) normally use ecstasy in conjunction with other drugs, with an average of 3.2 other drugs being used*
- ❖ *Similarly, the majority of ecstasy users use other drugs in the recovery period following acute ecstasy use, with an average of 2.1 drugs used*
- ❖ *Over half of ecstasy users had binged on one or more party drugs in the last six months, most commonly amphetamine, methamphetamine and nitrous oxide*
- ❖ *The longest binge reported by ecstasy users ranged from 2-8 days, with an average of 3 days*

Table 4: Patterns of drug use

| Drug Class | Ever used (%) | Used last six months (%) | No. days used last six months (median; range) # |
|------------------------|----------------------|---------------------------------|--|
| Ecstasy | 100 | 100 | 18 (6-78) |
| Alcohol | 100 | 92 | 20 (3-130) |
| Cannabis | 96 | 88 | 115 (2-182) |
| Amphetamine | 98 | 90 | 12 (1-120) |
| Tobacco | 82 | 52 | 180 (1-180) |
| LSD | 94 | 50 | 4 (1-20) |
| Cocaine | 54 | 32 | 2 (1-5) |
| Amyl nitrate | 74 | 32 | 3 (1-40) |
| Benzodiazepines | 44 | 24 | 4 (1-24) |
| Nitrous oxide | 96 | 74 | 20 (2-95) |
| Methamphetamine | 92 | 80 | 6 (1-150) |
| MDA | 42 | 28 | 2 (1-6) |
| Heroin | 8 | 0 | 0 |
| Antidepressants | 38 | 14 | 3 (1-30) |
| Ketamine | 26 | 16 | 2 (1-5) |
| Other opiates | 36 | 36 | 8 (1-35) |
| Other drugs * | 22 | 12 | 3 (1-25) |
| Ice or shabu | 8 | 2 | 1 (1 subject on 1 day) |
| Methadone | 0 | 0 | 0 |
| GHB | 34 | 18 | 1 (1-40) |

Among those who had used, rounded to the nearest day

* Other drugs included anti-histamines, butane, dexamphetamine, sudafed and hallucinogenic mushrooms

Table 5: Quantity of party drugs used in the last six months
(among those who reported their use during this period)

| Drug class (measure) ¹ | 'Typical' episode (median, range) | Heaviest episode (median, range) |
|--|-----------------------------------|----------------------------------|
| Amphetamine (grams) ² | 1 (0.25-4) | 2 (0.25-5) |
| Methamphetamine (points³) | 1 (0.25-8) | 1.25 (0.25-16) |
| Ice or shabu (points ³) ⁴ | 1 point ice | 1 point ice |
| Cocaine (grams) ⁵ | 0.75 (0.5-1) | 1 (0.5-2) |
| LSD (tabs) ⁶ | 1 (0.5-3) | 2 (0.5-7) |
| MDA (capsules) ⁷ | 1 (1-2) | 1 (1-4) |
| Amyl nitrate (snorts) | 4 (1-20) | 10 (1-20) |
| Nitrous oxide (bulbs⁸) | 10 (1-100) | 50 (4-200) |
| Ketamine (bumps⁹) ¹⁰ | 1.5 (1-2) | 2.5 (2-3) |
| GHB (bumps ⁹) ¹¹ | 1 bump | 1 bump |

Table legend:

- ¹ The measure most frequently mentioned by subjects who had used the drug in the last six months is reported. Data for subjects who reported some other measure are not included in this table.
- ² Of the 45 subjects who reported using amphetamine in the last six months, 39 reported the quantities used in a typical episode in grams. Three reported use in 'lines', with 2 lines taken in a typical session. Three reported use in 'points': two taking 1 point in a typical session and one taking 2 points. For the quantity of amphetamine used in their heaviest episode, 40 subjects reported use in grams. Two reported use in lines (one used 2 lines and one used 5 lines) and three reported use in points (two used 2 points and one used 3 points).
- ³ Although there is some confusion among subjects, it appears that one 'point' is equal to approximately 0.1 of one gram, such that ten 'points' is equal to one gram.
- ⁴ Only one subject reported on the quantity of ice used.
- ⁵ Of the 16 subjects who reported using cocaine in the last six months, 7 reported the quantities used in a typical episode in grams. Five subjects reported use in lines (three used 1 line and two used 2 lines). For the quantity of cocaine used in their heaviest episode, 8 reported use in grams. Four reported use in lines (three used 1 line and one used 2 lines). Four subjects did not provide any information on quantities used.
- ⁶ Also referred to by five subjects as 'trips' or 'wangers'.
- ⁷ Of the 14 subjects who reported using MDA in the last six months, 12 reported that the drug came in capsules (referred to by one subject as 'solid'), and two provided no information on quantity of use.
- ⁸ A 'bulb' of nitrous oxide refers to the small canisters in which the gas is sold legally in supermarkets for insertion into an appliance used for whipping cream.
- ⁹ A 'bump' refers to a small amount of powder, typically measured on either the end of a key or a small spoon provided with the container in which the drug is usually purchased.
- ¹⁰ Of the 16 subjects who reported using ketamine in the last six months, one referred to using a 'solid' and two subjects provided no information on quantity of use.
- ¹¹ Only one subject reported using bumps in the last six months. The other 8 subjects measured the quantity of GHB in millilitres. The median amount used in a typical session was 12 mls (range 1-20), and in the heaviest session 12 mls (range 1-45).

3.4 Price, purity and availability of party drugs in Adelaide

3.4.1 Ecstasy

3.4.1.1 Price

Nearly all subjects were able to comment on the price, purity and availability of ecstasy in Adelaide (Table 6). It was agreed that virtually all ecstasy available in Adelaide in the six months preceding the interview came in tablet form. Consistent with these reports, all KI stated that most of the ecstasy currently available in Adelaide comes in tablet form, although there has been an increase in capsules, and there is also more liquid ecstasy on the market.

The mean price of ecstasy was reported by users to be AUD\$45 per tablet (SD 7.6; range 30-55). Although 68% of subjects reported that the price had either remained stable or decreased in the last six months, 32% stated that the price tended to fluctuate (Table 6).

KI reports on the price of ecstasy were closely in line with those of the users. The prices ranged from \$25 to \$60, with an average price of \$40 to \$50. Ecstasy is cheaper when larger quantities are purchased, and one KI said that first-time users may be charged at a cheaper rate (as low as \$6 per tab) to encourage them to keep using the drug. Eleven of the 12 KI commented on recent changes in price, all of whom agreed that the price had either decreased ($n=3$) or remained stable ($n=8$).

The price of ecstasy obtained from ABCI data was similar to that reported by both ecstasy users and KI. For the months January to June 2000, the price of one ecstasy tablet was between \$25 and \$50. It appears that the price may have decreased in 2000, given that the price for one ecstasy tablet in 1999 ranged between \$40 and \$60. The price also decreased to between \$15 and \$25 for purchases greater than 25 tablets.

3.4.1.2 Availability

Table 6 indicates that the majority of users (94%) considered ecstasy to be either very easy or easy to obtain, and 84% reported that the availability had either remained stable or increased in the last six months. There was a high degree of consistency between users' and KI reports of the availability of ecstasy. All of the KI commented on the availability, and every one considered ecstasy very easy ($n=6$) or easy ($n=6$) to obtain. There was also general agreement that ecstasy has become easier to obtain in the last six months ($n=8$) or that availability has remained stable ($n=3$). Only one KI reported that it was more difficult to obtain. The KI also reported that there has been an increase in the forms of ecstasy, specifically in the number and types of capsules available, as well as an increase in liquid ecstasy.

3.4.1.3 Sources and purchase locations

The results revealed that subjects had obtained ecstasy from a number of sources. In the majority of cases this was from friends (98%) or dealers (58%). Other people from whom ecstasy had been obtained included acquaintances (reported by 50% of the sample); people unknown to subjects (usually dealers selling tablets in venues, 24%); and work colleagues (22%). Ecstasy was most often obtained at friends' homes (reported by 94% of the sample) and subjects' own homes (74%). Other common purchase locations included raves (72%); dealers' homes (54%); nightclubs (32%); dance parties (30%); and pubs (10%).

A variety of methods of paying for ecstasy in the last six months were reported, most frequently through paid employment (86%); being given ecstasy as a gift by friends (82%); on credit from dealers (52%); borrowing money from friends (44%) and selling or distributing drugs (20%). Other methods included bartering other drugs or goods for ecstasy (46%); obtaining money from parents (22%); pawning goods (10%); unemployment or sickness benefits (8%); government study allowances (8%); property crime (2%); sex work (2%); and fraud (2%).

Some of the KI commented on the types of people who sell ecstasy. Three KI observed that those who deal ecstasy are often users as well, and that dealers are much younger than they used to be. Most KI could not comment on the manufacture and importation of ecstasy. Three reported that much of the manufacture was carried out locally, the results of which was ecstasy with uncertain purity and contaminants. The four KI who worked at ADIS stated that they received many calls from people concerned about the contents of ecstasy tablets. Although they were not sure, two suggested that much of the drug is imported from the East Coast.

Table 6: Price, purity and availability of ecstasy in Adelaide, 2000

| | Total (n=50) |
|--|--|
| Price at the moment (AUD\$) Mean price (per tab) Mean lowest price Mean highest price | \$45 (SD 7.6; range 30-55) \$37 (SD 8.7; range 20-50) \$53 (SD 7.1; range 35-60) |
| Price changes in last six months (% sample) Increasing Stable Decreasing Fluctuating | - 48 20 32 |
| Purity at the moment (% sample) High Medium Low Fluctuates Don't know | 16 36 14 32 2 |
| Purity changes in last six months (% sample) Increasing Stable Decreasing Fluctuating | 6 22 16 56 |
| Availability at the moment (% sample) (‘How easy is it to get ecstasy?’) Very easy Easy Moderately easy Difficult Very difficult | 32 62 6 - - |
| Availability changes in last six months (% sample) More difficult Stable Easier Fluctuates Don't know | 4 64 20 10 2 |

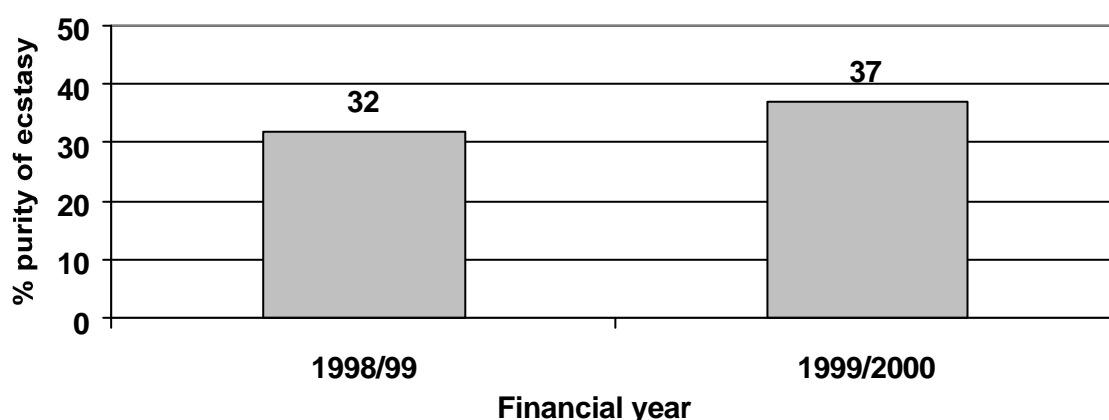
3.4.1.4 Purity

Table 6 indicates that there was little consistency in users' estimates of the current purity of ecstasy, or in reports of changes in purity in the last six months. Just over half of users (52%) found the current purity of ecstasy to be medium or high, although nearly one-third reported that it fluctuated. Similarly, 56% found that the purity of ecstasy over the last six months had fluctuated, with only 6% reporting an increase in purity. This inconsistency was also reflected in KI reports. Three did not know, and five stated that the purity of ecstasy varies depending on who manufactures it. Similarly, KI were not able to comment consistently on whether the purity of ecstasy had changed over the last six months.

Data provided by the Australian Bureau of Criminal Intelligence indicated that the average purity of seizures of ecstasy made in South Australia by AFP and SAPOL during the 1999/2000 financial year was 37% (range 10-64%; $n=178$ seizures). This was very similar to the national average in 1999/2000 of 35%, and only slightly higher than the average purity in South Australia in 1998/99, which was 32% (see Figure 2 below).

Only four of the 178 seizures reported in 1999/2000 were carried out by AFP. The median purity (as determined by the 174 SAPOL seizures) was 33.8%. Given the small number of AFP seizures, the SAPOL median should be considered representative of all seizures in South Australia.

Figure 2: Purity of South Australian ecstasy seizures, 1998/99-1999/2000



3.4.2 Other party drugs

The number of subjects who were able to comment on the price, purity and availability of other party drugs in Adelaide was somewhat smaller than for ecstasy. Moreover, for many drugs, subjects were not able to make any comments on these issues. This suggests that there was relatively limited recent exposure to some of

these drugs among the sample, and that they are not as widely available or as widely used as ecstasy, with the possible exception of LSD and methamphetamine, which were commented on by between 68 - 82% of the sample.

Only four KI were able to comment on the price, purity and availability of other drugs used by ecstasy users. They all agreed that amphetamine has decreased in price and has become more readily available. Two of these also reported an increase in the purity of amphetamine. Three KI commented on cannabis, and generally reported the same trends as for amphetamine: a decrease in price and an increase in availability. However, there was no change in the purity of the drug. Finally, two KI commented on heroin, and again both agreed that there has been a decrease in price, as well as an increase in availability. One of these also reported an increase in the purity of the drug.

3.4.2.1 LSD

Table 7 presents data on the price, purity and availability of LSD, which was commented on by between 76 - 82% of subjects. The median price per tab was \$10 (SD 2.0; range 6-15), although some subjects reported paying as much as \$40 per tab. Nearly two-thirds of subjects reported that the price of LSD has remained stable over the last six months, although one-quarter believed that the price fluctuated. Most subjects (83%) reported that the purity of LSD was medium to high, and nearly half stated that the purity had remained stable over the last six months. However, 37% found that the purity fluctuated, and 12% reported an increase in the purity of the drug. Only 7% of subjects reported difficulty in obtaining LSD, with 29% finding it easy or very easy, and 54% moderately easy. Interestingly, nearly one-third reported that it had become more difficult to obtain in the last six months, although 44% reported that the availability of LSD had remained stable.

3.4.2.2 Methamphetamine

Table 8 presents data on the price, purity and availability of methamphetamine, which was commented on by between 68 - 72% of subjects. The median price per point was \$40 (SD 9.4, range 20-50). Over 70% of subjects reported that the price had remained stable over the last six months, although nearly 17% believed the price fluctuated. Nearly 90% reported that the current purity of methamphetamine was medium to high, including two-thirds who believed the purity of the drug was high. There was no consistency in reports of changes in purity over the last six months: 56% reported it to be stable, while 28% reported that it fluctuated. A further 17% believed that the purity had increased. As with the other drugs, the majority of subjects (92%) reported that methamphetamine was easy or very easy to obtain, with no subjects finding it difficult. Over 70% reported that this availability had remained stable over the last six months, and 11% said methamphetamine had become easier to obtain.

3.4.2.3 MDA

Table 9 presents data on the price, purity and availability of MDA. However, as information was only available from eight subjects (16%), the results should be interpreted cautiously. The median price per cap of MDA was \$50 (SD 3.5, range 40-50). Around 63% of subjects reported that the price had fluctuated over the last six months, while 25% reported the price had remained stable. Most subjects agreed that the current purity was medium to low, with no subjects reporting that the purity was high. Furthermore, no subjects believed the purity had increased over the last six months. However, there was no consistency in subjects' responses, with 50% reporting that the purity had fluctuated, 25% reporting that it was stable and 25% reporting a decrease. In contrast to the other drugs investigated in this sample, MDA appears to be less readily available. Nearly 63% reported that it was difficult to obtain, with the remaining 37% reporting that it was moderately easy. Again, there was no consistency in subjects' responses to availability changes in MDA over the last six months. Half believed that the availability had fluctuated, one-quarter believed it was stable and one-quarter reported that it had become more difficult to obtain.

3.4.2.4 Other drugs

Subjects were not able to comment on the price, purity and availability of most of the other drugs used by this sample. There were only three subjects who commented on ketamine and five on GHB ('fantasy'). Although the numbers were too small to derive meaningful conclusions, Table 10 presents information on the average prices of these drugs as reported by subjects. For ketamine, subjects generally agreed that the price is relatively stable, as is the purity of the drug, and that it is reasonably difficult to obtain. For GHB, there was no agreement on the stability of the price or how easy it is to obtain, but subjects agreed that the purity of the drug is high.

Table 7: Price, purity and availability of LSD in Adelaide, 2000

| | |
|---|----------------------------|
| Price at the moment (AUD\$) | (n=38) |
| Median price (per tab) | \$10 (SD 2.0; range 6-15) |
| Median lowest price | \$7 (SD 4.9; range 4-30) |
| Median highest price | \$15 (SD 6.3; range 10-40) |
| Price changes in last six months (% sample) | (n=41) |
| Increasing | 4.9 |
| Stable | 65.9 |
| Decreasing | 4.9 |
| Fluctuating | 24.4 |
| Purity at the moment (% sample) | (n=41) |
| High | 41.5 |
| Medium | 41.5 |
| Low | - |
| Fluctuates | 17.0 |
| Purity changes in last six months (% sample) | (n=41) |
| Increasing | 12.2 |
| Stable | 48.8 |
| Decreasing | 2.4 |
| Fluctuating | 36.6 |
| Availability at the moment (% sample) (‘How easy is it to get LSD?’) | (n=41) |
| Very easy | 12.2 |
| Easy | 26.8 |
| Moderately easy | 53.7 |
| Difficult | 7.3 |
| Very difficult | - |
| Availability changes in last six months (% sample) | (n=41) |
| More difficult | 31.7 |
| Stable | 43.9 |
| Easier | 3.9 |
| Fluctuates | 19.5 |

Table 8: Price, purity and availability of methamphetamine in Adelaide, 2000

| | |
|---|-------------------------------|
| Price at the moment (AUD\$) | (n=34) |
| Median price (per 'point') | \$40 (SD 9.4; range 20-50) |
| Median lowest price | \$37.50 (SD 6.8; range 20-45) |
| Median highest price | \$50 (SD 3.6; range 40-50) |
| Price changes in last six months (% sample) | (n=36) |
| Increasing | 2.8 |
| Stable | 72.2 |
| Decreasing | 8.3 |
| Fluctuating | 16.7 |
| Purity at the moment (% sample) | (n=36) |
| High | 66.7 |
| Medium | 22.2 |
| Low | - |
| Fluctuates | 11.1 |
| Purity changes in last six months (% sample) | (n=36) |
| Increasing | 16.7 |
| Stable | 55.6 |
| Decreasing | - |
| Fluctuating | 27.8 |
| Availability at the moment (% sample) (‘How easy is it to get methamphetamine?’) | (n=36) |
| Very easy | 38.9 |
| Easy | 52.8 |
| Moderately easy | 8.3 |
| Difficult | - |
| Very difficult | - |
| Availability changes in last six months (% sample) | (n=36) |
| More difficult | - |
| Stable | 72.2 |
| Easier | 11.1 |
| Fluctuates | 16.7 |

Table 9: Price, purity and availability of MDA in Adelaide, 2000

| | |
|---|-------------------------------|
| Price at the moment (AUD\$) | (n=8) |
| Median price (per cap) | \$50 (SD 3.5; range 40-50) |
| Median lowest price | \$42.50 (SD 5.8; range 30-45) |
| Median highest price | \$52.50 (SD 4.1; range 50-60) |
| Price changes in last six months (% sample) | (n=8) |
| Increasing | 12.5 |
| Stable | 25.0 |
| Decreasing | - |
| Fluctuating | 62.5 |
| Purity at the moment (% sample) | (n=8) |
| High | - |
| Medium | 62.5 |
| Low | 25.0 |
| Fluctuates | 12.5 |
| Purity changes in last six months (% sample) | (n=8) |
| Increasing | - |
| Stable | 25 |
| Decreasing | 25 |
| Fluctuating | 50 |
| Availability at the moment (% sample) (‘How easy is it to get MDA?’) | (n=8) |
| Very easy | - |
| Easy | - |
| Moderately easy | 37.5 |
| Difficult | 62.5 |
| Very difficult | - |
| Availability changes in last six months (% sample) | (n=8) |
| More difficult | 25 |
| Stable | 25 |
| Easier | - |
| Fluctuates | 50 |

Table 10: Price of other party drugs in Adelaide, 2000

| | |
|--|---|
| GHB Median price (per 10mls) Median lowest price Median highest price | (n=5) \$20 (SD 12.6; range 10-40) \$10 (no range) \$40 (no range) |
| Ketamine Median price (per tab) Median lowest price Median highest price | (n=3) \$40 (SD 5.8; range 40-50) \$30 (SD 5.8; range 30-40) \$50 (no range) |

3.4.3 Summary

- ❖ *The current average price of ecstasy in Adelaide is \$45 per tablet*
- ❖ *The price of ecstasy has generally remained stable or decreased in the last six months*
- ❖ *Nearly all ecstasy users report that ecstasy is easy or very easy to obtain*
- ❖ *The availability of ecstasy has generally remained stable or increased in the last six months, and the KI report an increase in the number and types of ecstasy available, particularly in capsule form*
- ❖ *Reports of the purity of ecstasy are inconsistent, with just over half of ecstasy users finding the current purity to be medium or high, and one-third reporting that it fluctuates*
- ❖ *Ecstasy is obtained from a number of sources, in the majority of cases from friends and acquaintances, or from dealers*
- ❖ *Many ecstasy users commented on the price, purity and availability of other drugs, including LSD and methamphetamine*
- ❖ *The current average price of LSD in Adelaide is \$10 per tablet, and for methamphetamine, \$40 per point. Most subjects agreed these drugs are reasonably easy to obtain, and their purity is medium to high. These factors have generally remained stable over the last six months*

3.5 Physical and psychological side-effects of ecstasy

3.5.1 Ecstasy users

Tables 11 and 12 show the physical and psychological side-effects experienced by subjects in the last six months, as well as their duration and the extent to which the effects were attributed to ecstasy use.

Subjects reported a mean of 10.6 physical side-effects in the last six months (SD 5.2; range 0-18). The most common were blurred vision, trouble sleeping, hot and cold flushes and a loss of energy. Many subjects also reported muscular aches, stiff and painful joints, tremors and shakes, numbness and tingling, profuse sweating and weight loss. A mean of 4.5 psychological side-effects were reported (SD 2.6; range 0-13), most commonly mental confusion (disorientation, short-term memory loss and vagueness), irritability, depression and anxiety. Some subjects also reported paranoia, and visual and auditory hallucinations.

Males reported a mean number of 9.6 physical side effects and 3.9 psychological side-effects. In comparison, females reported a mean number of 11.7 physical side effects and 5.1 psychological side-effects. However, these gender differences were not statistically significant. A comparison was also made between the number of side-effects in subjects aged under 25 years, and those aged 25 years or more. The younger subjects reported a mean number of 10.6 physical side effects and 5.2 psychological side-effects. In comparison, the older subjects reported a mean number of 10.4 physical side effects and 3.7 psychological side-effects. Again, these differences were not statistically significant.

The number of side-effects reported by subjects were also compared according to whether they had injected ecstasy either recently or in the past, or whether they had injected any drug. There were no significant differences found. Similarly, there were no significant differences in the number of side-effects according to the number of drugs used by subjects in the last six months. However, those who had binged on ecstasy in the last six months reported significantly more physical (12.3 versus 8.6; $t_{48}=2.7$; $p<0.05$) and psychological (5.2 versus 3.7; $t_{48}=2.1$; $p<0.05$) side-effects.

Many of the physical side-effects experienced by subjects were attributed to ecstasy use. The physical side-effects that were attributed *solely* to ecstasy use by 70% or more of those who reported them included blurred vision, vomiting, tremors or shakes, stomach pains and numbness or tingling. Moreover, side-effects such as dizziness, hot and cold flushes and teeth problems as a result of grinding and jaw clenching were attributed solely to ecstasy by 50-65% of subjects who reported them (Table 11).

In contrast, all of the psychological side-effects were attributed solely to ecstasy use by less than half of those who reported them. The most common side-effects attributed to ecstasy by at least one-third of subjects included depression, visual hallucinations, paranoia and anxiety (Table 12).

3.5.2 Key informants

Three KI, due to the nature of their contact with ecstasy users, were able to comment on physical and psychological side-effects among this population. According to KI, the main problems reported by ecstasy users are adverse physical reactions as a result of the drug, such as anxiety attacks and paranoia. There were also reports of problems relating to general psychological functioning. These include feelings of depression once the effects of ecstasy subside, strange behaviour patterns and difficulties in maintaining relationships. One KI observed that ecstasy users are at “a loss of who they are”, and that many do not look after their health which can lead to physical problems resulting from poor diet and nutrition.

Table 11: Physical side effects of ecstasy

| Symptom | Last six months (%; n) * | Median length of worst case # | Only related to ecstasy (%; n) # |
|---------------------------|---------------------------------|--------------------------------------|---|
| Loss of energy | 70 | 2 days | 17 |
| Muscular aches | 68 | 2 days | 6 |
| Trouble sleeping | 74 | 12 hours | 19 |
| Blurred vision | 78 | 2 hours | 82 |
| Profuse sweating | 62 | 5.5 hours | 19 |
| Tremors/shakes | 64 | 2 hours | 78 |
| Hot / cold flushes | 72 | 2 hours | 56 |
| Weight loss | 64 | 3.5 days | 13 |
| Dizziness | 58 | 30 mins | 62 |
| Numbness/tingling | 64 | 2 hours | 72 |
| Stomach pains | 58 | 1 hour | 76 |
| Heart palpitations | 40 | 30 mins | 30 |
| Joint pains/stiffness | 68 | 2 days | 6 |
| Headaches | 46 | 5 hours | 13 |
| Inability to urinate | 6 (3) | 1 hour | 33 |
| Excessive urination | 4 (2) | 7 hours | 0 |
| Shortness of breath | 46 | 12.5 mins | 48 |
| Teeth problems | 18 | 2.5 days | 56 |
| Teeth and/or jaw grinding | 8 (4) | 4 hours | 100 (4) |
| Skin problems | 4 (2) | 36 hours | 0 |
| Mouth ulcers | 4 (2) | 36 hours | 100 (2) |

Table 11 (cont'd): Physical side effects of ecstasy

| Symptom | Last six months (%; n) * | Median length of worst case # | Only related to ecstasy (%; n) # |
|-------------------|---------------------------------|--------------------------------------|---|
| Trouble speaking | 2 (1) | 2 hours | 100 (1) |
| Rolling eyes | 2 (1) | 15 minutes | 0 |
| Vomiting | 54 | 5 mins | 82 |
| Chest pains | 20 | 1 hour | 20 |
| Fainting/pass out | 4 (2) | 31 mins | 50 (1) |
| Fits/seizures | 0 | 0 | 0 |

* percentage of total sample; # percentage among those reporting the symptom

Table 12: Psychological side effects of ecstasy

| Symptom | Last six months (%; n) * | Median length of worst case # | Only related to ecstasy (%; n) # |
|----------------------------------|---------------------------------|--------------------------------------|---|
| Confusion | 76 | 1 day | 32 |
| Irritability | 64 | 2 days | 25 |
| Depression | 62 | 1 day | 42 |
| Anxiety | 36 | 2 hours | 33 |
| Blackout/memory lapse | 28 | 3 hours | 21 |
| Paranoia | 46 | 5 hours | 35 |
| Visual hallucinations | 42 | 1 hour | 38 |
| Auditory hallucinations | 32 | 20 mins | 31 |
| Loss of sex urge | 20 | 24 hours | 40 |
| Flashbacks | 14 | 5 mins | 29 |
| Panic attacks | 10 | 1 hour | 0 |
| Violent behaviour | 6 (3) | 60 mins | 0 |
| Suicidal thoughts | 8 (4) | 30 mins | 0 |
| Suicide attempts | 2 (1) | - | 0 |
| Feeling of incredible well-being | 2 (1) | 6 hours | 100 (1) |

* percentage of total sample; # percentage among those reporting the symptom

3.5.3 Summary

- ❖ *Most ecstasy users report a range of physical and psychological side-effects which they perceive as being at least partly related to their use of the drug*
- ❖ *Physical side-effects that are solely attributed to ecstasy use include blurred vision, vomiting, tremors or shakes and stomach pains*
- ❖ *Psychological side-effects were generally not attributed solely to ecstasy use. However, the most commonly reported ones include depression, paranoia and anxiety*

3.6 Other ecstasy-related problems

3.6.1 Ecstasy users

Nearly 60% of the sample had experienced occupational or study problems in the last six months which they perceived as related, at least in part, to their use of ecstasy (Table 13). Nearly half of these problems involved trouble concentrating, reduced work performance or feeling unmotivated. A further 46% involved taking sick leave or not attending classes, while a minority (6%) were more serious problems such as being dismissed from or quitting a job, or inability to obtain employment.

In 72% of cases subjects reported at least one ecstasy-related problem in the last six months. The most common problems were financial, with 56% of the sample experiencing them. These subjects specified the most serious financial problem they had dealt with. In 59% of cases the problem was minor, with subjects having no money for recreation or luxuries. In 30% of cases the problem was more serious, with subjects being in debt or owing money to people. In the remaining 11% of cases the problem was extremely serious, with subjects not having enough money to pay for food or rent.

The use of ecstasy caused relationship or social problems for 36% of subjects in the last six months. These subjects also specified the most serious relationship problem they had dealt with. In 59% of cases the problem was relatively minor, with subjects reporting arguments and the development of mistrust or anxiety in the relationship. In the remaining 41% of cases the relationship actually ended as a result of ecstasy use, and in one case this resulted in violence.

The use of ecstasy interfered with work or study for 34% of subjects. In 44% of cases subjects reported that they had trouble concentrating, and a further 31% reported feeling unmotivated. The remaining 25% experienced major problems in this area, resulting in their failure to attend work or classes.

A variety of other problems caused by ecstasy in the last six months were reported by six subjects (12%). Four experienced mood swings, one reported skin problems

and one reported feeling that he “had to be high” to perform well. Only one subject had recently been cautioned by the police, although the reason for this caution was not determined.

There were no gender differences in the number or type of ecstasy-related problems experienced by subjects. Overall, 30% of females had experienced at least one problem in the last six months, compared with 26% of males. Similarly, there was no significant difference according to age. Overall, 27% of subjects aged less than 25 years had experienced at least one problem, compared with 29% of subjects aged 25 years or more.

However, there were some differences in the number and type of ecstasy-related problems experienced by subjects who had ever injected any drug. All persons who had ever injected any drug reported at least one problem, compared with 65% of those who had never injected any drug. In particular, subjects who had injected drugs were significantly more likely to have experienced financial problems (90% versus 10%; Fisher’s exact $p < 0.05$). Although a higher percentage of subjects who had injected drugs reported relationship or social problems (60% versus 30%) and occupational or study problems (40% versus 33%), the differences were not statistically significant.

A similar pattern was found for subjects who had ever injected ecstasy. Again, all of these subjects reported at least one problem, compared with two-thirds of those who had never injected ecstasy. In particular, subjects who had injected ecstasy were more likely to have experienced relationship or social problems (75% versus 29%; Fisher’s exact $p < 0.05$) and financial problems (88% versus 50%), although in the latter case the difference was not statistically significant.

Subjects who had recently binged on ecstasy were also more likely to report problems related to their use of this drug. Overall, all but one of these subjects (96%) reported at least one problem compared with 43% of those who had not. In particular, those who had binged on ecstasy in the last six months were significantly more likely to report financial problems (82% versus 26%; Fisher’s exact $p < 0.001$) which they perceived as being related to their ecstasy use.

An index of total ecstasy-related problems was calculated by adding together the number of different problems reported (occupational, relationship financial, legal and other). The mean number of problems experienced was 1.3 (SD 1.1; range 0-4).

Table 13: Other ecstasy-related problems in the last six months

| Ecstasy-related problem | % males (n=27) | % females (n=23) | % total (n=50) |
|------------------------------|-------------------|---------------------|-------------------|
| Financial problems | 59 | 52 | 56 |
| Relationship/social problems | 39 | 33 | 36 |
| Occupational/study problems | 37 | 30 | 34 |
| Legal/police problems | 4 (n=1) | 0 | 2 |
| Other problems | 15 | 13 | 12 |

3.6.2 Alcohol and Drug Information Service data

The South Australian Alcohol and Drug Information Service (ADIS) received 5084 telephone inquiries relating to alcohol and other drugs during the 1999/2000 financial year. Of these, only 46 (0.9%) were inquiries about ecstasy. The majority were made about alcohol (36%), cannabis (25%), amphetamines (18%) or heroin (12%).

3.6.3 Summary

- ❖ *In 72% of cases ecstasy users reported occupational, relationship or financial problems that they perceived as being related, at least in part, to their use of the drug*
- ❖ *Many of these problems were relatively minor, although some constituted significant disruptions to functioning, such as the ending of relationships, inability to pay for food or rent, and loss of employment*
- ❖ *Ecstasy use did not cause legal or police problems for these users*
- ❖ *Other problems reported included experiencing mood swings*

3.7 Criminal activity

3.7.1 Ecstasy users

Twenty-four percent of this sample had committed at least one crime in the month preceding the interview (Table 14). Drug dealing was the criminal activity subjects were most likely to have engaged in, with 24% of the sample having sold drugs at least once in the month preceding the interview. Sixteen percent of the sample had sold drugs on average less than once a week in the last month and 8% had sold drugs once or more a week. No subjects reported selling drugs on a daily basis.

3.7.2 Key informants

The KI agreed that criminal behaviour is not generally associated with ecstasy use. These users tend to be reasonably affluent, and do not need to involve themselves in criminal activities to support their use of the drug. Two KI mentioned that some users steal money from friends and family members, or steal drugs from each other, but that this is rare and overall ecstasy users do not commit criminal acts. Two KI commented that ecstasy is not a drug of dependence, and that people take the drug to feel happy and euphoric; one KI stated that it makes them feel “lovey dovey”. Moreover, none of the KI reported fraudulent behaviour or violent crime amongst ecstasy users.

Table 14: Criminal activity among ecstasy users

| | % sample (<i>n</i> =50) |
|--------------------------------------|--------------------------|
| Crime committed in last month | |
| Property crime | 2 (<i>n</i> =1) |
| Drug dealing | 24 |
| Fraud | - |
| Violent crime | 2 (<i>n</i> =1) |
| Any crime | 24 |
| Arrested in last 12 months | - |

Only one subject had committed a property crime in the last month, and this same subject also reported having committed a violent crime, and dealing drugs more than once a week. No subjects had committed any fraud, and none had been arrested.

These results appear to be consistent with the finding that only eight subjects (16%) in this sample reported being in debt due to their ecstasy use, and only three (6%) had trouble paying for food and rent. Moreover, only one subject had been involved with the police. The demographic characteristics of the sample presented in an earlier section (3.1) also support the low crime rate reported by subjects. Only three subjects (6%) were unemployed, with most either studying, or working on a full or part-time basis. Moreover, subjects residing in areas of Adelaide that are associated with a lower socioeconomic status were not over-represented in this sample.

3.7.3 Summary

- ❖ *Relatively few ecstasy users are involved in criminal activity apart from dealing drugs, reported by 24% of the sample*
- ❖ *None of the ecstasy users were arrested in the last 12 months*

3.8 Perceptions of police activity towards participants in the party drug market

3.8.1 Ecstasy users

The majority of the sample either could not comment on whether there had been any recent changes in police activity (78%), or reported that police activity had remained stable over the last six months (14%). Only four subjects (8%) reported an increase in police activity towards party drug users (Table 15). These subjects were asked to describe the perceived changes in more detail. They consistently stated that there had been an increase in police officers appearing during and after rave parties, both at private and public venues. However, this increase in police presence does not appear to have affected the availability of the drug, with only 14% of subjects reporting that police activity has made it more difficult to obtain or 'score' the drug. Similarly, 60% of subjects had not had their friends arrested or cautioned by the police recently. One-third of subjects felt that there had been no change in the number of friends arrested, or that the number had decreased. Only 16% believed that a greater number of their friends had been approached by the police in the last six months.

Table 15: Perceptions of police activity among ecstasy users

| Perception | % sample (n=50) |
|--|-----------------|
| Changes in police activity in last six months | |
| Don't know | 78 |
| More activity | 8 |
| Stable | 14 |
| Less activity | - |
| More difficult to obtain drugs in last six months | |
| Yes | 14 |
| No | 86 |
| Friends arrested recently more in last six months | |
| None of friends arrested | 60 |
| Less | 8 |
| Stable | 16 |
| More | 16 |

3.8.2 *Key informants*

The two police officers who were interviewed as KI were specifically asked to comment on their experiences with ecstasy. They reported that there are not many people arrested for ecstasy dealing and/or use as it is difficult to identify such people. They also observed that it is unusual to find a specific ecstasy dealer, as they usually deal in a number of different drugs. Similarly, they reported a low frequency of ecstasy seizures. Every so often there is a large seizure, but they usually occur by accident rather than by design.

In general, the KI had not observed any changes in police activity towards ecstasy users over the last six months.

3.9 Other trends in the party drug market

There were 23 subjects (46%) who had perceived recent changes in the party drug market in Adelaide. A wide range of changes were noted, but several common themes emerged. The trend most consistently reported by users was a general increase in the use and availability of ecstasy and other drugs. Of the 23 subjects, 21 (91%) reported observing these increases, and some also reported an increase in the volume of ecstasy used per session. Ten subjects reported an increase in use among their friends, or by the subjects themselves. Ten subjects also reported an increase in people injecting drugs, especially methamphetamine. One subject commented that much of this is occurring “underground”, although there is more acceptance and tolerance of injecting drug use among the general community of drug users. Five subjects reported an increase in younger people taking ecstasy, with one person attributing this to her own reduction in using the drug: “looking at the younger kids out of it made me realise...”. There were three subjects who commented on the increased number of different types of drugs around at the moment.

Another common theme reported by nine of the 23 subjects (39%) relates to concerns and fears about the purity of drugs at the moment. Four subjects said there were a lot more “dodgy” or “fake” drugs around that you can’t trust, one subject even referring to them as “unreliable and scary”. Four subjects believed that there has been a reduction in drug purity, along with an increase in homemade drugs, and a wide variety of different types of ecstasy pills are available.

Finally, subjects were asked at the end of the interview to make any other comments about ecstasy or other party drugs that they felt to be relevant. There were 28 subjects (56%) who did so, and again, many common themes emerged from these comments.

Of the 28 subjects who made additional comments, nine believed that ecstasy should be legalised, and available by prescription. The justifications for this included that ecstasy is a harmless drug that makes people feel good, and that it is less harmful than other legal drugs such as alcohol and tobacco. One subject also felt that legalisation would help to control the purity and content of ecstasy.

Four subjects reported how ecstasy makes them feel. It is seen as a nice way to relax, that it makes people happier and more understanding, and that it “makes the world seem like a nicer place”. A further five subjects believed that ecstasy users have been misjudged: “Compared with alcohol users, ecstasy users are non-violent and placid, and people should make the effort to learn about the drugs and those who take them, and not just judge them outright”. Two of these subjects said that not all drugs are “bad”, that users just need to be careful when taking them. One subject said it is a pity there is such a negative attitude towards drug users who are simply choosing to take these drugs instead of others such as alcohol.

Three subjects criticised the police, stating that they are “too harsh”, and shouldn’t be so hard on users. One subject commented that police seizures of all the good imports of ecstasy that enter Australia only leads to the manufacturing of local products that are less pure.

It is notable that only one subject conceded that drugs can “mess with peoples’ heads”. All the other comments were centred on the positive aspects of the ecstasy and other party drugs, and reports that police and legislators should acknowledge these aspects.

4.0 SUMMARY AND IMPLICATIONS

4.1 Summary of results

4.1.1 Demographic characteristics and patterns of drug use

The results of this study indicate that party drug users, a population defined in this study by regular use of tablets sold as ‘ecstasy’, tend on the whole to be young, well-educated, heterosexual, from English speaking backgrounds and likely to be employed or engaged in studies. Most subjects had not had contact with police or other social authorities and did not come from socially deprived backgrounds, and few engaged in crime other than drug dealing. None were currently in treatment for a drug-related problem, and only one had a prior criminal conviction .

Subjects typically began to use ecstasy in their late teens, and frequency of use varied from once per month to three days per week, with 34% of the sample using ecstasy at least once per week. Over half (54%) had used ecstasy continuously for more than 48 hours in the last six months. Thirty percent of the sample had used more than four tablets in a single use episode in the last six months, and 44% reported that they ‘typically’ used more than one tablet. Consistent with other reports, use of ecstasy was primarily through oral routes, but a substantial minority (16%) had injected ecstasy.

As with other Australian samples of party drug users (e.g., Boys, Lenton & Norcross, 1997), it is accurate to describe this sample as extensive polydrug users, 40% of whom nominated ecstasy as their favourite drug. The average number of drugs ever tried by subjects (including ecstasy) was 11.5, and an average of 8.5 drugs had been used in the last six months. Substantial percentages of the sample regularly used drugs such as cannabis, amphetamine, methamphetamine, tobacco, nitrous oxide,

and alcohol concurrently with ecstasy, and drugs such as cannabis, nitrous oxide, alcohol, amphetamine and methamphetamine to ease the 'come down' or recovery period following acute ecstasy intoxication. This emphasises the need for research and education on the effects of such polydrug use.

On average, subjects reported 10.6 recent physical and 4.5 recent psychological side-effects which they perceived as due, at least in part, to their use of ecstasy. The physical side-effects that were solely attributed to ecstasy use included blurred vision, vomiting, tremors or shakes and stomach pains. Psychological side-effects were generally not attributed solely to ecstasy use. However, the most commonly reported ones included depression, paranoia and anxiety. These side-effects were consistent with those described in earlier reports of ecstasy users, although current Australian research reports a higher incidence of side-effects among users than earlier research conducted internationally (e.g., Hayner & McKinney, 1986; Cohen, 1995; Curran & Travill, 1997; van Laar & Spruit, 1997). Ecstasy-related occupational, relationship and financial problems were also reported relatively frequently by the present sample, and although many of these were minor, some constituted significant disruptions to functioning, including loss of employment, ending of relationships, and an inability to pay for food or rent.

4.1.2 Price, purity and availability

Forty-five dollars is currently the standard price for a single tablet of ecstasy in Adelaide. The price has generally remained stable or decreased in the last six months. Nearly all ecstasy users reported that ecstasy is easy or very easy to obtain, and that the availability has generally remained stable or increased in the last six months. Ecstasy is readily obtained from a number of sources, in the majority of cases from friends and acquaintances, or from dealers. Although the majority of ecstasy is sold in tablet form, the KI reports indicated there has been an increase in the number and types of ecstasy available, particularly in capsule form, as well as liquid ecstasy.

Reports of the purity of ecstasy were inconsistent in both ecstasy users and the KI, with just over half of ecstasy users finding the current purity to be medium or high, and one-third reporting that it fluctuates. The KI suggested that the level of purity is dependent on who manufactures the drug; whether it is locally made or imported from interstate or overseas.

The subjects in this sample were also able to comment on the price, purity and availability of many other party drugs, including LSD, methamphetamine and MDA, and to a lesser degree, ketamine and GHB. Overall, the results indicated that these drugs are readily available, of medium to high strength, and that the price has generally remained stable over the last six months. The fact that most subjects felt confident enough to comment on these drugs suggests that they were quite experienced in using other party drugs, and that there is a definite market for these drugs in Adelaide.

4.1.3 Comparison with other data sources

It is useful to compare the results reported in this study with those in the main IDRS study (Humeniuk *et al.*, 2001). The main study found that ecstasy was not widely used among the group of injecting drug users: 58% reporting ever having used ecstasy, and 16% had used in the last six months. The subjects in the main study mostly used heroin and amphetamines, and had a lower prevalence of use of other party drugs such as hallucinogens and inhalants. In contrast, only two ecstasy users in this sample had ever used heroin (4%), and none were current users of the drug. This suggests that the subjects in the main study are a distinct and separate group from the ecstasy users interviewed in this study, and thus validates extending the main study to include a party drugs component.

It is interesting that the rates of injecting ecstasy were much higher in the main IDRS study. One-third of the DU's had ever injected ecstasy, and 10% had injected in the last six months. This contrasts with the ecstasy users in this study. Only 16% of these had ever injected ecstasy, and 6% had done so in the last six months. Moreover, only 12% of subjects in the main study had taken ecstasy orally in the last six months, compared with all of the ecstasy users in this study. This also supports the finding that the ecstasy users in the party drugs component comprise a separate group of drug users, distinct from the IDU's interviewed in the main study.

The demographic characteristics of ecstasy users were generally similar to those in the main IDRS study who had used this drug. A slightly lower percentage of ecstasy users were male (54% versus 58%), and the ecstasy users were a little younger (mean age 23 years versus 29 years). However, subjects in the main study were more likely to be unemployed (47% versus 6%) and currently be in drug treatment (35% versus 0%).

The age characteristics of the ecstasy users was consistent with NDS data reporting use in the general population. These data indicate that ecstasy use is most prevalent among the 20-29 year age group. However, the NDS data report higher rates of ecstasy use among males. In contrast, the results of this study show that ecstasy use is fairly evenly distributed among males and females. It is possible that there has been a change since the NDS survey was carried out in 1998, with an increase in the number of females using ecstasy in recent times.

The average price of ecstasy reported in this study by both users and KI was consistent with the main IDRS study, which reported that the price of ecstasy has decreased, ranging from \$25 - \$50. It was also reported that the purity of ecstasy has remained relatively stable at 37%. There was no consistent agreement in the present study, about half believed the purity was medium to high, but a substantial percentage said it fluctuated.

4.2 Methodological issues

One of the main aims of this study was to examine the feasibility of using the extant IDRS methodology to monitor emerging trends in the party drug market. The results contained in this report clearly demonstrate that, with minor adjustments to the

methodology, the IDRS can successfully monitor trends in this market. Given that 2000 was the first year that the party drugs component was carried out in Adelaide, it will be interesting to document any changes in the following year, and to draw comparisons between the data in this report and those obtained in 2001.

4.2.1 The appropriate sentinel population

The 2000 IDRS party drugs component clearly demonstrated that it is possible to access a sentinel population of illicit drug users who are able to provide information about emerging trends in the party drug market. This population is necessarily different to the population of injecting drug users (IDU) that are accessed in the main IDRS. In support of the need to interview different drug users in the two components is the observation that only 16% of the IDU sample had used ecstasy in the six months preceding the interview, on an average of only four days (Humeniuk *et al.*, 2001). Similarly, only 9% of the IDU sample reported using inhalants such as amyl nitrate or nitrous oxide in the last six months, compared with 32% and 74%, respectively, of the ecstasy users in this study. However, a reasonably high percentage of the IDU sample had used hallucinogens in the same time-frame (19.6%), on an average of 3 days. This was still much lower than the rate reported by the ecstasy users in this study, 50% of whom had used LSD in the last six months. Clearly, the limited exposure of the IDU to drugs such as ecstasy renders this group inappropriate to provide the detailed information required in the party drug component. It is therefore reassuring that an appropriate group of illicit drug users, who were able and willing to provide the required information, were accessed with relative ease. Moreover, this sample contained a very small percentage of past heroin users (4%), and no subjects were current users of the drug. Furthermore, statistical analyses throughout the report demonstrated that the results pertaining to ecstasy-related harm could not be accounted for by an over-sampling of intravenous polydrug users.

4.2.2 Number of subjects to be interviewed

Funding restrictions limited the size of the South Australian sample to 50 subjects, which precluded multivariate analyses. Nonetheless, reliable indicator data were obtained. Where possible, future user surveys will have larger samples in order to allow for such analyses to be performed.

Larger sample sizes are preferred as ecstasy is a relatively new drug in Australia, having been widely used for only a decade. Although it is likely that it will remain an established part of the illicit drug landscape in this country, equivalent indicator data sources such as those that exist for heroin or other illicit drugs are yet to be developed. For example, in the main arm of the IDRS, the results are validated by their consistency with the Australian NSP Survey (MacDonald & Topp, 2000). Other data, such as those from the Australian Bureau of Statistics on overdose deaths and toxicology results from state drug analytical laboratories from the urine tests of intoxicated drivers and methadone clients, are also used to validate the subjective reports of IDU and KI to allow more confidence to be placed in the results. Such established and varied sources of indicator data do not yet exist for party drugs, and

thus the main sources of data currently available to allow the monitoring of trends in these markets are the reports of users themselves. In a situation in which the monitoring of trends is heavily dependent on information collated from users, a methodologically rigorous study will be one that seeks to interview a broad range and large number of users.

Related to this is the fact that, as yet for ecstasy, there is no professional equivalent to the methadone worker or NSP worker who is able to provide a wealth of information about heroin or amphetamine injectors, knowledge of which the IDRS can take advantage. By their very nature, ecstasy users are highly functioning members of society who are likely to be employed or engaged in studies. They are less likely to present for treatment, to have major legal problems or to die from drug-related complications. In general, they are a much less 'visible' population of illicit drug users than IDU. Therefore, the sample of KI recruited for the party drug component of the IDRS reported their main contact with ecstasy users was through personal or social networks. Although many were drug treatment workers, they had limited experience with ecstasy compared with other drugs (see Section 2.2). Thus, in many cases, KI who are appropriate for the party drug component of the IDRS are not necessarily as knowledgeable as are KI who participate in the main IDRS. Accordingly, this leads to a heavier dependence on the data collected in the user interview component, such that interviewing a larger sample of users is desirable.

4.3 Implications

The results contained in this report clearly demonstrate that, with minor adjustments to the methodology, the IDRS can successfully monitor trends in the party drug market. This is information that cannot be obtained through the extant IDRS, due to the low rates of exposure of IDU to party drugs such as ecstasy and LSD. NDS Household Survey data and the reports of both ecstasy users and KI indicate that over the last decade, ecstasy has become firmly entrenched in the illicit drug landscape of this country, and all indications are that this is unlikely to change. Indeed, a youth culture that revolves around the use of drugs like ecstasy and associated trends in music and fashion is evident not only in Australia but throughout the Western world (EMCDDA, 2000).

It remains unclear what the long-term effects of chronic ecstasy use will be, but the evidence continues to mount that the drug is neurotoxic to serotonergic regions of the brain and that current heavy users may be likely to experience elevated risk of mood disorders and cognitive dysfunctions in the future (Boot, McGregor & Hall, 2000; Hegadoren, Baker & Bourin, 1999). It must be acknowledged that it is difficult to ascertain exactly what users take when they purchase tablets purported to contain ecstasy in Adelaide, as well as to unravel the effects of concurrent polydrug use. However, this is not reason enough to discontinue the sort of monitoring in this market which the IDRS has successfully conducted in other Australian illicit drug markets for five years (Darke, Hall & Topp, 2000). Substantial rates of drug-related harm were reported by the current sample of ecstasy users, as they were in 1997 (Topp *et al.*, 1998). Although authorities have continued to fight to reduce the importation and local manufacture of drugs such as ecstasy in this country, they remain readily available to interested consumers, and in fact have become cheaper,

purier, and more widely used since this time. The importance of continued monitoring of such a dynamic market, the current participants of which are likely to experience significant harm both presently and in the future, cannot be understated.

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