# Adapting the IDRS methodology to monitor trends in party drug markets


## Findings of a two-year feasibility trial

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| | |
|---|---|
| **ACON** | AIDS Council of NSW |
| **ACPR** | Australasian Centre for Policing Research |
| **ADIS** | Alcohol and Drug Information Service |
| **AFAO** | Australian Federation of AIDS Organisations |
| **AFP** | Australian Federal Police |
| **AGAL** | Australian Government Analytical Laboratories |
| **CDHA** | Commonwealth Department of Health and Aging |
| **DASC** | Drug and Alcohol Services Council (South Australia) |
| **GHB (GBH)** | Gamma-hydroxy-butyrate ('grievous bodily harm') |
| **IDRS** | Illicit Drug Reporting System |
| **IDU** | Injecting drug user(s) |
| **KI(S)** | Key Informant(s) |
| **LSD** | *d*-lysergic acid |
| **MDA** | 3,4-methylenedioxyamphetamine |
| **MDMA** | 3,4-methylenedioxymethamphetamine |
| **NDARC** | National Drug and Alcohol Research Centre, University of New South Wales |
| **NDLERF** | National Drug Law Enforcement Research Fund |
| **NDS** | National Drug Strategy |
| **NIDIP** | National Illicit Drug Indicators Project |
| **NSP** | Needle and syringe program |

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## EXECUTIVE SUMMARY

In 2000, the National Drug Law Enforcement Research Fund (NDLERF) funded a two year, two state trial to examine the feasibility of monitoring emerging trends in the markets for ecstasy and other 'party drugs' using the existing IDRS methodology. The trial was funded in NSW and QLD by NDLERF, and the Drug and Alcohol Services Council (DASC) provided funding to allow the trial to proceed in SA. Individual state results are reported elsewhere (Topp & Darke, 2001, Topp et al 2002a, Rose & Najman 2002a, McAllister et al 2001, Longo et al 2001, Longo et al 2002). This report presents an overview of the results of the two-year trial and a discussion of the feasibility of marketing the markets for party drugs using the IDRS methodology. The reports focuses on two main issues:

### (1) METHODOLOGY

The report examines the feasibility of monitoring trends in the market for party drugs using the extant IDRS methodology. It discusses the strengths and weaknesses of such a system, and considers the methodological issues involved; and

### (2) RESULTS

The report presents the results of the two year trial in NSW, QLD and SA. To demonstrate the value of collecting comparable data over time, key results of a comparable study of ecstasy users conducted in Sydney in 1997 are also presented. The report discusses data relating to trends over time in the demographic characteristics and patterns of drug use among party drug users, their criminal behaviour, and perceived party drug-related harms. The implications of the results for our understanding of the nature and characteristics of party drug markets are discussed.

### 1. Methodology

The trial was designed to follow the methodology employed in the main IDRS. Accordingly, we sought to triangulate data collected from three different sources:

i) a quantitative survey of a sample of an appropriate sentinel population of drug users (equivalent to the injecting drug users that are interviewed in the main IDRS in terms of possessing a broad knowledge of a range of drugs). The sentinel population chosen was people who regularly used tablets sold as 'ecstasy'.

ii) a qualitative survey of key informants (KIS) who, through the nature of their work, have regular contact with party drug users; and

iii) a collation of extant indicator data sources, such as may be available from health and law enforcement agencies, from specialist surveys of drug use, and so on.

Thus, with minor adjustments to the extant methodology, the IDRS was adapted to examine the feasibility of monitoring trends in the markets for ecstasy and other party drugs. Regular ecstasy users were administered a quantitative interview schedule. Qualitative interviews were conducted with KIS and the data were used to contextualise and validate the reports of users. There are fewer sources of relevant indicator data for party drugs than for other drugs such as

heroin. In some instances this prevented a triangulation of data sources, the strength of the main IDRS.

Overall, the results of the feasibility component of the trial suggest that the capacity of the party drugs IDRS to collect detailed, reliable and valid data about party drug markets is a direct function of the size of those markets. The trial has demonstrated that a system that employed this methodology would allow the successful monitoring of trends in the markets for party drugs that are relatively widely used, but would be less sensitive in monitoring trends in the markets for party drugs that are used by only small proportions of the total population.

Currently, ecstasy is a party drug that is used widely enough that reliable and valid information relating to its market can be collected. Drugs such as ketamine and GHB, at this stage, appear not to be used widely enough among party drug users, to allow the collection of anything other than indicative information relating to their markets from this study. This is due to the relatively small number of participants in the party drugs survey with reliable knowledge of these markets. To examine in detail the patterns of use and associated harms of the less common party drugs, a sample recruited on the basis of their use of each drug would be required. The prevalence of use of party drugs such as ketamine and GHB may continue to increase, and may reach the point where a sufficient proportion of the total population of party drug users was able to provide information about them for that information to be considered reliable. Were this to be the case, the methodology employed in this trial would allow the reliable monitoring of key market indicators such as their price, purity and availability. However, while markets remain limited it is argued that indicative information about these markets constitutes sufficient monitoring. The methodology employed in this trial would detect any significant expansion of these markets, and, if and when that occurred, the need for more detailed data collections specific to a particular drug market could be reassessed.

## 2. Results

A total of 544 ecstasy users were recruited and interviewed in the two years of the trial. One hundred and ninety four participants were involved in the 2000 survey (NSW, n=94; QLD, n=50 and SA, n=50). In 2001 there were 350 participants recruited (NSW, n=163; QLD, n=117 and SA, n=70).

*Demographic characteristics*

The results of the two year trial indicate that party drug users, a population defined in this study by the regular use of tablets sold as 'ecstasy', tend to be young, relatively well-educated, and likely to be employed or engaged in studies. The majority of participants had not had contact with police or other social authorities, did not come from socially deprived backgrounds, and few engaged in crime other than low-level drug dealing. Few participants were currently in treatment for a drug-related problem and a small proportion had previously been incarcerated.

*Patterns of ecstasy use*

There was variation in patterns of party drug use. Typically participants first used ecstasy in their late teens, and their current frequency of use varied from once per month to a few days per week. Twenty four percent of the 2000 sample and 32% of participants in 2001 reported that they had used ecstasy between weekly and fortnightly in the six months preceding the interview, and a majority had binged on ecstasy (i.e. used ecstasy continuously for more than 48 hours

without sleep) in the preceding six months. More than half of participants reported that they 'typically' used more than one tablet. Consistent with earlier reports, participants primarily administered ecstasy orally. Although substantial proportions of participants (14% in 2000, 13% in 2001) reported they had injected ecstasy at some time, however very few participants reported that injection was their preferred route of ecstasy administration.

*Patterns of polydrug use*

Participants could be characterised as extensive polydrug users, over half of whom nominated ecstasy as their favourite or preferred drug. Substantial minorities regularly used other drugs concurrently with ecstasy, including alcohol, cannabis, tobacco, methamphetamine, and amyl nitrate. Most participants also used other drugs to ease the 'come down' or aversive recovery period following acute ecstasy intoxication, including cannabis, alcohol, tobacco and benzodiazepines. These apparently normative patterns of polydrug use emphasise the need for research and education on the effects and risks of such practices.

Figures relating to the prevalence and frequency of use of party drugs other than ecstasy suggested that although the use of drugs such as ice and GHB appears to have increased, there are relatively few dedicated users. Much of the use of these drugs appears to be opportunistic in nature, and they are not as widely or as consistently available as ecstasy. Users of these drugs are invariably experienced users of ecstasy, the 'staple' drug, or fundamental core, of the party drug market.

*Price, purity and availability of ecstasy*

Across all three states, the price of a tablet either remained stable (QLD) or decreased (NSW, SA) between 2000 and 2001. In recent years, there has been a steady decrease in the average price in NSW of a single ecstasy tablet, from $50 in 1997, to $40 in 2000, to $35 in 2001. In SA an ecstasy tablet sold for $45 in 2000 and $40 in 2001, while in QLD the price was reported to be $40 in both years. Tablets sold as ecstasy are readily available in all three states; the majority of users and key informants in both 2000 and 2001 described the drug as 'very easy' or 'easy' to obtain. However, the proportion of the burgeoning ecstasy market that is sourced by locally produced 'duplicate' tablets has increased markedly since 1997. The Australian Bureau of Criminal Intelligence (ABCI, 2002) recently estimated that up to 80% of tablets sold as ecstasy in Australia are locally manufactured duplicate tablets that contain low-dose methamphetamine, sometimes in combination with another drug such as ketamine, rather than MDMA (3,4-methylenedioxymethamphetamine), the compound to which the term 'ecstasy' originally referred. Almost all of the tablets that contain MDMA are likely to have been imported; few clandestine manufacturers in Australia have access to the necessary precursors or the required expertise to produce true MDMA.

The average purity of seizures of tablets actually containing MDMA analysed by NSW forensic laboratories has steadily increased since the mid-1990s, rising from an average of 26% purity in 1996/97, to 42% in 2000/01. In QLD in 1999/2000 103 samples were analysed with the majority (76%) between 20%-39.9% purity while in 2000/01, 75% of the 68 samples were between 20-49.9% purity (Rose & Najman 2002). In SA, the purity of seizures increased from 32% in 1998/99 to 37% in 1999/2000 (Longo et al 2002).

'Imports' (imported tablets) tend to be more highly sought after than locally manufactured imitations, with users willing to pay more for a tablet they believe is imported. The supply of

imported MDMA tablets cannot match demand, and the market for 'duplicate' pills remains strong among users who are not overly fussy about which particular stimulant combination is contained in the tablets they consume.

*Price, purity and availability of other party drugs*

Relatively small numbers of participants felt confident enough of their knowledge about party drugs other than ecstasy to comment on their price, purity and availability, suggesting relatively limited exposure to such drugs. Much of the use of less common party drugs, such as MDA or ketamine, appears to be opportunistic in nature, and therefore infrequent relative to the use of the widely used party drug ecstasy. Many people who report the recent use of such drugs do not deliberately seek them out, and hence, are unfamiliar with market indicators such as changes in their price, purity and availability. The low prevalence rates of the regular use of these drugs are indicative of the small size of their markets.

*Self-reported harms related to ecstasy and other drug use*

In both years of the trial, participants reported a broad range of recent physical and psychological side-effects which they perceived as due, at least in part, to their use of ecstasy. There was a high level of consistency in the side-effects reported in the two years of the trial; for example, loss of energy, trouble sleeping, mental confusion and irritability had been experienced in the preceding six months by the majority of both samples. Reported side-effects were also consistent with those described in earlier reports of ecstasy users, although it appears that current Australian research reports a higher incidence of side-effects among users than earlier, international research. Ecstasy-related occupational, relationship and financial problems were reported among both samples, and although many of these problems could be considered relatively minor, some constituted significant disruptions to functioning, including loss of employment, the ending of relationships, and the inability to pay for food or rent.

*The expansion of the party drug market*

It was possible to triangulate data from all three sources (ecstasy users, KIS and indicator data) regarding reports of the expansion of the market for ecstasy. Both users and KIS in the two year trial consistently reported that the number of people using ecstasy had increased and that, in recent years, ecstasy has become a mainstream drug firmly established in Australia's illicit drug landscape. These impressions are validated by the results of the 1998 NDS Household Survey, which indicated that prevalence of both lifetime and recent use of ecstasy in Australia had doubled since the 1995 survey. The 2001 survey also suggested an increase in lifetime prevalence of ecstasy use since 1998 (to 6.1% of the general population), despite the fact that the lifetime prevalence of use of almost all illicit drugs appeared to decrease over the same timeframe. The demographic characteristics and self-reported patterns of drug use of ecstasy users interviewed in 2000 and 2001 were strikingly similar, suggesting that the main change in the market has been its size rather than in its nature. In 2001, similar sorts of people reported using ecstasy and other drugs in similar ways to those interviewed earlier, but all indications were that they currently exist in greater numbers.

Although overall rates of polydrug use remained stable between 2000 and 2001, the results suggested that the use of specific drugs varied over that time. Between 2000 and 2001, the prevalence and frequency of use of some drugs appeared to have decreased in some jurisdictions, including LSD (in NSW and QLD), MDA (in all states) and inhalants such as amyl nitrate and

nitrous oxide (in NSW and SA). However, over the same period, the prevalence of use of other drugs, including GHB and ice, have appeared to haveincreased in all states. It seems that as the demand for and/or availability of one illicit drug wanes, the demand for and/or availability of another increases, creating its own niche in a changing range of party drug options. Ecstasy is the fundamental 'staple' of the party drug market and is consistently widely available. The demand for and availability and use of other party drugs appear more limited and erratic, and there are relatively few dedicated users of these drugs.

*Conclusion*

Despite Australia's continued effort to reduce the importation and local manufacture of ecstasy, the drug most fundamental to party drug markets, in recent years it has remained readily available in NSW, SA and QLD. Between 2000 and 2001, the price per tablet decreased or remained stable in all states, and between 1998 and 2001, the prevalence of self-reported use among the general population increased to 6.1% (AIHW, 2002). The weight in kilograms of detections of MDMA made at the border by the Australian Customs Service steadily increased between the financial years 1997/98 and 2000/01.

Since the mid-1990s, the market for 'ecstasy' has been characterised by an increasing proportion of locally manufactured 'duplicate' tablets that do not contain MDMA at all. Originally designed to meet the unmet demand for true MDMA (the majority of which is imported into Australia), the preponderance of 'duplicate' tablets has been associated with the evolution and growth of a less discerning marketplace. Independent of the demand for MDMA, there is now also marked demand for tablets that users are equally as likely to call 'pills' as 'ecstasy', and which may contain a range of stimulant cocktails. Although within this market, 'real Es' (tablets containing MDMA) are more expensive and more sought-after than a 'pill', it is likely that a substantial proportion of consumers have never used real MDMA; and that an equally sizeable, if not larger, proportion of less informed users would not recognise it if they had. Thus, in the recent evolution of Australia's ecstasy market, demand that was originally specific to MDMA took on a life of its own when domestic clandestine manufacturers discovered that some users were willing to purchase an easy-to-manufacture proxy 'pill' rather than refrain from using 'ecstasy' altogether. Those to whom 'pills' proved unacceptable eventually left the market, to be replaced by naïve participants with no experience of any other than contemporary market conditions. The memory of the subjective experience of MDMA, and the capacity to recognise its unique effects in the event that they are re-experienced, is likely to be held by a declining proportion of so-called 'ecstasy' users.

Despite the variability in the contents of tablets sold as 'ecstasy', it remains the case that the market demand for the tablets continues to grow, and that substantial proportions of samples of users report ecstasy-related harm. Continued monitoring of this market will enable the collection and dissemination of information that will provide the appropriate basis for the development of timely policy responses to market developments. The value of the main IDRS became increasingly apparent as the number of years over which comparable data has been collected increased (Darke *et al.*, 2002 a,b,c; Topp *et al.*, in press; Topp & McKetin, in press). It seems likely that this would also prove the case in the party drugs IDRS if in the future the collection of comparable data on an annual basis was maintained.

## 1.0 INTRODUCTION

The Illicit Drug Reporting System (IDRS) is an ongoing study funded by the Commonwealth Department of Health and Aging (CDHA) and has been conducted annually in NSW since 1996, in SA and VIC since 1997 and in all states and territories of Australia since 1999. The purpose of the IDRS is to provide a coordinated approach to the monitoring of the use of Australia's main illicit drugs, in particular, methamphetamine, cannabis, cocaine and heroin. The IDRS is intended to serve as a strategic early warning system, identifying emerging trends of local and national concern in various illicit drug markets. It 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 the collation of indicator or secondary data sources, such as surveys of drug use in the general population, data on drug seizures and importations from the Australian Customs Service, arrest data, hospital accident and emergency data and so on. These three data sources are triangulated against each other in order to minimise the biases and weaknesses inherent to 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' IDRS were New South Wales (NSW) and Queensland (QLD). The Drug and Alcohol Services Council (DASC) of South Australia (SA) agreed to provide funding to allow the trial to also proceed in that state. It was decided that, wherever possible, consistency should be maintained between the main IDRS and the 'party drugs' IDRS. Consequently, as in the main IDRS, the focus of the party drugs IDRS was on the capital cities of the participating states, as new trends in illicit drug markets are likely to emerge in large cities rather than regional centres or rural areas.

The feasibility trial was designed to follow as closely as possible, the methodology employed in the main IDRS. Accordingly we sought to triangulate data from;

1) a quantitative survey of a sample of an appropriate sentinel population of drug users (equivalent to the injecting drug users that are interviewed in the main IDRS in terms of possessing a broad knowledge of a range of drugs). The sentinel population chosen was people who regularly used tablets sold as 'ecstasy'.

2) a qualitative survey of key informants (KIS) who, through the nature of their work, have regular contact with party drug users; and

3) a collation of extant indicator data sources, such as may be available from health and law enforcement agencies and from specialist surveys of drug use.

Like the main IDRS, the party drugs IDRS was designed to enable the monitoring of trends over time through the collection of comparable data on an annual basis. To demonstrate the value of continued data collection over time, the results the two years of the trial are presented in this report. The detailed reports of the NSW findings (Topp & Darke, 2001; Topp et al 2002b) also presents comparable results drawn from a study of ecstasy users conducted by NDARC in Sydney in 1997 and funded by the (then) Commonwealth Department of Health and Family Services (Topp et al., 1998; 2000).

The results presented in this report summarise data collections conducted in three jurisdictions over the two year period. The statistical constraints of drawing comparisons over time and across jurisdiction are considered more fully in Section 4.3.3, but suffice to note that the methodology of the data collection in both years of the trial were identical, including the criteria for participation, questions asked, recruitment methods and statistical analyses

Data on other drug classes at the jurisdictional levels are presented in other IDRS reports (Bruno & McLean, 2002; Darke et al., 2002; Fry & Miller, 2002; Hargreaves & Lenton, 2002; Longo et al., 2002; Rose & Najman, 2002; O'Reilly, 2002; Williams & Rushforth, 2002). A national overview of trends in other illicit drug markets was presented in *Australian Drug Trends 2001* (Topp et al., 2002).

## 1.1 Aims of the trial

The trial aimed to investigate the feasibility of adding ecstasy and other party drugs to the list of drug classes monitored by the IDRS using the extant IDRS methodology. The trial aimed to examine the demographic characteristics, patterns of ecstasy and other drug use and perceived harms associated with use, the current price, purity and availability of ecstasy and other party drugs from a sample of regular ecstasy users interviewed in NSW, QLD and SA in 2000 and 2001.

The trial also aimed to identify emerging trends in the party drug market that may require further investigation and to examine jurisdictional differences in party drug use.

The feasibility study aimed to identify methodological issues involved in the examination of party drug markets and to investigate the extent to which the conduct of the party drugs IDRS is cost effective in terms of improvement in the quality of information obtained.

## 2.0 METHOD

### 2.1 Defining the appropriate sentinel population of illicit drug users

The first step in adapting the methodology of the main IDRS to enable the monitoring of trends in the markets for party drugs was to define an appropriate sentinel population of drug users. This population was to be considered equivalent to the injecting drug users that are interviewed in the main IDRS in terms of possessing a broad knowledge of the markets of interest. For the reasons outlined below, the sentinel population chosen consisted of people who engaged in regular use of tablets sold as 'ecstasy'.

Although a range of drugs fall into the category 'party drugs', ecstasy is the most widely used. It is the only party drug that can rightfully be considered one of the main illicit drugs used in Australia. A growing market for ecstasy (tablets sold purporting to contain 3,4-methylenedioxymethamphetamine [MDMA]) has existed here for more than a decade. In contrast, other drugs that fall into the class of 'party drugs' have either declined in popularity since the appearance of ecstasy in this country (e.g., LSD), fluctuate widely in availability (e.g., 3,4-methylenedixoyamphetamine [MDA]), or are relatively new in the market and are not as widely used as ecstasy (e.g., ketamine and gamma-hydroxy-butyrate [GHB]). We suggest that it would be impossible to identify a regular user of, for example, GHB or ketamine, who was not also an experienced user of ecstasy, whereas the reverse will often be the case. Ecstasy is the first party drug which young Australians who choose to use illicit drugs will experiment; but only a minority of these users will go on to experiment with the less common party drugs such as GHB and ketamine.

The entrenchment of ecstasy in Australia's illicit drug markets relative to other party drugs underpinned the decision that regular use of ecstasy could be considered the defining characteristic of the target population, namely, party drug users. A sample of this population was successfully recruited and interviewed in 2000, and was able to provide the data that were sought. Therefore, this component of the trial remained unchanged in 2001.

### 2.2 Survey of ecstasy users

#### *2.2.1 Recruitment*

In the first year of the trial, ecstasy users were interviewed in August and September 2000 in NSW and SA. Interviews in QLD were dispersed with most in November and December 2000. However, it became apparent that, because the interview schedule focused primarily on the six months preceding the interview, some party drug use was missed because the Christmas/New Year and summer holiday period was not captured within that timeframe. For this reason, it was recommended in the report of the first year of the trial (Topp & Darke, 2001) that the interviews be held earlier in the calendar year. Consistent with that recommendation, data collection for the second year of the trial was completed by the end of July 2001. After the first year of the trial we recommended that a sample of 50 ecstasy users (as stipulated in the NDLERF contract) was not a large enough sample and that n=100 be the target for 2001.

A total of 194 ecstasy users were interviewed for the 2000 party drugs IDRS (NSW n=94; QLD n=50; SA n=50) and 350 individuals were interviewed in 2001 (NSW n=163; QLD n=117; SA n=70). Participants were recruited through a purposive sampling strategy (Kerlinger, 1986), which included advertisements in entertainment and gay and lesbian newspapers, interviewer contacts, and 'snowball' procedures (Biernacki & Waldorf, 1981). In SA advertisements were

also put up at Universities and clothes/ music stores. '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 (e.g., Boys et al., 1997; Ovendon & Loxley, 1996; Solowij et al., 1992) and international (e.g., Dalgarno & Shewan, 1996; Forsyth, 1996; Peters et al., 1997) studies. Initial contact was established through newspaper advertisements or interviewers' personal contacts. Following interviews, participants were asked if they would be willing to discuss the study with friends who might be able to provide the desired information.

### *2.2.2 Procedure*

Participants contacted the researchers by telephone and were screened for eligibility. To meet entry criteria, participants had to be at least 16 years of age (due to ethical constraints), they must have used ecstasy at least six times during the preceding six months, and they must have been a resident of the metropolitan region for a minimum of 12 months. This criterion mimics the main IDRS IDU survey eligibility criteria in which participants have injected at least once a month in the last six months. As in the main IDRS, the focus was on the capital cities of the participating jurisdictions, as new trends in illicit drug markets are more likely to emerge in urban areas rather than in remote or regional areas.

Participants were informed that all information they provided was confidential and anonymous, and that the study would involve a face-to-face interview which would take approximately 45 minutes. All participants were volunteers who were reimbursed AUD$30 for their participation. Interviews took place in varied locations, negotiated with participants, and were conducted by interviewers trained in the administration of the interview schedule. The nature and purpose of the study was explained to participants before informed consent was obtained.

### *2.2.3 Measures*

Participants were administered a structured interview schedule based on a national study of ecstasy users conducted by NDARC in 1997 (Topp et al., 1998; 2000), which itself incorporated items from a number of previous NDARC studies of users of ecstasy (Solowij et al., 1992) and powder amphetamine/methamphetamine (Darke et al., 1994; Hando & Hall, 1993; Hando et al., 1997). The interview schedule focussed primarily on the preceding six months, and assessed demographic characteristics; patterns of ecstasy and other drug use, including frequency and quantity of use and routes of administration; the price, purity and availability of a number of different party drugs; self-reported criminal activity; perceived physical and psychological side-effects of ecstasy; other ecstasy-related problems, including relationship, financial, legal and occupational problems; and general trends in party drug markets, such as new drug types, new drug users and perceptions of police activity.

### *2.2.4 Data analysis*

For continuous, normally distributed variables, *t*-tests were employed and means reported. Where continuous variables were skewed, medians are 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 $\chi^2$. Gender differences are noted when significant. To determine the variables independently associated with injection of ecstasy, multiple logistic regressions were conducted. Odds rations (OR) and 95% confidence intervals (CI) were calculated. Backwards elimination of variables was used to remove those variables not significantly predictive of outcome, as indicated by the Wald $\chi^2$ (Hosmer & Lemeshow, 1989). To determine the variables independently associated with ecstasy-related harm, simultaneous multiple linear regressions

were conducted. All analyses were conducted using SPSS for Windows, Version 10.0 (SPSS Inc., 2000).

Data from the three states were combined to describe ecstasy users across Australia. The data collected in 2001 across all states were compared with the data collected in 2000. NSW data were also compared with data collected from a sample drawn from a national study of ecstasy users conducted by NDARC in 1997 and funded by the (then) Commonwealth Department of Health and Family Services (Topp et al., 1998; 2000). The 1997 sample derived for comparative purposes comprised of 173 ecstasy users interviewed in Sydney who had used the drug at least six times in the six months preceding the interview. Thus, comparisons drawn between the results of 2001, 2000 and 1997 were based on samples recruited using the same procedures who self-reported equivalent patterns of ecstasy use.

Data were also compared by state. Detailed state reports are reported elsewhere (Topp & Darke, 2001, Topp et al 2002, McAllister et al 2001, Rose & Najman 2002, Longo et al 2001, Longo et al 2002).

## 2.3 Survey of key informants

To maintain consistency with the main IDRS, the eligibility criterion for key informant (KI) participation in the party drug IDRS was regular (on average weekly) contact, in the course of employment, with a of ecstasy users range (at least ten) throughout the preceding six months.

Key informants were involved in a range of occupations including; involvement in the entertainment industry (DJ's, events promoters, producers in the (rave/dance) music industry), law enforcement (police officers and detectives) and health professionals (drug treatment workers, medical officers that provide first aid at entertainment venues and GP's).

A total of 46 KIS were interviewed in 2000 (NSW n=19; QLD n=15; SA n=12) and 63 KIS interviewed in 2001 (NSW n=21; QLD n=30; SA n=12).

### *2.3.1 KIS in NSW*

In NSW in 2000 the 19 key informants (15 male and four female) represented a range of occupations. Two were medical officers who provided first aid at entertainment venues such as nightclubs and dance parties, and five were health promotion workers with organisations such as the AIDS Council of NSW (ACON) and the Australian Federation of AIDS Organisations (AFAO). Two DJs were interviewed, one of whom played only at underground parties catering for a young heterosexual clientele, and one of whom played at two of Sydney's major nightclubs, one of which is primarily a gay and lesbian venue. A researcher currently conducting research into the effects of ecstasy use on memory; four party promoters; a nightclub owner; the head of security for one of Sydney's leading clubs; the manager of a dance music radio station; and two user representatives also acted as KIS for the party drugs component of the IDRS.

Seventeen KIS knew about the ecstasy users through both their work and their personal life and two obtained their knowledge solely through their work. Six stated that they worked primarily with the gay and lesbian community, two worked primarily with HIV+ gay men, and one worked primarily with youth. The extent of KIS' contact with ecstasy users ranged from one to seven days per week over the preceding six months, with an average of 3.4 days contact per week. In the week preceding their interviews, five KIS had contact with less than 10 ecstasy users, five had contact with between 10 and 20 users, three had contact with between 21 and 50 users, and six

had contact with more than 100 users. All obtained the information provided in the interview through their own contact with ecstasy users, and some also obtained information from their own observations (*n*=7), talking with their colleagues (*n*=6), and the media (*n*=1). All ecstasy KIS were either moderately (*n*=14) or very (*n*=5) certain of the information they provided.

Again in 2001, the 21 KIS (15 male and six female) interviewed represented a range of occupations. Some KIS from 2000 were interviewed again in 2001. Four KIS were health promotion workers with organisations such as the AIDS Council of NSW (ACON) and the Australian Federation of AIDS Organisations (AFAO); four were DJs; and four were employed in various roles in the nightclub industry (e.g., club managers, security personnel, etc.). Also interviewed were three party promoters; three first aid medical officers; one researcher; one manager of a dance music radio station; and one user representative.

Eighteen KIS stated that they knew about the ecstasy users through both their work and their personal life, and three obtained their knowledge solely through their work. Seven KIS worked primarily with the gay and lesbian community, two worked primarily with HIV+ gay men, and one worked primarily with youth. The extent of KIS contact with ecstasy users ranged from one to seven days per week over the preceding six months, with an average of 3 days contact per week. In the six months preceding their interviews, two KIS had meaningful contact with between 10 and 20 users, seven had contact with between 21 and 50 users, four had contact with between 51 and 100 users, and eight had contact with more than 100 users. All KIS stated that they obtained the information provided in the interview through their own contact with ecstasy users, and some also obtained information from their own observations (*n*=16) and from talking with their colleagues (*n*=15). All KIS were either moderately (*n*=16) or very (*n*=5) certain of the information they provided.

### *2.3.2 KIS in QLD*

In 2000 fifteen key informants (12 male and three female) representing a range of occupations and from various regions of Brisbane, the Gold Coast, and the Sunshine Coast were interviewed. Six KIS were either DJs, event promoters, or producers in the (rave/dance) music industry; two were GP's; three were outreach workers who provided education first aid and brief treatment interventions at entertainment venues such as raves, dance parties, and outdoor events; three were drug treatment workers; and the remaining KI was involved in the rave fashion industry in Brisbane. All KIS reported contact with users through both their work and social interactions.

Three key informants stated that they worked primarily with gay males; two worked with youth; and one worked primarily with students/youth. Two key informants reported having contact with more than 100 ecstasy users during the week prior to the interview. Two reported contact with between 51 and 100 users; three reported contact with between 21 and 50 users; five reported contact with between 10 and 20 users; and only three key informants reported contact with fewer than 10 illicit drug users during the week preceding the survey. The average number of days per week that key informants reported having been in contact with illicit drug users during the six months preceding the survey was 4.26 (*SD*=1.66). All key informants reported having obtained the information provided in the interview through their personal contact with ecstasy users, and some also relayed information from their own observations (n=9), talking with their colleagues (n=4), and the media (n=3). Ecstasy key informants were either moderately (n=6) or very (n=9) certain of the information they provided.

In 2001, the 30 KIS (25 males and five females) represented a range of connections with ecstasy users including; 11 DJs , four law enforcement personnel, three night club operators, six

rehabilitation/drug service delivery; three that worked in IT/fashion/research industries, and three outreach workers. Outreach workers provide education, first aid and brief treatment interventions at entertainment venues such as raves, dance parties and outdoor events. Key informants reported that their mode of contact with users was either: through their work and social interactions; through their work only; or through personal contact.

In the week prior to interview, ten key informants had contact with over 100 ecstasy users; eight had contact with 21-50 users; five had contact with 10-20 users; and four had contact with fewer than 10 users. Generally KIS had contact with a range of ecstasy users, with seven KIS reporting specific contact with IDU, seven with youth and six with gay users. Of the thirty key informants interviewed, most (n=25) were certain of the accuracy of the information they provided, with the remainder being either moderately certain (n=3) or a little unsure (n=2).

### *2.3.3 KIS in SA*

In 2000, 12 KI were interviewed (seven females and five males). All KI had contact with ecstasy users through their professions, and four of them 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.

In 2001, 12 KI were interviewed (six females and six males). All KI had contact with ecstasy users through their professions, and five of them also through personal and social networks. Seven of the KI worked in the health sector. Three were community drug and alcohol workers, two were drug treatment workers who were telephone counsellors for ADIS, one was a health promotion and youth worker and one was a drug and alcohol nurse at the Royal Adelaide Hospital. Two were police officers, one working in the Drugs and Organised Crime Division and one working for Operation Mantle in the city. Operation Mantle is an initiative that involves the policing of illicit drugs at a street level. Two KI were 'Ravesafe' workers, providing information on ecstasy and promoting safe behaviour at raves. These people dealt specifically with ecstasy users. The final KI was a drug dealer and had regular and frequent contact with people in the party drug scene through the nature of his work, as well as on a personal and social level.

As was found in the 2000 party drugs report, the criteria for selecting KI were not always met, and it was difficult to find a substantial number who fit these specific criteria. In their work, 10 of the 12 KI, on average, saw more than 10 users per week. The remaining two saw less than 10 users per week. Six KI spent on average one day per week with users, although three of these said that the number of days varied considerably. The remaining six reported seeing users 2-5 days per week. However, five KI had regular contact with users on a personal and social basis

outside of work, thus meeting the criteria in this way. These KI were either part of the 'clubbing' scene in Adelaide, or had friends who used party drugs 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. All key informants stated that they were either moderately certain ($n$=5) or very certain ($n$=6) of the information they had provided.

## 3.0 RESULTS

### 3.1 Demographic characteristics of ecstasy users

#### *3.1.1 Demographic characteristics of ecstasy users in NSW, QLD and SA*

The ecstasy users recruited into the study in 2000 and 2001 were similar in terms of demographic characteristics. There were no differences between the 2000 and 2001 samples with regards to age, gender, sexuality or ethnicity. Participants were 24 years of age on average in both 2000 (SD 5.4, range 16-48) and 2001 (SD 5.9, range 16-49). In both years the majority of the samples were male, heterosexual, had finished high school and were from English speaking backgrounds.

There was no difference in the proportion of participants that had tertiary qualifications or the proportions unemployed. Significantly fewer participants were full time students in the 2001 sample compared to the 2000 sample ($\chi^2$ = 13.85, $p<0.05$).

The ecstasy users in both years had limited involvement with drug treatment agencies and the criminal justice system. None of the participants in the 2000 sample were currently in drug treatment while 5% of the 2001 sample reported being in drug treatment. The same proportion of users (4%) in each year had previous criminal convictions.

**Table 1**: Demographic characteristics of the 2000 (n=194) and 2001 samples (n=350)

| Variable | 2000 sample (n=194) | 2001 sample (n=350) |
|---|---|---|
| Mean age (years) | 24 | 24 |
| % male | 63 | 58 |
| % English speaking background | 96 | 96 |
| % ATSI | 3 | 5 |
| % own accommodation (includes renting) | No data[1] | 64 |
| % live with parents/family | No data[1] | 26 |
| % heterosexual | 79 | 75 |
| Mean number school years completed | 12 | 12 |
| % tertiary qualifications | 61 | 52 |
| % employed full-time | 37 | 37 |
| % full-time students | 14[2] | 5[2] |
| % unemployed | 15 | 14 |
| % previous prison history | 4 | 4 |
| % in treatement | 0 | 5 |

[1]Extra questions on accommodation were added to the survey in 2001.
[2]Significant at $p < 0.05$

### *3.1.2 Demographics characteristics by state in 2000 and 2001*

Table 2 presents demographic data for the 2000 and 2001 sample of ecstasy users in each state. There were no gender differences between the 2000 and 2001 samples. The SA samples were significantly younger than the NSW and QLD samples in 2000 ($t_{171}$ = 2.15, $p < 0.05$) and 2001 ($t_{171}$ = 4.50, $p < 0.05$).

All states had low proportions of ATSI participants. There was a significantly higher proportion of ATSI participants in NSW in 2000 ($\chi^2$ = 4.63, df =1, $p<0.05$) and significantly fewer in SA in 2001 ($\chi^2$ = 8.75, df =1, $p<0.05$). SA had a significantly higher proportion of people from ESB than the other states ($\chi^2$ = 8.86, df =1, $p<0.05$) in 2000 and NSW had significantly fewer ESB in 2001 ($\chi^2$ = 9.52, df =1, $p<0.05$).

There were no differences between states in the proportion of the 2000 sample that were heterosexual. However in 2001 SA reported a significantly higher proportion of heterosexual ecstasy users when compared to the other states ($\chi^2$ = 9.99, df =1, $p<0.05$).

**Table 2**: Demographic characteristics of ecstasy users in NSW, QLD and SA in 2000 and 2001

| | NSW | | QLD | | SA | |
|---|---|---|---|---|---|---|
| **Variable** | **2000 (n=94)** | **2001 (n=163)** | **2000 (n=50)** | **2001 (n=117)** | **2000 (n=50)** | **2001 (n=70)** |
| Mean age (years) | 25 | 25 | 25 | 25 | 23 | 22 |
| % male | 69 | 58 | 62 | 61 | 54 | 53 |
| % English speaking background | 95 | 93* | 96 | 100 | 98* | 99 |
| % ATSI | 6* | 6 | 0 | 8 | 0 | 0* |
| % heterosexual | 78 | 68 | 74 | 74 | 86 | 90* |
| Mean number school years | 12 | 12 | 12 | 12 | 13 | 12 |
| % tertiary qualifications | 55 | 54 | 80* | 56 | 54 | 41 |
| % employed full-time | 33 | 48 | 36 | 31 | 44 | 24 |
| % full-time students | 12 | 20 | 22 | 17 | 12 | 47* |
| % unemployed | 21 | 9 | 14 | 23 | 6 | 10 |
| % current drug treatment | 0 | 1 | 0 | 13* | 0 | 0 |
| % previous conviction | 6 | 3 | 2 | 7 | 2 | 0 |

* Significant at $p < 0.05$

Participants in QLD in the 2000 sample were significantly more likely to have tertiary qualifications (university or trade technical) than participants in the other states ($\chi^2$ = 8.86, df =1, $p<0.05$). There were no differences in tertiary qualifications between states in 2001.

Participants in SA were significantly more likely to be full time students ($\chi^2$ = 56.58, df =1, $p<0.05$) than participants in the other states.

In 2001, participants in QLD were significantly more likely to be in drug treatment than those in the NSW and SA ($\chi^2$ = 21.6, df =1, $p<0.01$). Thirteen percent of the sample in QLD were in drug treatment. This is inconsistent with the other states, and with previous studies that have found very low proportions of ecstasy users in treatment (Topp et al 1998; 2002). This finding may be due to the sampling of participants in 2001. Some of the venues from which participants were recruited were in close proximity to treatment services.

### *3.1.3 KIS' reports*

In 2000 and 2001 KIS' descriptions of the ecstasy users were generally consistent with the demographic characteristics of the ecstasy users interviewed. KIS described groups of ecstasy users that comprised of roughly equal proportions of males and females (in SA) or majority male (NSW and QLD). Contact with ecstasy users from a range of ages (15-65) was reported from the KIS but almost all agreed that the majority of ecstasy users are in their 20s.

It is worth noting that many of the KIS worked in venues that had age restrictions requiring patrons to be at least 18 years of age. This does not mean there are not younger people using ecstasy. A comment by participants during the ecstasy user interview was that users are getting younger and that the age of initiation into ecstasy use continues to decrease. KIS reports in NSW and QLD suggested that the number of teenage users had increased in recent years. The ethical constraints placed on the survey of ecstasy users by the Ethics Committee prohibited the recruitment of participants under the age of 16 years.

The majority of KIS described predominantly English-speaking background groups of ecstasy users. The proportions of KIS that reported contact with ATSI ecstasy users were small. The estimated proportions of ecstasy users from a non-English speaking background ranged widely and most KIS commented that the range of cultural backgrounds of ecstasy users was extremely broad and difficult to narrow down to certain groups.

Most KIS considered the majority of ecstasy users had usually completed high school, and high proportions were also estimated to also have completed tertiary education or to currently be studying at the tertiary level. The majority were considered to be either working or studying full-time, and small proportions were estimated to be currently unemployed.

Some KIS could not comment on the sexual identity of users but those that did described groups of ecstasy users that were mainly comprised of people identifying as heterosexual.

Consistent with the demographic characteristics of the ecstasy users, the KIS reported small proportions of ecstasy users who were in treatment, and most commented that the treatment was not for ecstasy problems *per se*, but for other drug problems (stimulant use or polydrug use) or for mental health problems exacerbated by drug use. KIS also reported that small proportions of the ecstasy users had a previous prison history.

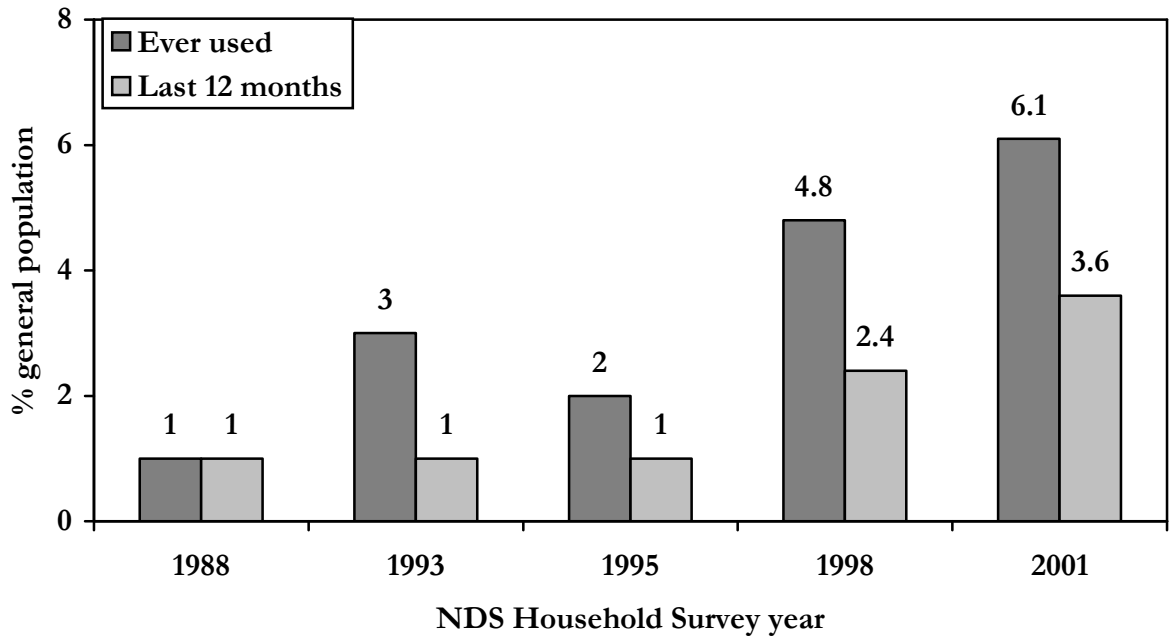
Generally, KIS considered the ecstasy users with whom they had recent contact to be a relatively highly functioning, well-educated group, with high rates of employment or engagement in studies, and low levels of criminal activity.

### *3.1.4 National Drug Strategy Household Surveys*

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

In the 2001 survey, changes to the methodology of the NDS Household Survey were implemented to make the 2001 survey more comparable with general population surveys conducted in the United States. Many people working in the field agree that the change in the wording of the question relating to lifetime use of drugs (from having ever 'tried' to having ever 'used'), may have led to fewer people being willing to report that they had 'used' (as opposed to 'tried') illicit drugs. In general, the prevalence of use of most illicit drugs appeared to decrease between 1998 and 2001, which may reflect, at least in part, the change to the methodology. However, even in the face of the methodological change and the trend toward an apparent decrease in prevalence of illicit drug use in general, reported lifetime prevalence of ecstasy use still increased between 1998 and 2001, from 4.8% to 6.1% of the general population. Similarly, the proportion of the general population who reported that they had used ecstasy in the preceding 12 months also increased, from 2.4% in 1998 to 3.6% in 2001.

**Figure 1:** Prevalence of ecstasy use in Australia, 1988-2001




Prevalence of ecstasy use varies slightly according to gender, although differences are modest compared to other drugs. In the 2001 NDS Household Survey (AIHW, 2002) 5.1% of females and 7.1% of males reported ecstasy use. This is consistent with data from previous surveys; for example, in 1998, males reported a higher lifetime (6% versus 4%) and recent (3% versus 2%) prevalence than females (Higgins, Cooper-Stanbury & Williams, 2000).

In the 2001 Survey, prevalence of both lifetime and recent ecstasy use were most common among those aged 20-29 years. Approximately 23% of males and 17% of females in this age

bracket reported lifetime ecstasy use, and 12% of males and 5% of females reported having used ecstasy in the preceding 12 months (AIHW, 2002).

The availability of ecstasy has also increased in recent years, as indicated by the proportion of the population who have been offered ecstasy. In 1988, 4% of the population had been offered ecstasy, compared to 7% in 1991 and 6% in 1993 (Makkai & McAllister, 1998). In 1995, the focus of this question changed from lifetime exposure to drugs to exposure in the preceding 12 months, and 3% of the sample reported recent exposure to ecstasy, compared to 5% of the 1998 sample (Darke et al., 2000). Of particular concern is the high prevalence of exposure among young adults (14-29 years); in 1991 and 1993, 14% and 12%, respectively, of this age group reported exposure to ecstasy. In 1995, when the exposure question was changed to refer to the preceding 12 months, 8% of this age group reported exposure to ecstasy. In 1998 the proportion increased again; 10% of 14-19 year olds and 14% of 20-29 year olds reported having had the opportunity to use ecstasy. These results for 2001 are not yet available.

#### *3.1.5 Summary*

- *both males and females use ecstasy. As with all illicit drugs, ecstasy use is most common among young males*
- *ecstasy users tend to be young, most being aged in their late teens or early to mid 20s*
- *ecstasy users are relatively well-educated, with most having completed high school and a substantial proportion with tertiary qualifications*
- *a high proportion of ecstasy users are either employed or engaged in studies*
- *ecstasy users have little contact with the criminal justice system or with drug treatment agencies*
- *demographic characteristics of ecstasy users appear relatively stable over the two year trial period. However, NDS surveys indicate that prevalence of use has increased, such that now there is a larger group of people who have ever used ecstasy, as well as a larger group of people who have used it recently*

### 3.2 Ecstasy use

#### *3.2.1 Patterns of ecstasy use among users in 2000 and 2001*

The median age at which participants in the 2000 and 2001 samples first used ecstasy was 19 years (range 12-43, 12-40 respectively). There were no gender differences in age of initiation in 2000, however in 2001, the mean age of initiation for females (mean 18.9 years, SD 3.8) was significantly lower than that for males (mean 20.0 years, SD 4.2) ($t_{348.} = 2.50$, $p < 0.05$).

Participants in both years had used ecstasy at least monthly at some time, and reported having first done so at a median age of 20 years (range 14-48 in 2000, 14-40 in 2001). Participants had used ecstasy on a median of 15 days in the six months preceding interview in 2000 and 2001 (range 6-117 days and 6-100 respectively).

Forty five percent of the 2000 sample and 42% of the 2001 sample had used ecstasy between monthly and fortnightly in the six months preceding interviews. Twenty four percent of the 2000

sample and 32% of the 2001 reported using between fortnightly and weekly, while 21% of the 2000 and 26% of the 2001 sample had used ecstasy more than one day per week.

In 2000 half (50%) of the sample nominated ecstasy as their favourite or preferred drug. The next most commonly preferred drug was cannabis (22%), followed by methamphetamine base (7%), then cocaine and methamphetamine powder (5% each), alcohol, tobacco and LSD (3% each) and ketamine (1%). Two participants could not choose a favourite drug.

In 2001 over half (54%) of the sample nominated ecstasy as their favourite or preferred drug. The next most commonly preferred drug was cannabis (13%), followed by cocaine (10%), methamphetamine base (6%), then methamphetamine powder (5%), alcohol (4%), heroin and LSD (2% each), MDA and tobacco (1% each). Two individuals reported nitrous oxide as their favourite drug, while ketamine and GBH were each nominated by one participant each. Again, two participants could not choose a favourite drug.

The median number of ecstasy tablets taken in a 'typical' or 'average' use episode in the preceding six months was 1.5 (range 0.33-12) in 2000 and 1.5 (range 0.25-15) in 2001. Over half of both samples reported that they typically used more than one tablet (52% in 2000, 55% in 2001). Three percent of the sample in 2000 and 5% in 2001 typically used five or more tablets in a session. During their 'heaviest' use episode in the preceding six months, participants reported the use of a median of 3 tablets in both years (range 0.5-35 in 2000 and range 0.5-30 in 2001).

**Table 3:** Patterns of ecstasy use in 2000 (n=194) and 2001 (n=350)

| **Variable** | **2000 sample (n=194)** | **2001 sample (*n*=350)** |
|---|---|---|
| Median age first used ecstasy (years) | 19 | 19 |
| Median no. days used ecstasy last 6 months | 15 | 15 |
| % ecstasy 'favourite' drug | 50 | 54 |
| % use ecstasy weekly or more | 31 | 26 |
| Median no. ecstasy tablets in 'typical' session | 1.5 | 1.5 |
| % typically use >1 tablet | 52 | 55 |
| % recently binged on ecstasy (>48 hours) | 51 | 56 |
| % ever injected ecstasy | 14 | 13 |
| % mainly swallowed ecstasy last 6 months | 93 | 92 |
| Number drugs ever used (range) | 10 (3-18) | 10 (3-19) |
| Number drugs used in last 6 months (range) | 7 (2-15) | 7 (3-18) |

There was no difference between years in proportions of participants that reported 'binging' on 'party drugs' generally and ecstasy specifically in the preceding six months. Fifty five percent in 2000 and 61% in 2001 reported 'binging' on party drugs, defined as using the drug on a continuous basis for more than 48 hours without sleep (Ovendon & Loxley, 1996). Fifty one

percent had binged on ecstasy in 2000 and 56% in 2001. The median length of the longest binge was 3 days (range 2 -60 days in 2000 and 2-21 days in 2001).

There were no age or gender differences between those who had binged on ecstasy in the preceding six months and those who had not in 2000 and 2001. In both years those who had binged on ecstasy had used ecstasy on a significantly greater number of days in the preceding six months (2000: median 25 versus 12 days; $U$=2235.5; $p$<.001; 2001: median 22 versus 12 days; $U$=8240.5; $p$<.001). They had used significantly more ecstasy in both typical (2000: median 2 versus 1 tablet; $U$=1978; $p$<.001; 2001: median 2 versus 1 tablet; $U$=9679; $p$<.001;) and heavy (2000; median 4 versus 2 tablets; $U$=1542.5; $p$<.001; 2001: median 4 versus 2.5 tablet; $U$=7923; $p$<.001;) use episodes.

In both 2000 and 2001, those who had binged on ecstasy in the preceding six months reported a more extensive polydrug use history than those who had not. On average, they had used significantly more drugs both ever (2000: 11.7 versus 9.7, $t_{192}$= -4.8; $p$<.001; 2001: 11.0 versus 9.7, $t_{348}$= -3.8; $p$<.001) and in the preceding six months (2000: 8.4 versus 6.8; $t_{179}$=-4.1; $p$<.001; 2001: 8.4 versus 6.8, $t_{348}$= -6.0; $p$<.001).

### *3.2.2 Patterns of ecstasy use in NSW, QLD and SA*

To examine trends and confidently interpret changes in patterns of ecstasy use over time, data needs to be collected in subsequent years. However, some indicators are consistent in suggesting that the quantity of ecstasy use among regular users may have increased in recent years. In NSW, increasing proportions in the 2000 and 2001 sample nominated ecstasy as their favourite drug; reported that they had binged on ecstasy in the preceding six months; and reported that they typically used more than one tablet (Table 4). There was also an increase in the median number of days they had used ecstasy. In SA increasing proportions in 2001 nominated ecstasy as their favourite drug and reported that they typically used more than one tablet. The concordance between variables that suggest an increase in the quantity of ecstasy use allows more confidence to be placed in these findings. However, the data from QLD show similar proportions of participants in 2000 and 2001 reporting that they had binged on ecstasy in the preceding six months and a decrease in those reporting that they typically used more than one tablet as well as a decrease in the proportion that had used ecstasy at least weekly in 2001.

**Table 4:** Patterns of ecstasy use in NSW, QLD and SA in 2000 and 2001

| | NSW | | | QLD | | SA | |
|---|---|---|---|---|---|---|---|
| **Variable** | [1]**1997 (*n*=173)** | **2000 (*n*=94)** | **2001 (*n*=163)** | **2000 (*n*=50)** | **2001 (*n*=117)** | **2000 (*n*=50)** | **2001 (*n*=70)** |
| Age first used ecstasy (median years) | 17 | 18 | 19 | 19 | 19 | *20 | *19 |
| Days used ecstasy last 6 months (median) | 12 | 12 | 20 | 18 | 15 | 18 | 13 |
| % ecstasy 'favourite' drug | 55 | 53 | 63 | 52 | 46 | 40 | 45 |
| % use ecstasy weekly or more | 27 | 34 | 29 | 42 | 31 | 34 | 20 |
| Median no. ecstasy tablets in 'typical' session | 1.5 | 1.5 | 1.5 | 1 | 1 | 1.5 | 2 |
| % typically use >1 tablet | 56 | 53 | 62 | 48 | 41 | 44 | 61 |
| % recently binged on ecstasy (>48 hours) | 42 | 44 | 58 | 60 | 59 | 54 | 49 |
| % ever injected ecstasy | 14 | 12 | 10 | 16 | 19 | 16 | 11 |
| % injected any drug | 31 | 28 | 20 | 28 | 41 | 20 | 21 |

[1] Data from study conducted by NDARC in 1997 (Topp et al, 1998) using the same methodology
*mean reported

### *3.2.3 Routes of administration among ecstasy users in 2000 and 2001*

The consistencies between years regarding routes of administration are noteworthy (Table 4). In the six months preceding the interview, almost all participants (99% in 2000 and 98% in 2001) had swallowed ecstasy. The majority of participants in both years (93% in 2000 and 92% in 2001) nominated oral ingestion as their main route of ecstasy administration in the preceding six months.

Twenty six percent of the 2000 sample and 27% of the 2001 reported they had injected a drug (Table 3) in their lifetime. A total of 14% of the 2000 sample and 13% of the 2001 had injected ecstasy at some time. The median age of first injection of ecstasy was 21 years (range 16-38 years). Ecstasy was the first drug injected for 2% of participants in 2000 and 2001. Most of the injectors reported commencing injecting with either methamphetamine (2000; 60%, 2001; 64%) or heroin (2000; 24%, 2001; 18%).

**Table 5:** Routes of administration among ecstasy users in 2000 and 2001

| Variable | 2000 sample (n=194) | 2001 sample (n=350) |
|---|---|---|
| % injected any drug | 26 | 27 |
| First drug injected (%)* | | |
| Methamphetamine | 60 | 64 |
| Heroin | 24 | 18 |
| Ecstasy | 2 | 2 |
| % ever injected ecstasy | 14 | 13 |
| % injected ecstasy in the last 6 months | 7 | 6 |
| Median age injected ecstasy (years) | 21 | 21 |
| In the six months prior to interview: (%) | | |
| Swallowed ecstasy | 99 | 98 |
| Snorted ecstasy | 44 | 41 |
| Smoked ecstasy | 8 | 6 |
| Injected ecstasy | 7 | 6 |
| Main route of ecstasy administration: | | |
| Swallowed | 93 | 92 |
| Snorted | 3 | 1 |
| Injected | 2 | 2 |
| Shelved/Shafted | 2 | 1 |
| Could not specify | 2 | 3 |

*Percentages rounded to nearest integer

To ensure that intravenous polydrug or primary opiate users were not over-sampled and that the samples in 2000 and 2001 were primarily party drug users, a number of comparisons were drawn between those who had ever injected a drug and those who had not. Those that injected were significantly older than those that had not injected (2000: median 24 .5 years versus 22.5; $U$=2638.5; $p$<.01; 2001: median 25 years versus 22; $U$=9222, $p$<.01;). There were no differences in gender distribution between the two groups in both years. There was no significant difference between injectors and non-injectors in duration of education, including whether they had completed tertiary education or whether currently a student. Those that had injected were more likely to have a previous prison history (2000: $\chi^2$ = 4.05, df =1, p<0.05; 2001: $\chi^2$ = 4.56, df =1, p<0.05) and more likely to be unemployed than participants that had never injected history (2000: $\chi^2$ = 4.69, df =1, p<0.05; 2001: $\chi^2$ = 6.22, df =1, p<0.05).

There were a number of significant differences between the two groups in terms of drug use. Injectors had used ecstasy on a greater number of days in the preceding six months (2000: median 25 days versus 13; $U$=2478.5, $p$<.01; 2001: median 20 days versus 14; $U$=1377, $p$<.05). They had used more ecstasy in both their heaviest use episode (2000: median 3.5 versus 3 tablets; $U$=2292, $p$<.05; 2001: median 4 versus 3 tablets; $U$=9019, $p$<.01), and their typical use episodes (2000: median 2 versus 1 tablet, $U$=1365, $p$<.01; 2001: median 2 versus 1.5 tablets; $U$=9536.5, $p$<.05). Participants in both years that had injected had also used a wider range of other drugs, both ever (2000: 13 versus 10; $t_{192}$=-7.4; $p$<.001; 2001: 13 versus 10; $t_{348}$=-9.9; $p$<.001 ) and in the

preceding six months (2000: 9 versus 7; $t_{192}$=-4.9; $p$<.001; 2001: 9 versus 7; $t_{348}$=-7.4; $p$<.001). In particular, those who had injected a drug were significantly more likely to have used heroin, both ever (2000: 60% versus 15%; $\chi^2_{-1}$=37.2; $p$<.001, 2001: 57% versus 9%; $\chi^2_{-1}$=87.2; $p$<.001) and in the preceding six months (2000: 26% versus 4%; $\chi^2_{-1}$=17.6; $p$<.001, 2001: 26% versus 2%; $\chi^2_{-1}$=49.3; $p$<.001).

In 2000 none of the participants reported being in drug treatment and in 2001 5% were in treatment, these participants were mainly from QLD (see Table 4). In 2000 no one nominated heroin as their favourite drug while 2% in 2001 nominated heroin as their favourite drug. In 2000 heroin had been used in the preceding six months by 10% of the sample, with over half of those using on one day in the 6-month period. In 2001 9% had used heroin in the six months prior to interview on an average of 4 days.

Therefore a small proportion of past and current heroin users were included in both the 2000 and 2001 samples. However, the majority of participants were primary party drug users and were therefore the appropriate sentinel population to interview to meet the aims of the party drug IDRS.

### *3.2.3 KIS' reports*

The qualitative KIS reports were consistent with data from the ecstasy users survey in 2000 and 20001 with KIS describing wide variation in patterns of ecstasy use, however all KIS reported that the majority of ecstasy users primarily take ecstasy orally in tablet form. Only small proportions of those with whom KIS had recent contact were considered to regularly snort or inject ecstasy.

Frequency of use varied but generally KIS reported that ecstasy was used for recreational purposes and generally not on a daily basis. KIS reported contact with ecstasy users that only used ecstasy three or four times per year for special occasions to three or four days per week. However monthly to fortnightly ecstasy use was considered an average pattern of use.

Quantity of use also varied with one to two tablets per use occasion considered fairly typical. Again consistent with the user survey, KIS reported ecstasy users engaging in weekend 'binges', in which ecstasy and other drugs were used continuously for a number of days, generally between Thursday and Sunday. Use of other drugs in combination with ecstasy in these binges was also commonly reported by KIS. Many KIS noted that patterns of ecstasy use, as with all illicit drugs, were widely varied.

Many KIS commented on the broader range of people who use ecstasy, and although the connection between the dance music industry and ecstasy use is still strong, a huge variety of 'types' of people currently use the drug. Most agreed the increase occurred steadily over recent years, with ecstasy use among some groups becoming a normalized part of many social interactions, just as is alcohol.

KIS commented specifically on the increased use of ecstasy among young people, and some reported that the age of initiation continues to drop, with early to mid teens being the most frequently estimated age at which young people first try ecstasy.

### *3.2.4 Summary*

- *on average, ecstasy users start using the drug in their late teens*
- *the majority of ecstasy users consume the drug orally*
- *patterns of ecstasy use vary, however, on average, regular users use the drug between weekly and fortnightly*
- *the heaviest patterns of ecstasy use rarely exceed three or four days per week*
- *a substantial proportion of regular ecstasy users have recently used the drug on a continuous basis for 48 hours or more*
- *the majority of regular ecstasy users use, on average, more than one tablet per use episode*
- *substantial proportions of those who could be considered primary 'party drug' users have injected a drug at some time*

## 3.3 Other drug use

### *3.3.1 Patterns of polydrug use among ecstasy users in 2000 and 2001*

Polydrug use was common among participants in both years. In 2000 a mean of 11 drugs (SD 3.0, range 3-18) were reported as having ever been tried, and a mean of 8 drugs (SD 2.1, range 2-15) used in the six months prior to interview. In 2001 participants reported having used a mean of 10 drugs (SD 3.3; range 3-19) in their lifetimes, and a mean of 8 drugs (SD 2.6; range 3-18) in the preceding six months.

The similarities in overall levels of polydrug use among participants interviewed in 2000 and 2001 are noteworthy (Table 6). As mentioned previously, to confidently interpret trends in drug use among party drug users over time, data will need to be collected in subsequent years. Taking this into account, it appears the use of some party drugs may have increased in recent years and the use of others appears to have decreased over the same timeframe. In 2001 a greater proportion of participants reported ever using 'ice' (56%) and using 'ice' in the six months preceding interview (42%), than in 2000 (12% ever, 6% in the last months). It should be noted that in the 2000 survey 'crystal meth' was coded under 'methamphetamine – crystal meth/base/paste/pure'. Ice or shabu was a separate category. In 2001 methamphetamine included base/paste/pure and crystal methamphetamine incorporated 'ice or shabu'. However, the increase in the crystal methamphetamine in 2001 was greater than the decrease in the methamphetamine (base/paste/pure) category, suggesting the increase was not only a change due to coding. A greater proportion of participants reported using GHB both ever (24%) and in the six months preceding interview (16%), than in 2000 (16% ever, 8% in the last months). The increase in proportions of users reporting the use of 'ice' and GHB are consistent with KIS reports.

**Table 6:** Patterns of drug use for ecstasy users in 2000 (n=194) and 2001 (n=350)

| | **2000 n=194** | **2001 n=350** |
|---|---|---|
| **Ecstasy** | | |
| Ever used (%) | 100 | 100 |
| Used last 6 months (%) | 100 | 100 |
| No. days used in last 6 months (median, range #) | 15 (1-117) | 15 (6-100) |
| **Alcohol** | | |
| Ever used (%) | 99 | 99 |
| Used last 6 months (%) | 94 | 95 |
| No. days used in last 6 months (median, range #) | 48 (1-180) | 48 (1-180) |
| **Cannabis** | | |
| Ever used (%) | 98 | 95 |
| Used last 6 months (%) | 90 | 85 |
| No. days used in last 6 months (median, range #) | 100 (1-180) | 50 (1-180) |
| **Methamphetamine powder** (speed) | | |
| Ever used (%) | 99 | 94 |
| Used last 6 months (%) | 76 | 78 |
| No. days used in last 6 months (median, range #) | 12 (1-180) | 7 (1-180) |
| **Tobacco** | | |
| Ever used (%) | 86 | 81 |
| Used last 6 months (%) | 69 | 76 |
| No. days used in last 6 months (median, range #) | 180 (1-180) | 180 (1-180) |
| **LSD** | | |
| Ever used (%) | 85 | 77 |
| Used last 6 months (%) | 43 | 35 |
| No. days used in last 6 months (median, range #) | 3 (1-74) | 3 (1-70) |
| **Cocaine** | | |
| Ever used (%) | 70 | 69 |
| Used last 6 months (%) | 44 | 47 |
| No. days used in last 6 months (median, range #) | 3 (1-90) | 3 (1-96) |
| **Amyl nitrate** | | |
| Ever used (%) | 64 | 55 |
| Used last 6 months (%) | 29 | 29 |
| No. days used in last 6 months (median, range #) | 4 (1-180) | 5 (1-180) |
| **Benzodiazepines** | | |
| Ever used (%) | 57 | 45 |
| Used last 6 months (%) | 36 | 33 |
| No. days used in last 6 months (median, range #) | 3 (1-180) | 6 (1-180) |

**Table 6 continued:** Patterns of drug use for ecstasy users in 2000 (*n*=194) and 2001 (*n*=350)

| | 2000 n=194 | 2001 n=350 |
|---|---|---|
| **Nitrous oxide** | | |
| Ever used (%) | 72 | 59 |
| Used last 6 months (%) | 40 | 29 |
| No. days used in last 6 months (median, range #) | 15 (1-95) | 6 (1-104) |
| **Methamphetamine base*** | | |
| Ever used (%) | 62 | 56 |
| Used last 6 months (%) | 51 | 44 |
| No. days used in last 6 months (median, range #) | 6 (1-150) | 5 (1-130) |
| **MDA** | | |
| Ever used (%) | 39 | 38 |
| Used last 6 months (%) | 22 | 19 |
| No. days used in last 6 months (median, range #) | 2 (1-30) | 2 (1-100) |
| **Heroin** | | |
| Ever used (%) | 26 | 22 |
| Used last 6 months (%) | 10 | 9 |
| No. days used in last 6 months (median, range #) | 1 (1-96) | 12 (1-180) |
| **Antidepressants** | | |
| Ever used (%) | 34 | 27 |
| Used last 6 months (%) | 15 | 15 |
| No. days used in last 6 months (median, range #) | 10 (2-180) | 42 (1-180) |
| **Ketamine** | | |
| Ever used (%) | 26 | 27 |
| Used last 6 months (%) | 14 | 14 |
| No. days used in last 6 months (median, range #) | 2 (1-30) | 3 (1-90) |
| **Other opiates** | | |
| Ever used (%) | 24 | 13 |
| Used last 6 months (%) | 13 | 4 |
| No. days used in last 6 months (median, range #) | 4 (2-35) | 5 (1-60) |
| **Ice (crystalline methamphetamine)*** | | |
| Ever used (%) | 12 | 56 |
| Used last 6 months (%) | 6 | 42 |
| No. days used in last 6 months (median, range #) | 1 (1-20) | 4 (1-130) |
| **Methadone** | | |
| Ever used (%) | 4 | 5 |
| Used last 6 months (%) | 0 | 2 |
| No. days used in last 6 months (median, range #) | N/A | 17.5 (3-60) |
| **GHB** | | |
| Ever used (%) | | |
| Used last 6 months (%) | 16 | 24 |
| No. days used in last 6 months (median, range #) | 8 | 16 |
| | 2(1-40) | 2 (1-70) |

# Among those who had used

* In 2000 'crystal meth' was coded under 'methamphetamine – crystal meth/base/paste/pure'. Ice or shabu was a separate category. In 2001 methamphetamine was base/paste/pure and crystal methamphetamine incorporated 'ice or shabu'.

The majority (55% in 2000 and 61% in 2001), of participants had binged on one or more party drugs in the six months preceding interview. The most commonly reported party drugs used in a binge in both 2000 and 2001 were methamphetamine powder (30%, 37%) and methamphetamine base (21%, 19%)[1]. Eight percent of the sample reported using cocaine in a binge in 2000, while 12% reported cocaine in 2001. Recent bingeing on ice was reported by two participants (1%) in 2000 and 15% of the sample in 2001. Nine percent reported using LSD in a

[1] This report follows the distinction drawn by Topp and Churchill (2002) between four main forms of methamphetamine: powder ('speed'); tablets ('pills'); oily powder/paste ('base'); and crystalline ('ice').

binge in 2000 and 6% in 2001. Nitrous (5% both years), ketamine and amyl nitrate (2%,4%), GBH (1%, 3%) and MDA (1%, 2%) were reported by small proportions of participants in 2000 and 2001 respectively.

Most participants 'typically' (defined as on two-thirds or more occasions of ecstasy use in the preceding six months) used other drugs in combination with ecstasy (88%, 78%) and in the 'come down' (i.e., acute recovery period) following ecstasy use (86%, 73% in 2000 and 2001 respectively).

The majority of participants in both years reported typically drinking alcohol while using ecstasy (54%, 56% in 2000 and 2001 respectively). Of those respondents that drink while using ecstasy, substantial proportions reported drinking more that five standard drinks per session (65%, 30%). This suggest that large proportion of ecstasy users are consuming large quantities of alcohol in conjunction with their ecstasy use. Consistent with this, substantial proportions of both samples reported typically drinking alcohol during the recovery period following ecstasy use (36% and 34%).

Methamphetamine powder was reported by 40% in 2000 and 46% in 2001 as typically used in conjunction with ecstasy. Substantial proportions also reported use of methamphetamine base (19% in 2000, 25% in 2001). A higher proportion of participants reported using cocaine in conjunction with ecsasy in 2001 (14%) compared to 2000 (4%). While a smaller proportion reported using LSD (7%) and nitrous (9%) compared to the proportion of participants in 2001 (24% and 17% respectively).

Cannabis was reported large proportions of participants in both years as being used typically in conjunction with ecstasy (63% in 2000 and 47% in 2001) and to ease the come down from ecstasy (80% in 2000, 68% in 2001).

A higher proportion of the 2001 sample also reported that they typically used benzodiazepines when recovering from ecstasy use (15% versus 4% in 2000).

### *3.3.2 Patterns of drug use among ecstasy users in NSW, QLD and SA*

The similarities in use drug use across jurisdictions among participants in 2000 and 2001 are noteworthy (Table 7). As mentioned previously, to confidently interpret trends in drug use over time data will need to be collected in subsequent years. However the information from the user surveys in conjunction with the KIS suggest an increase in some drug use and decreases in others. For example, the increase in proportion of participants that use ketamine and the frequency of ketamine use observed between 1997 and 2000 was sustained in 2001 in NSW, consistent with KIS reports. The proportions of users reporting use of inhalants such as amyl nitrate and nitrous oxide decreased in NSW and SA.

Although the prevalence of anti-depressant use has fluctuated (Table 6), among those who reported their recent use, there has been a substantial increase in number of days used in the last 6 months in all jurisdictions. This may reflect an increase in the prescription of anti-depressants to this population, as little evidence exists of a significant black market for anti-depressants.

**Table 7**: Patterns of polydrug use among ecstasy users in NSW, QLD and SA

| | NSW | | | QLD | | SA | |
|---|---|---|---|---|---|---|---|
| **Variable** | **1997 (n=173)** | **2000 (*n*=94)** | **2001 (n=163)** | **2000 (n=50)** | **2001 (*n*=117)** | **2000 (n=50)** | **2001 (*n*=70)** |
| Number drugs ever used (mean) | 10 | 10 | 10 | 11 | 11 | 12 | 10 |
| Number drugs used last 6 months (mean) | 7 | 7 | 7 | 8 | 8 | 9 | 8 |
| Cocaine | | | | | | | |
| % ever used | 72 | 78 | 77 | 70 | 69 | 54 | 51 |
| % used last 6 months | 50 | 53 | 57 | 56 | 41 | 32 | 34 |
| Methamphetamine powder | | | | | | | |
| % ever used | 97 | 92 | 99 | 94 | 85 | 98 | 94 |
| % used last 6 months | 91 | 75 | 87 | 66 | 65 | 90 | 74 |
| LSD | | | | | | | |
| % ever used | 97 | 80 | 74 | 86 | 79 | 94 | 79 |
| % used last 6 months | 72 | 37 | 23 | 48 | 40 | 50 | 50 |
| MDA | | | | | | | |
| % ever used | 60 | 36 | 43 | 40 | 40 | 42 | 23 |
| % used last 6 months | 41 | 16 | 14 | 28 | 24 | 28 | 21 |
| Amyl nitrate | | | | | | | |
| % ever used | 84 | 66 | 62 | 52 | 50 | 74 | 44 |
| % used last 6 months | 56 | 29 | 36 | 26 | 25 | 32 | 17 |
| Nitrous oxide | | | | | | | |
| % ever used | 69 | 54 | 48 | 82 | 70 | 96 | 69 |
| % used last 6 months | 41 | 22 | 11 | 38 | 40 | 74 | 53 |
| Ketamine | | | | | | | |
| % ever used | 16 | 25 | 31 | 30 | 27 | 26 | 19 |
| % used last 6 months | 6 | 14 | 15 | 14 | 10 | 16 | 16 |
| Anti-depressants | | | | | | | |
| % ever used | 22 | 31 | 22 | 36 | 36 | 38 | 21 |
| % used last 6 months | 10 | 14 | 9 | 20 | 23 | 14 | 13 |
| days used last 6 months | 13 (1-120) | 30 (2-180) | 90 (2-180) | 8 (1-90) | 30 (1-180) | 3 (1-30) | 42 (1-180) |
| GHB | | | | | | | |
| % ever used | - | 5 | 23 | 18 | 27 | 34 | 23 |
| % used last 6 months | - | <1 | 15 | 12 | 15 | 18 | 19 |
| Ice (crystalline methamphetamine) | | | | | | | |
| % ever used | - | 12 | 43 | 16 | 67 | * | * |
| % used last 6 months | - | 6 | 26 | 8 | 55 | | |

* SA data not presented as data was coded differently; as methamphetamine 'non powder' and 'powder'

Table 8 displays quantity of use in the preceding 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. Again, the similarities between 2000 and 2001 in reported quantities of party drugs consumed is noteworthy.

**Table 8:** Quantity of party drug use in preceding 6 months (of those who reported use)

| | 2000 | | 2001 | |
|---|---|---|---|---|
| **Drug class (measure)** [1] | **'Typical' episode (median, range)** | **Heaviest episode (median, range)** | **'Typical' episode (median, range)** | **Heaviest episode (median, range)** |
| **Methamphetamine powder (grams)** | 1 (0.6 – 7) | 1 (0.6 – 28) | 0.5 (0.1 – 3) | 1 (0.6 – 8) |
| **Methamphetamine base (points[2])** [3] | 1 (0.2- 10) | 2 (0.25 – 16) | 1 (0.1- 10) | 2 (0.1 – 40) |
| **Ice (points)** [4] | 1 (1-3) | 1(1 – 4) | 1 (0.1-7) | 1.5 (0.1 – 40) |
| **Cocaine (grams)** | 1 (0.1 – 7) | 1.75 (0.1 – 26) | 1 (0.1 – 7) | 0.5 (0.1 – 3) |
| **LSD (tabs)** | 1 (0.25 – 4) | 1 (0.25 – 7) | 1 (0.25 – 10) | 1 (0.5 – 20) |
| **MDA (capsules)** | 1 (0.25 – 3) | 1 (0.25 – 6) | 1 (0.1 – 10) | 1 (0.1 – 18) |
| **Amyl nitrate (snorts)** | 3 (1 – 25) | 6 (1 – 100) | 5 (1 – 25) | 5 (1 – 180) |
| **Nitrous oxide (bulbs[3])** | 5 (1 – 100) | 20 (1 – 200) | 10 (1 – 80) | 14 (1 – 300) |
| **Ketamine (bumps[4])** | 2 (1-20) | 3 (1 – 50) | 2 (1-15) | 4 (1 – 30) |

Table legend:

1 The measure most frequently mentioned by participants who had used the drug in the preceding six months is reported. Data for participants who reported some other measure is not included..

2 Although there is some confusion among participants, it appears that one 'point' is equal to approximately 0.1 of one gram, such that ten 'points' is equal to one gram.

3 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.

4 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.

### *3.3.3 KIS' reports*

In both years of the trial, across all states, KIS reported extensive polydrug use generally consistent with the users reports regarding patterns of their drug use.

#### 3.3.3.1 NSW KIS reports of other drug use

In 2000, in NSW all KIS considered that the majority of ecstasy users used amphetamine, often in conjunction with their ecstasy use. In 2001 KIS reported that substantial proportions (10-100%) of ecstasy users were considered to use some form of methamphetamine. There was, however, wide variation in KIS' estimates of proportions of methamphetamine users using the stronger more potent forms of methamphetamine known as 'ice' and 'base', and those using the more traditional powder form of methamphetamine known as 'speed'.

In both years in NSW, all KIS reported cannabis was used by substantial proportions of ecstasy users, some only in conjunction with ecstasy or while coming down from ecstasy, but many KIS considered substantial proportions to be daily smokers. Alcohol was also commonly reported as being used, with varied patterns of use, with KIS commenting that alcohol may not be consumed during acute ecstasy intoxication. Cocaine use by minorities (5-50%) of ecstasy users was reported by the majority of KIS. In 2000 it was reported that generally the snorting of

cocaine was considered to be for special occasions. In both years the use of benzodiazepines was reported by KIS to be widespread among party drug users and in 2001, four KIS commented on an increase in the use of anti-depressants.

Drugs such as ketamine, GHB and amyl nitrate were reported to be used by minorities, specifically among certain groups. In 2000 six KIS reported that amyl nitrate is more likely to be used by gay men however, in 2001 fifteen KIS stated the use of amyl nitrate has decreased significantly in recent years, and four related this decrease to a change in sexual practices among gay men as a result of the well-publicised dangers of the concurrent use of Viagra™ and amyl nitrate.

Four KIS reported that crystal meth has replaced cocaine as the stimulant of choice in the gay, lesbian and transsexual community, as its strong subjective effects and extended duration of action has led some users to consider it better value for money.

In both years KIS reported that GHB was almost exclusively associated with the gay dance party scene. However in 2001 six KIS had perceived a recent increase in the availability and use of GHB among party drug users. In 2000 nine KIS reported that ketamine was more widely used than in the past, specifically within the gay dance party scene. In 2001 five KIS had perceived a recent increase in the availability and use of ketamine. Nine KIS reported that a recent trend among party drug users has been to use ketamine at the end of a drug-taking session in order to begin the process of 'coming down', and that to some extent, in certain groups, ketamine has begun to replace benzodiazepines as the drug of choice for the recovery period following party drug use.

3.3.3.2 QLD KIS reports of other drug use

In 2000, KIS in QLD reported amphetamine and cannabis use was common among ecstasy users. The use of LSD, cocaine, and benzodiazepine use was common but frequency of use was low.

Key informants mostly reported low levels of alcohol use among ecstasy users, although alcohol use was reported as more prevalent among novice ecstasy users. In contrast to the reports from ecstasy users, none of the key informants reported alcohol use to come down from ecstasy. Eight key informants reported that between 10% and 60% of the users known to them used benzodiazepines on certain occasions to come down from intensive party drug use, although none reported use of any more than five tablets at a time. Six key informants reported contact with ecstasy users who occasionally used heroin to come down from intensive periods of party drug use, although that behaviour was confined to between 1% and 15% of the total number of ecstasy users known to those key informants. Heroin use was mostly reported among ecstasy users with more intensive patterns of poly-drug use, usually including injecting amphetamines.

Several key informants commented that cocaine use was currently more prevalent among the party drug using population than the IDU population in Brisbane. While key informant reports suggested that almost all ecstasy users would have tried LSD at some stage, several key informants working in the rave industry were confident and consistent in reporting that patterns of ecstasy, amphetamine, and LSD use varied depending upon the nature of the event that was being attended. Amyl nitrate was reported to be used on the dance floor at certain events, several key informants noted that its most common use is by homosexual men during sex.

3.3.3.3 SA KIS reports of other drug use

In SA in 2000 the most commonly reported drug used in conjunction with ecstasy was amphetamine or methamphetamine. The KIS 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.

Benzodiazepines are also used to 'come down' from ecstasy, but their use is less prevalent than cannabis. Ten KIS reported a high level of alcohol intake among ecstasy users, however, many 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.

Small numbers of KIS commented on the use of LSD (believed by users to enhance the effects of ecstasy) cocaine (the high price and short-term effects of this drug precludes use), amyl nitrate (predominantly in the gay scene), and GHB ('fantasy').

In 2001 KIS reports in SA were similar to 2000. All KIS reported that cannabis is widely used and that benzodiazepines are used around 20% to 30% of users to come down from ecstasy, but use is much less prevalent than cannabis. All KIS reported that other stimulant drugs are also commonly taken by ecstasy users. The percentages range between 30% and 60%. The most popular of these are non-powder methamphetamine and powder methamphetamine, although the use of powder has declined due to the increased quality of methamphetamine, usually in crystalline form ('ice'). These drugs are often taken together with ecstasy to enhance and prolong the effects, but are also taken independently, with several KIS explaining that these drugs are all part of the club and rave scene. The route of administration varies, but the drugs are usually snorted or added to drinks. Injecting of methamphetamine is rare among this group of users.

Other drugs commonly used by ecstasy users that are also considered to be part of the club and rave scene are GHB ('fantasy') and ketamine ('special k'). Six key informants stated that fantasy is often used together with ecstasy, usually in a liquid form that is mixed into drinks. A key informant who works as a police officer noted that it is hard to detect and monitor the use of fantasy, as it is usually taken in nightclubs mixed in with 'designer drinks' that are of various colours. Five key informants also noted the use of cocaine, although the high price tends to preclude users taking it as often as they would like. One KI observed that cocaine use is more prevalent among sex industry workers, and the gay and lesbian population. Similarly, several key informants stated that inhalants such as nitrous oxide and amyl nitrate are more prevalent among these groups, as well as among younger ecstasy users who tend to use these drugs together with ecstasy. The use of LSD was reported by four key informants, but it is becoming less popular. One informant attributed this decline in popularity to the emergence of drugs such as fantasy and ketamine, which users are curious to experiment with.

Ten key informants reported a high level of alcohol intake among ecstasy users ranging from 40% to 90%. However, many of these observed that this practice has declined over recent times, and those that do combine the two drugs generally do not drink large quantities of alcohol. It has become more popular to drink bottled water, and to abstain from drinking alcohol altogether when taking ecstasy.

### *3.3.4 Summary*

- *ecstasy users engage in patterns of extensive polydrug use, and report a high prevalence of lifetime and recent use of a wide range of drugs*
- *substantial proportions of ecstasy users have recently used alcohol, tobacco, cannabis, methamphetamine, cocaine, inhalants and benzodiazepines*
- *the use of other drugs concurrently with ecstasy is the norm among ecstasy users*
- *the majority of ecstasy users also use other drugs to help ease the 'come down' (recovery period following acute ecstasy intoxication)*
- *the use of LSD, MDA and inhalants appears to have decreased among party drug users in NSW and SA*
- *the majority of the use of other party drugs such as ketamine and GHB remains opportunistic and relatively infrequent*
- *ecstasy remains ubiquitous in party drug markets, however the demand for and/or availability of other drugs can be limited and erratic*

## 3.4 Price, purity and availability of party drugs

### *3.4.1 Ecstasy*

#### 3.4.1.1 Price

The majority of respondents were able to comment on the price ecstasy. Across all three states, the price of a tablet either remained stable (QLD) or decreased (NSW, SA) between 2000 and 2001.

In recent years, there has been a steady decrease in the average price in NSW of a single ecstasy tablet, from $50 in 1997, to $40 in 2000, to $35 in 2001. In SA an ecstasy tablet sold for $45 in 2000 and $40 in 2001, while in QLD it was reported to be $40 in both years.

Once again the similarities between years and across jurisdiction are noteworthy (Table 9). In all states the majority of participants reported that the price either remained stable or decreased in the six months preceding interview. In all jurisdictions, almost all participants described ecstasy as 'easy' or 'very easy' to obtain, and they also agreed that availability had either remained stable or increased.

**Table 9:** Price and availability of ecstasy in NSW, QLD and SA in 2000 and 2001

| | NSW | | | QLD | | SA | |
|---|---|---|---|---|---|---|---|
| **Variable** | **1997 (*n*=173)** | **2000 (*n*=94)** | **2001 (*n*=163)** | **2000 (*n*=50)** | **2001 (*n*=117)** | **2000 (*n*=50)** | **2001 (*n*=70)** |
| Median price per tablet (range) | $50 (40 - 60) | $40 (30 - 50) | $35 (10 - 70) | $40 (30 - 50) | $40 (15 - 60) | $45 (30-55) | $40 (15-50) |
| % reported price stable | 62 | 53 | 55 | 53 | 62 | 48 | 51 |
| % reported price decreased | 29 | 38 | 29 | 38 | 29 | 20 | 26 |
| % reported 'very easy' to obtain | 67 | 70 | 72 | 70 | 67 | 32 | 74 |
| % reported 'easy' to obtain | 31 | 27 | 23 | 27 | 31 | 62 | 19 |
| % availability stable | 67 | 69 | 68 | 69 | 67 | 64 | 56 |
| % availability increased | 25 | 21 | 28 | 21 | 25 | 20 | 33 |
| % score from friends | 90 | 83 | 90 | 83 | 90 | 98 | 96 |
| % score from work colleagues | 8 | 12 | 12 | 12 | 8 | 22 | 20 |
| % score from dealers | 34 | 63 | 50 | 63 | 34 | 58 | 63 |
| % score from acquaintances | 12 | 30 | 28 | 30 | 12 | 50 | 64 |
| % score from unknown people | 6 | 27 | 22 | 27 | 6 | 24 | 13 |
| % score at friends home | 70 | 59 | 69 | 80 | 83 | 94 | 61 |
| % score at own home | 35 | 45 | 30 | 45 | 35 | 74 | 49 |
| % score at dealer's home | 23 | 35 | 33 | 35 | 23 | 54 | 30 |
| % score on the street* | 12 | 20 | 20 | 20 | 12 | 4 | 27 |

* includes other venue/ public place

In all jurisdictions, similar proportions of participants reported that they normally obtained ecstasy from friends and from work colleagues (Table 9). Substantial proportions of participants reported that they normally obtained ecstasy through dealers, acquaintances, or persons unknown to them. It was common for participants to report they obtained ecstasy at a dealer's home and on the street. This may reflect the structure of the ecstasy market wherein more people sell the drug such that there are now more options as to where and from whom it can be obtained. The results may also reflect the increase in the number of dealers who are willing to make 'home deliveries' (a trend with all drugs), as well as an increase in the number of dealers who operate through a mobile phone, meeting customers in a designated meeting spot to exchange drugs and money.

KIS reports of the price and availability of ecstasy were generally consistent with the reports by ecstasy users and were similar across the states.

Key informants in NSW cited prices ranging from $30-$60 per ecstasy tablet in 2000 and ($25-60 in 2001. Many commented that the price varied depending on the number of tablets purchased (bulk purchases reduces the cost), the relationship between the dealer and the users, and the purchase location (tablets purchased in a dance venue are likely to be more expensive). In 2000 eighteen of the 19 KIS commented on recent changes in price and all agreed that the price had either decreased (n=11) or remained stable (n=7). Of the 18 KIS who commented on recent changes in the price of ecstasy in 2001, all agreed that the price had either remained stable (n=12) or decreased (n=6).

Key informants in QLD reported that the price of a single ecstasy tablet was $45 (range $25-$60) with four key informants suggesting that 100 ecstasy tablets could be purchase for $30 per tablet. Most key informants thought the price had decreased (n=7) or remained stable (n=6), with one reporting price fluctuated.

In SA in both 2000 and 2001 an average of $40-$50 reported per ecstasy tablet (range $25-$60 in 2000 and $30-$80 in 2001. It was noted in both years that ecstasy was cheaper when large quantities are purchased. In 2000, most reported that the price had either decreased (n=4) or remained stable (n=5) with one KI reporting the price fluctuated. In 2001 all KIS that responded thought the price had remained stable (n=8) or decreased (n=1).

#### 3.4.1.2 Availability

There was a high degree of consistency between users' and KIS' reports of the availability of ecstasy. The majority of users across all sates, considered that ecstasy was either 'very easy' or 'easy' to obtain (Table 9), and similar proportions reported that the availability had either remained stable or increased in the preceding six months.

In both years, KIS reports were consistent with ecstasy user reports with KIS in all states reported that it was 'very easy' or 'easy' to obtain ecstasy. In both years the vast majority of KIS reported that availability had remained stable over the preceding six months. In 2000, one KI in NSW reported it had become easier and one reported availability fluctuated, while one KI in SA reported it had become more difficult. In 2001 two KIS in SA reported it had become easier to obtain ecstasy and a KI in NSW reported that although the availability of tablets sold as 'ecstasy' is extremely high, the availability of quality imported tablets containing MDMA has in fact decreased markedly in recent years.

Our knowledge that tablets that contain MDMA have in recent years constituted a steadily declining proportion of the market may, on the surface, appear inconsistent with figures provided by the Australian Customs Service regarding MDMA detections. The total weight of in kilograms of detections of MDMA at the Australian border has increased dramatically since the mid-1990s (Figure 2). The average weight per seizure has increased from 402.5 grams to 2302 grams in the same period. It is generally recognised that increased detection weights could reflect: i) changes in law enforcement activity, such as increased detection capabilities or a shift in focus to high-level trafficking syndicates; ii) increased demand for the drug, and a consequent increase in the size of its market; or iii) a combination of the two factors.

Increased funding for Commonwealth law enforcement agencies in recent years has significantly enhanced their intelligence, targeting, search and detection capabilities, which is highly likely to

have contributed to the increase in MDMA detections depicted in Figure 2. However, at the same time, there are indications that the demand for ecstasy has increased in recent years, both in Australia (see Section 5.1.7) and globally (e.g., UNDCP, 2002). There is limited manufacture of MDMA in Australia; in the financial year 2000/01, only two MDMA producing clandestine laboratories were seized in Australia, and Customs has detected only limited numbers of imported MDMA precursors. Thus, it is highly likely that the increased weight of MDMA detections reflects not only more efficient supply reduction activity, but also increased market demand that traffickers are seeking to meet through an increase in the weight per importation.

Given that we know that importations of MDMA have increased in recent years; and that MDMA has over the same time constituted a steadily declining proportion of the ecstasy market, together, the two pieces of information clearly suggest that the manufacture of locally produced 'duplicate' ecstasy tablets must have increased proportionately more over the same period.

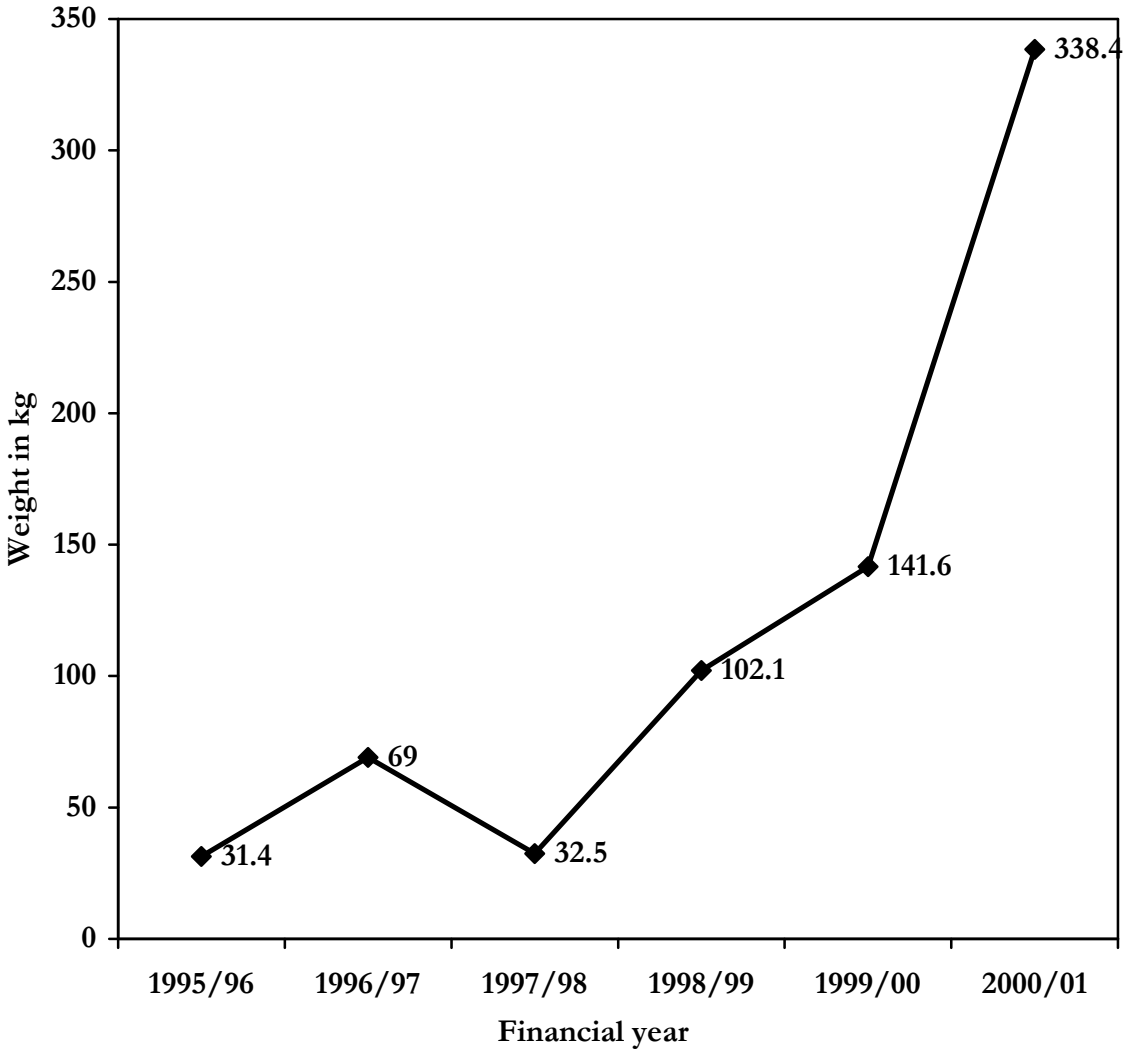



**Figure 2:** Weight in kilograms of detections of MDMA at the Australian Border, 1995/96 - 2000/01

#### 3.4.1.3 Sources and purchase locations

The source and purchase locations of ecstasy in the two-year trial are similar. The majority of participants in 2000 and 2001 reported that in the six months preceding the interview they had obtained ecstasy from friends (90%, 92%) or dealers (60%, 55%). Other people from whom ecstasy had recently been obtained included acquaintances (reported by 32% in 2000 and 37% in 2001); people unknown to participants (usually dealers selling tablets in entertainment venues; 20% in 2000, 15% in 2001); and work colleagues (13% in both years).

Ecstasy was most often obtained at friends' homes (73% in 2000, 72% in 2001), own home (51%, 36%) and dealers home (43%, 35%). Other purchase locations included nightclubs (30%, 38%); dance parties (22%, 23%); raves (31%, 22%); and pubs (9%, 10%). Nine percent in 2000 and 18% in 2001 reported that they had obtained ecstasy in another location, the majority of which occurred in a 'public place' and reflects an increase in 'mobile dealing'. A dealer is called on their mobile telephone and a public meeting place is arranged.

Participants reported paying for their ecstasy by a variety of methods, including; paid employment (85% in both 2000 and 2001); being given ecstasy by friends or partner (69% in 2000, 72% in 2001); borrowing money from friends (39%, 32%); on credit from dealers (38%, 31%); and selling or distributing drugs (33%, 37%). Other methods of paying for ecstasy included bartering other drugs or goods for ecstasy (27%, 25%); obtaining money from parents (22%, 15%); unemployment or sickness benefits (17%, 14%); government study allowances (11%, 13%); pawning goods (10%, 8%); sex work (3%, 4%); property crime (3% in both years); and fraud (3% in both years).

The variety of purchase locations and type of people to obtain drugs is reflected in the KIS reports. KIS in both years reported a recent increase in the number of young, low-level users-dealers who sell to their friends to support their own use. Some KIS commented that there are many options from which to purchase ecstasy, and that even those without a regular connection can obtain tablets within a very short period of time. KIS reported that dealing in nightclubs has become much more discrete in recent years as dealers attempt to adjust to the greatly increased security in these venues.

#### 3.4.1.4 Purity

There was consistency across years with regards to purity. The most common response regarding purity of ecstasy in the six months preceding interview was that it fluctuates (33% in 2000, 38% in 2001), with equal proportions in both years reporting the purity to be high (25%) or medium (28%).

Key informant reports regarding purity were similar to the ecstasy users with a range reported, with many suggesting the purity fluctuates widely.

Estimates of purity are necessarily subjective and depend, among other factors, on users' tolerance levels. Laboratory analyses of the purity of seizures of ecstasy provide objective evidence regarding purity changes, and should therefore be more highly regarded than the reports of users. However, it is also important to understand the major limitation of the average purity figures calculated by forensic agencies. All illicit drugs seized by Australia's law enforcement agencies are not analysed for purity. In some instances, seized drugs will be analysed only in a contested court matter. Therefore the purity figures are of an unrepresentative

sample of the illicit drugs available in Australia. Despite this limitation, the purity figures provided by forensic agencies remain the most objective measure of changes in purity levels available in Australia.

Data provided by the ABCI indicate that the national average purity of ecstasy seizures in 2000/01 of 39%. The average purity figures are calculated based on ecstasy seized by both the Australian Federal Police (AFP) and state police. The majority of AFP seizures occur at import level, and typically at larger volumes than those made by state police, so it might be expected that AFP seizures would be of higher purity. However examination AFP and NSW Police Service seizures (Topp et al 2002a) show little difference in the average purity (AFP: 41%, NSW Police Service: 42%) suggesting that limited cutting and re-pressing of imported MDMA tablets occurs as they filter down the distribution chain.

The average purity of seizures of tablets actually containing MDMA analysed by NSW forensic laboratories has steadily increased since the mid-1990s, rising from an average of 26% purity in 1996/97, to 42% in 2000/01. In QLD in 1999/2000 103 samples were analysed with the majority (76%) between 20%-39.9% purity while in 2000/01, 75% of the 68 samples were between 20-49.9% purity (Rose & Najman 2002). In SA, the purity of seizures increased from 32% in 1998/99 to 37% in 1999/2000 (Longo et al 2002).

Despite the purity of MDMA tablets seized, the figures do not necessarily contradict the common perception of both users and KIS that imported ecstasy tablets are inevitably higher quality, and the subsequent willingness of users to pay more for tablets they believe to be imported. Few local laboratories have the capacity to produce MDMA due to difficulties in obtaining the necessary precursor chemicals and the expertise required to successfully manufacture the drug (ABCI, 2002). It is likely that almost all tablets containing MDMA that appear on the streets are imported, and they command a higher price than tablets which are not imported and which are therefore highly unlikely to contain MDMA. Seizures of tablets are classified as 'ecstasy' only if forensic analysis indicates that they contain MDMA, the drug to which the term 'ecstasy' originally referred. Thus, the common user perception that imported tablets are of higher quality may be correct; it is just that the variable quality and ingredients of locally manufactured tablets is not captured in forensic analyses because the tablets that do not contain MDMA are not classed together with those that do, despite the fact that the market considers both to be 'ecstasy'.

### *3.4.3 Summary*

- *the average price of ecstasy has decreased (NSW and SA) or remained stable (QLD) in recent years*
- *the majority of tablets sold as 'ecstasy' are locally manufactured methamphetamine tablets*
- *although the proportion of the market of tablets that actually contain MDMA has decreased substantially in recent years, the average purity of those tablets has steadily increased since the mid-1990s, to 42% in 2000/01*
- *users and KIS consistently report that the availability of ecstasy has remained stable or increased*
- *ecstasy is purchased from variety of locations*

### *3.4.4 Other party drugs*

Small numbers of participants were able to comment on the price, purity and availability of other party drugs, and accordingly, these data should be interpreted cautiously. Indeed, the lack of data relating to these drugs suggests relatively limited recent exposure among this sample, and that they are not as widely available, or at least not as widely used, as ecstasy.

Table 10 presents results relating to the price of LSD, methamphetamine base, MDA, and crystalline methamphetamine in NSW, QLD and SA in both years of the trial. In all three states in 2001, more participants were able to comment on the price of these drugs. The median prices reported within states are consistent across years.

Only a small number of participants reported on the price of drugs such as GHB and ketamine and there is still some uncertainty on the price of quantities purchased. Initially it was thought that people were reporting purchasing GHB by the gram, however after a study with more users (Degenhardt et al 2001) it was thought to be more commonly purchased by the ml. Future studies could clarify the issue by determining the price and most common amount purchased.

The results relating to purity and availability of these drugs are not presented because the majority of data is missing, and too few participants provided answers to consider the data as reliable.

**Table 10:** Price of other party drugs by jurisdiction in 2000 and 2001

| | NSW | | | QLD | | SA | |
|---|---|---|---|---|---|---|---|
| **Drug** | **1997** | **2000** | **2001** | **2000** | **2001** | **2000** | **2001** |
| **LSD** | ***n*=68** | ***n*=16** | ***n*=46** | ***n*=29** | ***n*=70** | **n=38** | **n=43** |
| Median price (per tab) | $15 (2-25) | $10 (3-25) | $10 (5-45) | $15 (6-30) | $15 (6-50) | $10 (6-15) | $10 (5-25) |
| **Methamphetamine base** | | ***n*=9** | ***n*=13** | ***n*=31** | ***n*=74** | **n=34#** | **n=28** |
| Median price (per 'point') | * | $50 (50-80) | $50 (10-80) | $30 (15-80) | $ 30 (13-120) | $40 (20-50) | $30 (10-50) |
| **MDA** | ***n*=32** | ***n*=8** | ***n*=24** | ***n*=10** | ***n*=21** | ***n*=8** | ***n*=13** |
| Median price (per capsule) | $50 (30-60) | $50 (40-60) | $50 (20-80) | $40 (35-60) | $40 (30-60) | $50 (40-50) | $50 (10-50) |
| **Crystalline methamphetamine** | * | **n=5** | **n=13** | **n=6** | **n=37** | **n=34#** | **n=33** |
| Median price (per point) | | $50 (50-80) | $50 (10-80) | $35 (20-40) | $40 (10-60) | $40 (20-50) | $35 (7-75) |

* data not collected

# in SA in 2000 there was no distinction made between methamphetamine base and ice, therefore the price reported is the same and includes both.

## 3.5 Criminal activity

### *3.5.1 Self reported criminal activity among ecstasy users in 2000 and 2001*

Over half of participants (55% in 2000 and 57% in 2001) reported committing a crime in the month preceding the interview (Table 11). Drug dealing was the criminal activity participants were most likely to have recently committed (39% in 2000 and 40% in 2001) having sold drugs at least once in the month preceding the interview. It should be noted that many of these 'dealers' would not identify themselves as such, buying drugs to distribute among their friends and making little (if any) profit. Twenty-one percent of participants in both years reported that they had sold drugs less than once a week in the preceding month, 10% in 2000 and 6% in 2001 had sold drugs once a week, 6% in 2000 and 9% in 2001 had sold drugs between weekly and daily, and 3% of participants had sold drugs daily during the preceding month in both years.

Consistent with this, KIS had perceived a recent increase in the number of young, low-level users-dealers who sell to their friends to support their own use, generally buying only 50 or 100 tablets and selling them all in a single weekend.

**Table 11:** Self-reported **c**riminal activity among ecstasy users in 2000 and 2001

| | **2000 (n=194)** | **2001 (n=350)** |
|---|---|---|
| **Crime committed in preceding month** | | |
| Property crime | 7 | 9 |
| Drug dealing | 39 | 40 |
| Fraud | 2 | 4 |
| Violent crime | 2 | 4 |
| Any crime | 57 | 55 |
| **Arrested in last 12 months** | 9 | 9 |

Fifteen percent of participants in 2000 and 9% in 2001 had been arrested in the preceding 12 months. The most common arrest was for illicit drug use or possession (eight participants (4%) in 2000 and eleven (3%) in 2001). In 2000, one participant was arrested for a property crime, another for a violent crime, one for drink driving and three for 'other' offences. In 2001, seven participants had been arrested for property crimes and another six for driving offences. Four participants had been arrested for violent crimes and two for dealing or trafficking. A minority (4%) of participants in both years had a previous criminal conviction for which they had served a custodial sentence.

### *3.5.2 Comparison among NSW, QLD and SA in self reported criminal activity*

The most common self reported crime was drug dealing in all jurisdictions in both years (Table 12). Similarly low rates of fraud and violent crime in the preceding month were reported in all states.

In NSW, compared to the 1997 sample, smaller proportions of the 2001 and 2000 samples reported having engaged in any crime in the month preceding interview. Specifically, the 2001 sample reported lower prevalence of recent drug dealing and recent property crime than the earlier samples. There was a corresponding decrease between 1997 and 2000, sustained in 2001, in the proportion of the samples that reported that they had financed their ecstasy use through

these forms of crime in the preceding six months. In QLD and SA larger proportions of the 2001 sample reported drug dealing in the last month.

In SA there was an increase in 2001 of the proportion that had committed any crime and an increase in those that reported financing their ecstasy through dealing drugs. However, none of the participants in the 2001 sample reported paying for their ecstasy by committing property crime.

**Table 12:** Self-reported criminal activity among ecstasy users recruited in NSW, QLD and SA

| | NSW | | | QLD | | SA | |
|---|---|---|---|---|---|---|---|
| **Criminal activity** | **1997 (*n*=173) %** | **2000 (*n*=94) %** | **2001 (*n*=163) %** | **2000 (*n*=50) %** | **2001 (*n*=117) %** | **2000 (*n*=50) %** | **2001 (*n*=70) %** |
| Any crime in last month | 62 | 49 | 44 | 50 | 41 | 24 | 53 |
| Drug dealing in last month | 51 | 40 | 38 | 50 | 61 | 24 | 44 |
| Property crime in last month | 25 | 11 | 12 | 2 (n=1) | 3 | 2 (n=1) | 13 |
| Fraud in last month | 3 | 3 | 4 | 2 (n=1) | 1 (n=1) | 0 | 9 |
| Violent crime in last month | 2 | 2 | 4 | 0 | 3 | 2 (n=1) | 4 |
| Paid for ecstasy through dealing drugs | 49 | 35 | 36 | 42 | 31 | 20 | 46 |
| Paid for ecstasy through property crime | 13 | 4 | 3 | 0 | 3 | 2 (n=1) | 0 |

### *3.5.3 Summary*

- *about half of participants reporting some criminal activity in the month preceding interview.*
- *drug dealing was the most common self reported crime with few ecstasy users involved in other types of criminal activity. The majority of drug dealing by these users is low-level and often involves little or no profit.*
- *small proportions of ecstasy users have recently been arrested and very few report a history of incarceration*

## 3.6 Perceptions of police activity towards participants in the party drug market

### *3.6.1 Police activity in 2000 and 2001 in NSW, QLD and SA*

The majority of participants in both years reported that police activity had either increased or remained stable in the six months preceding interview, with the exception of SA in 2000 in which 78% could not comment on police activity (Table 13). An increase in the visibility of uniformed police and more undercover agents around venues and on the streets between venues was commonly reported. The emergence of drug detector (sniffer) dogs was the most common change noted by participants in NSW with disapproval of the routine use of the dogs to detect illicit drugs carried by patrons waiting in the queues outside venues.

Despite marked perceptions of a recent increase in police activity (23% across the three states in 2000 to 44% in 2001), and the fact that a substantial proportion of participants (16% in 2000 and 21% in 2001) reported that more of their friends than in the past had recently been in trouble with the police, the overwhelming majority (88% in 2000, 90% in 2001) reported that police activity had failed to make it more difficult for them to obtain illicit drugs recently. The majority (64% in 2000, 77% in 2001) also reported that the number of friends in trouble with police had remained stable.

Between 2000 and 2001, there was a marked increase in the proportions of participants that had recently perceived more police activity towards ecstasy users and the party drug market in general (23% to 44% in 2001). In all three states, in both years, few participants reported a perceived decrease in recent police activity.

**Table 13:** Perceptions of police activity among ecstasy users in 2000 and 2001 by jurisdiction

| | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|
| **Perception** | **NSW (n=94) %** | **QLD (n=50) %** | **SA (n=50) %** | **All states (n=194) %** | **NSW (n=163) %** | **QLD (n=117) %** | **SA (n=70) %** | **All states (n=350) %** |
| Recently been more police activity | 32 | 22 | 8 | **23** | 49 | 22 | 30 | **44** |
| Recently been less police activity | 5 | 6 | - | **4** | 5 | 6 | 7 | **4** |
| Police activity remained stable | 52 | 34 | 14 | **38** | 34 | 34 | 61 | **41** |
| Unable to comment on police activity | 11 | 38 | 78 | **35** | 12 | 16 | 1 | **11** |
| Police activity not made more difficult to score | 87 | 92 | 86 | **88** | 94 | 86 | 89 | **90** |
| No. of friends in trouble with police stable | 80 | 84 | 76* | **64** | 83 | 74 | 70* | **77** |
| More friends in trouble with police recently | 18 | 12 | 16 | **16** | 16 | 21 | 30 | **21** |

* In SA percentage reported reflects proportion that responded that none of friends in trouble or remained stable.

### *3.6.2 KIS' reports*

The reports of KIS regarding police activity were consistent with the ecstasy users reports. There were some differences among KIS reports between states, which may reflect different policing operations at the state level. In NSW KIS agreed that in recent years there had been marked increases in visible police activity, particularly around dance and other entertainment venues. In 2000 comments of an increase in uniformed police activity to ensure venues complied with licensing regulations and to discourage drug dealing were commonly reported while in 2001 and police activity in the form of drug detector dogs was reported. Many commented that such practices may increase the harm associated with illicit drug use, in that users would either consume all their drugs prior to leaving the house, or on the spot if the drug detector dogs were in the area. Informal anecdotes derived during interviews with users supported such speculation.

Similar to KIS reports in NSW, QLD KIS reported increased visibility of uniformed police and more undercover police and sniffer dogs. In SA in 2000 most KIS had not observed changes in police activity while in 2001 about half reported changes in police activity consistent with the ecstasy users comments of an increased presence at raves and nightclubs and around the streets. Consistent with user reports the KIS reported that police tend to observe and target dealers as opposed to users. The use of undercover police in venues was noted as an issue as the majority of people are young and they look conspicuous.

### *3.6.4 Summary*

- *In 2001 more participants and KIS perceived an increase in police activity, both uniform and undercover police activity, this can be explained in part by the introduction of drug detector dogs.*
- *substantial minorities of ecstasy users reported that more of their friends had experienced recent trouble with the police*
- *however, the overwhelming majority of all three samples of ecstasy users reported that police activity had not made it more difficult for them to obtain drugs*

## 3.7 Physical and psychological side-effects of ecstasy

### *3.7.1 Self reported physical and psychological side effects of ecstasy in 2000 and 2001*

Tables 14 and 15, display the physical and psychological side-effects attributed by participants, at least in part, to their use of ecstasy in the preceding six months among participants who reported them in 2000 and 2001.

In 2000, participants reported a mean of 9 physical side-effects in the preceding six months (SD 4.2; range 0-19). In 2000, participants reported a mean of 10 physical side-effects in the preceding six months (SD 3.8; range 0-20). The most common physical side-effects in both years were energy loss, trouble sleeping, blurred vision and muscle aches, each of which had been experienced in the preceding six months by two thirds of more of the sample (Table 14).

Most physical side-effects were attributed by at least a third of those that reported the symptoms as solely due to ecstasy use, with the exceptions of muscular aches, joint pains/stiffness and

chest pain (Table 14). Similarly, all psychological side-effects were attributed solely to ecstasy use by at least half of those who reported them except for suicide attempts, which were perceived by the small numbers that reported them as caused by a combination of factors (Table 15).

**Table 14:** Physical side-effects of ecstasy in preceding six months in 2000 and 2001

| | 2000 (n=194) | | 2001 (n=350) | |
|---|---|---|---|---|
| **SYMPTOM** | **Last 6 months (%) *** | **Only related to ecstasy (%) #** | **Last 6 months (%) *** | **Only related to ecstasy (%) #** |
| Loss of energy | 71 | 39 | 71 | 61 |
| Blurred vision | 70 | 84 | 66 | 89 |
| Trouble sleeping | 68 | 51 | 76 | 73 |
| Muscular aches | 67 | 26 | 70 | 44 |
| Profuse sweating | 65 | 44 | 63 | 40 |
| Numbness/tingling | 53 | 78 | 61 | 86 |
| Hot / cold flushes | 58 | 65 | 55 | 75 |
| Weight loss | 56 | 34 | 61 | 62 |
| Dizziness | 48 | 56 | 43 | 75 |
| Joint pains/stiffness | 44 | 28 | 50 | 41 |
| Tremors/shakes | 58 | 62 | 50 | 78 |
| Headaches | 39 | 38 | 40 | 56 |
| Inability to urinate | 25 | 76 | 33 | 86 |
| Stomach pains | 46 | 64 | 34 | 61 |
| Teeth problems | 30 | 36 | 46 | 61 |
| Vomiting | 38 | 78 | 32 | 73 |
| Heart palpitations | 44 | 47 | 44 | 58 |
| Shortness of breath | 37 | 51 | 32 | 40 |
| Chest pains | 18 | 31 | 17 | 42 |
| Fainting/pass out | 8 | 40 | 8 | 62 |
| Fits/seizures | n=1 | n=1 | 2 | 28 |

* proportion of total sample

\# among those reporting the symptom

**Table 15:** Psychological side-effects of ecstasy experienced in the preceding six months in 2000 and 2001

| | 2000 (n=194) | | 2001 (n=350) | |
|---|---|---|---|---|
| **SYMPTOM** | **Last 6 months (%) *** | **Only related to ecstasy (%) #** | **Last 6 months (%) *** | **Only related to ecstasy (%) #** |
| Confusion | 67 | 49 | 90 | 72 |
| Irritability | 63 | 47 | 63 | 64 |
| Depression | 57 | 57 | 62 | 75 |
| Anxiety | 47 | 61 | 48 | 71 |
| Paranoia | 42 | 52 | 48 | 70 |
| Blackout/memory lapse | 41 | 60 | 50 | 74 |
| Visual hallucinations | 40 | 62 | 45 | 79 |
| Auditory hallucinations | 33 | 63 | 40 | 77 |
| Loss of sex urge | 24 | 72 | 21 | 69 |
| Flashbacks | 13 | 65 | 19 | 80 |
| Panic attacks | 11 | 74 | 17 | 83 |
| Suicidal thoughts | 9 | 50 | 11 | 57 |
| Violent behaviour | 8 | 47 | 7 | 73 |
| Suicide attempts | n=2 | 0 | 3 | 22 |

Table legend:
***** proportion of total sample
**#** among those reporting the symptom

A mean of 5 psychological symptoms were reported in both years (2000: SD 2.5, range 0-13; 2001: SD 2.7, range 0-14;), most commonly mental confusion (disorientation, short-term memory loss and vagueness), irritability, depression and anxiety (Table 15).

In both 2000 and 2001 those that binged on ecstasy reported significantly higher physical side-effects than those that had not binged (2000: 10.5 versus 8.9; $t_{192}$=-3.6; $p$<.05, 2001: 10.1 versus 8.9; $t_{348}$=-3.0; $p$<.05). They also reported significantly higher psychological side effects than those that had not binged (2000: 5.3 versus 3.8; $t_{192}$=-4.3; $p$<.05, 2001: 5.6 versus 4.8; $t_{348}$=-2.7; $p$<.05).

In 2000, the route of administration of ecstasy and other drugs was not related to the extent of ecstasy-related side-effects, whereas the pattern of results was different in 2001. Compared to participants who had never injected ecstasy, participants who had injected ecstasy reported a significantly higher number of recent physical (11.2 versus 9.3; $t_{21}$=-3.2; $p$<.05) and psychological (6.3 versus 5.1; $t_{348}$=-3.1; $p$<.05) side-effects which they perceived as related to ecstasy. Those who had injected ecstasy in the preceding six months reported a significantly higher number of

recent physical side-effects that they perceived as related to their ecstasy use (12.2 versus 9.4; $t_9$=-3.5; $p$<.05) than those who had not recently injected ecstasy, although there was no difference in the number of psychological side-effects reported by the two groups. The relatively small number of participants who had injected ecstasy recently (n=22) necessitates caution when interpreting these results.

Multiple linear regressions were performed to determine the variables independently associated with the number of physical and psychological side-effects attributed to ecstasy. Predictor variables entered into the models included demographic variables, indicators of ecstasy use, route of administration variables and extent of polydrug use.

In 2000, the final regression model predicting number of physical side-effects indicated that the those that binged on party drugs in the last six months (β=.24; $p$<0.01) and being younger (β=-.24; $p$<0.05) were independently associated with reporting a higher number of physical side-effects. This model was significant ($F_{2.191}$=15.3; $p$<0.01), and accounted for 13% of variance in the number of ecstasy-related physical side-effects reported by participants. The negative β coefficient in this regression equation indicates that age was inversely related to number of physical side-effects, such that older participants reported fewer side-effects than younger participants. This relationship did not appear to be mediated by duration of ecstasy use, the inclusion into regression models (at the expense of age) reduced their explanatory power.

In 2001, the final regression model predicting number of physical side-effects indicated that the frequency of recent ecstasy use (β=.14; $p$<0.01), the extent of recent polydrug use (β=.15; $p$<0.05), being younger (β=-.29; $p$<0.05) and the extent of lifetime polydrug use (β=.25; $p$<0.05) were independently associated with reporting a higher number of physical side-effects. This model was significant ($F_{=4.340}$=23.8; $p$<0.01), and accounted for 21% of variance in the number of ecstasy-related physical side-effects reported by participants. The negative β coefficient in this regression equation indicates that age was inversely related to number of physical side-effects, such that older participants reported fewer side-effects than younger participants. Again the relationship did not appear to be mediated by duration of ecstasy use.

As for physical side effects, the final regression model predicting number of psychological side-effects in 2000 indicated that recent binging on ecstasy (β=.26; $p$<0.01), and being younger (β=-.21; $p$<0.01) were independently associated with more psychological side-effects. This model was significant ($F_{2,194}$=14.4; $p$<0.01), and accounted for 12% of variance in the number of ecstasy-related psychological side-effects reported by participants. Although the models only account for a minority of the variance, as expected young people that binge are more likely to report both physical and psychological side effects.

In 2001 the final regression model predicting number of psychological side-effects indicated that the extent of lifetime polydrug use (β=.35; $p$<0.01), the frequency of recent ecstasy use (β=.15; $p$<0.01), and being younger (β=-.30; $p$<0.01) were independently associated with more psychological side-effects. This model was significant ($F_{3,341}$=25.8; $p$<0.01), and accounted for 18% of variance in the number of ecstasy-related psychological side-effects reported by participants. Again, the age of participants was inversely related to the number of psychological side-effects they reported, such that younger users reported more side-effects.

### *3.7.2 KIS' reports*

Key informants, due to the nature of their contact with ecstasy users, were able to comment on physical and psychological side-effects. Consistent with ecstasy users reports, most KIS agreed that there is a high incidence of such problems among party drug users, but that the majority are of relatively low severity. KIS commented that generally ecstasy users are not seeking treatment for ecstasy related problems but information on the effects of the drug.

#### 3.7.2.1 NSW KIS reports on ecstasy related harm

In 2000, four KIS, with extensive contact with the nightclub industry, had perceived an increase in the number of people experiencing paranoia and panic reactions in clubs, two of whom felt that this increase was specific to young people. Two speculated that this could be due to the users' young age and a lack of information about the drug, while a third believed that changes in the chemical composition of the drug might account for such increases. A fifth key informant reported an increase in the number of people presenting to First Aid services in respiratory distress, and in the severity of that distress, increases which he considered due to polydrug use. Four KIS commented that any increases in presentations to First Aid services may reflect, at least in part, a greater awareness of and willingness to report drug-related problems, as well as increased trust of the services.

Five KIS perceived that ecstasy users had recently reported an increase in the incidence and severity of the depression experienced during the recovery period following acute intoxication. Two felt that the apparent increase may simply be due to an increased awareness of and willingness to report such problems, whereas a third perceived that impurities and changes in the chemical composition of tablets sold as ecstasy may account for the increase. Two KIS reported they had witnessed more partygoers experiencing problems related to the use of GHB, both emphasised that they were referring to small numbers.

In 2001, few KIS had perceived recent changes in physical and psychological side-effects reported by party drug users. Most agreed that there is a high incidence of such problems among party drug users, but the great majority are of relatively low severity. The exception was among the three medical officers who were employed in First Aid facilities in venues. All three were consistent in reporting changes in the types of people presenting to First Aid and the types of problems with which they presented.

Two of the three medical officers reported that although the overall numbers of patrons presenting to First Aid services had remained relatively constant, the severity of the problems with which patrons presented had increased. In particular, they had perceived an increase in the number of people losing consciousness in venues following the use of GHB, and both agreed that users did not appear to understand the gravity of such a situation, perhaps in part because many of those who lose consciousness also recover such that the risk of death may be underestimated.

Both these KIS considered that the increased use of crystal meth (ice) among patrons of entertainment venues was associated with increased incidence and severity of paranoid reactions, aggression and hostility. They also pointed out, however, that it is often difficult to identify exactly which drug may have triggered a specific problem, and that in such cases users have often engaged in extensive polydrug use. Despite this, both agreed that crystal meth and GHB were the main problem drugs they had witnessed in venues over the preceding six months.

The same two medical officers also agreed that many of the less serious drug-related presentations that they had treated in the past, such as paranoia and vomiting, were less likely to present to First Aid services in venues. They considered that this was because relatively minor problems were more likely to be handled within a peer group. The third medical officer KI, who provided First Aid services in venues more often frequented by younger and heterosexual party drug users, had perceived a different trend in the preceding six months in the types of presentations to First Aid. He reported that a larger number of inexperienced young people, particularly young women, were presenting to First Aid with relatively minor problems that they were not equipped to handle, such as paranoia and vomiting. Among a small proportion of this group, such reactions occasionally escalated into panic because users were unaware of what to expect following drug use. He attributed this to the fact that there are a larger number of inexperienced users in the market, and therefore there is also a greater incidence of such problems. He also reported a more serious trend among the same users, namely dehydration as a result of combining ecstasy with alcohol. He believed that this was due to a lack of knowledge on the part of these naïve users about the risks of concurrent stimulant and alcohol use.

#### 3.7.2.2 QLD KIS reports on ecstasy related harm

In 2000 the key informants reports were consistent with the user reports describing the psychological side-effects of regular ecstasy use. Key informant reports suggested that many ecstasy users experience several days of depression after cessation of ecstasy use. Several of the same respondents coined the term "Eckie Tuesday" when reporting that information with reference to regular weekend users, elaborating that feelings of depression and anxiety often peak on that day and gradually subside during the rest of the week. According to key informant reports, the belief (among users) that these symptoms were attributable to temporary depletion of serotonin was reported to underlie the use of SSRI anti-depressant medications during the days immediately following ecstasy use. Of particular concern is that six (12%) participants had experienced suicidal thoughts either while under the effects of ecstasy or after using the substance, especially given five of those participants attributed those ideations solely to ecstasy use. Perhaps equally concerning was the fact that a minority (10%) of participants (three males and two females) reported recently engaging in violent behaviour which they all believed was solely attributable to their use of ecstasy (or at least, pills that were sold as ecstasy). Reports suggesting violent behaviour are inconsistent with the notion that those users had ingested MDMA, however, as that substance is reported to induce feelings of empathy and warmth. It seems highly likely that users reporting violent behaviour had consumed methamphetamine tablets, which Forensic Chemistry Section of Queensland Health Scientific Services reports suggest comprise the majority of the pills that are sold as ecstasy in Queensland and Australia (McAllister et al 2001).

In 2001 key informants reported a range of problems associated with ecstasy use and that regular ecstasy use may contribute to depression, paranoia and insecurities. Treatment centre workers reported that an increase in number of young people presenting with ecstasy related problems including complex psychological, financial, social and legal problems. There were reports form hospital accident and emergency departments and paramedics that stimulant related incidences appear to be increasing and the difficulties involved due to aggressive behaviour (Rose & Najman, 2002).

#### 3.7.2.3 SA KIS reports of ecstasy related harm

In 2000, three KI were able to comment on physical and psychological side-effects due to the nature of their contact with ecstasy users. 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.

In 2001 all of the key informants were able to comment on the physical and psychological side-effects observed among this population. They emphasised ecstasy users were not seeking treatment for ecstasy-related problems, but rather want information on the effects of the drug. They also request information on harm minimisation techniques to reduce the risks of adverse effects, including advice on water consumption, how to avoid over heating, and the effects of mixing ecstasy with other drugs. Three KI observed that users tend to be very educated and aware of the effects of the drug, and are often looking to confirm and expand on their current knowledge. However, there are reports of side-effects, although they are not regarded by users as problems that are serious or disruptive to their lives. According to KI, the main problems reported by ecstasy users are depression and mood swings (*n*=7), panic and anxiety attacks (*n*=5), paranoia (*n*=4), sleep disturbances (*n*=3), muscular aches and pains (*n*=3), sexual risk-taking behaviour (*n*=2) and loss of appetite (*n*=2). Nearly all KI spoke of problems associated with the 'come down', where users report feeling lethargic, depressed and experience muscular aches and pains. One KI (a community drug and alcohol worker) said that many users find it very hard to return to work or study following a weekend of use. This key informant also noted that the problems associated with ecstasy use appear to be increasing. Similarly, the two drug treatment workers noted that ecstasy use appears to be causing problems in more people, not only among regular users but among those who use less frequently.

### *3.7.3 Summary*

- *most ecstasy users report a range of physical and psychological symptoms which they perceive as related, at least in part, to their use of the drug*
- *a small proportion of ecstasy users report physical side-effects which have been associated with ecstasy-related deaths, including the inability to urinate and passing out*
- *some ecstasy users report psychological side-effects which cause significant clinical distress, such as panic attacks, suicidal thoughts and violent behaviour*
- *although extensive polydrug use is the norm, most users attribute many of these problems specifically to their use of ecstasy*
- *younger users are more likely to report a greater number of physical and psychological side-effects, a pattern of results which cannot be accounted for by the duration of ecstasy use*

## 3.8 Other ecstasy-related problems

### *3.8.1 Ecstasy related problems reported in 2000 and 2001*

The similarities in 2000 and 2001 of users reports of ecstasy related problems are noteworthy. About half (51% in 2000 and 53% in 2001) of participants had experienced occupational or study problems in the preceding six months (Table 16), which they perceived as related, at least

in part, to their use of ecstasy. In 2000, of those that reported experiencing recent work/study problems, over half (57% in 2000 and 52% in 2001) of these problems were relatively minor, involving trouble concentrating, reduced work performance or feeling unmotivated. Thirty six percent in 2000 and 40% in 2001, involved taking sick leave or not attending classes, while a minority (6% in 2000 and 8% in 2001) were serious problems such as being dismissed from or quitting a job, or inability to obtain employment.

More than one third (43% in 2000 and 38% in 2001) reported ecstasy-related relationship or social problems in the preceding six months. Of those problems, 64% in 2000 and 65% in 2001 were relatively minor, such as arguments, mistrust or anxiety. Minorities of those who had relationship problems reported more serious issues such as ending a relationship (23% in 2000, 20% in 2001), violence (5% in 2000, 3% in 2001) or being forced to leave home (1% in both years).

**Table 16:** Other ecstasy-related problems experienced in the preceding six months in 2000 and 2001 by jurisdiction

| | 1997 | 2000 | | | | 2001 | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Ecstasy-related problem** | **NSW (n=173) %** | **NSW (n=94) %** | **QLD (n=50) %** | **SA (n=50) %** | **All states (n=194) %** | **NSW (n=163) %** | **QLD (n=117) %** | **SA (n=70) %** | **All states (n=350) %** |
| Occupational/study problems | 53 | 59 | 52 | 34 | 51 | 52 | 47 | 63 | 53 |
| Relationship/social problems | 52 | 49 | 38 | 36 | 43 | 36 | 73 | 36 | 38 |
| Financial problems | 54 | 27 | 24 | 56 | 34 | 31 | 34 | 39 | 33 |
| Legal/police problems | 4 | 6 | 2 | 2 | 4 | 7 | 5 | 6 | 6 |

Financial problems related to ecstasy use were also relatively common (34% in 2000 and 33% in 2001). Thirty eight percent in both years were relatively minor, such as having no money for other recreational activities. Forty two percent in 2000 and 37% in 2001 of those who had experienced recent ecstasy-related financial problems reported being in debt. Seventeen percent in 2000 and 24% in 2001 had been unable to pay for essentials such as food or rent.

A small minority (4% in 2000, 6% in 2001) had recent legal problems related to ecstasy. Of these, two participants had been arrested in 2000 and three in 2001. Four participants had been cautioned in 2000 and six had been cautioned in 2001.

In both years of the trial there were no gender differences in likelihood of participants reporting various ecstasy-related problems in the preceding six months. In 2000 participants who had injected ecstasy recently, were no more likely to report ecstasy-related problems than those who had not. Participants those who had ever injected ecstasy were more likely to have financial (44%) and legal (15%) problems than those who had not (31% and 2% respectively) ($\chi^2$ = 5.41, df=1, p <0.05; $\chi^2$ = 6.198, df=1, p <0.05). Participants who had ever injected any drug were also more likely financial problems than those who had not (48% to 29%, $\chi^2$ =5.06, df =1, p < 0.05).

In 2000, bingeing on ecstasy was demonstrated to be associated with the experience of ecstasy-related social and relationship problems (51% to 33% for those that had not binged, $\chi^2$ =5.06, df =1, $p < 0.05$), financial problems (48% to 17%, $\chi^2$ =18.45, df =1, $p < 0.05$) and occupational/ study problems (59% to 40%, $\chi^2$ =5.95, df =1, $p < 0.05$).

In 2001 those that had ever injected any drug (46% to 29%, $\chi^2$ =8.95, df =1, $p < 0.05$), injected ecstasy in the last six months (59% to 32%, $\chi^2$ =5.77, df =1, $p < 0.05$) and binged on ecstasy in the last six months (38% to 26%, $\chi^2$ =5.71, df =1, $p < 0.05$) were more likely to have financial ecstasy related problems than those that had not. Participants that had ever injected any drug (12% to 4%, $\chi^2$ =5.90, df =1, $p < 0.05$) and those that had binged on ecstasy in the last six months (9% to 1%, $\chi^2$ =6.96, df =1, $p < 0.05$) were more likely to have had legal ecstasy related problems in the six months preceding interview.

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

Despite the similarities between the years for the combined state samples, there were differences within states in participants' reports of ecstasy-related problems. In NSW a larger proportion of the 1997 sample reported financial problems related to their use of ecstasy. The reasons for this difference are not clear. The data collected do not allow the teasing out of the reasons, but it is interesting to note that there are also differences between the groups in terms of crime. Also in NSW, a smaller proportion of the 2001 sample reported experiencing recent relationship or social problems related to their ecstasy use. In QLD the proportion of participants that reported financial and relationship/social problems related to their ecstasy use increased in 2001. In SA those that reported occupational or study problems related to their ecstasy use increased in 2001. Again, the reasons for these apparent changes are not clear and data are not available from which it is possible to draw valid inferences.

### *3.8.4 Summary*

- *significant proportions of ecstasy users report occupational, relationship and financial problems that they perceive as being related, at least in part, to their use of the drug*
- *many of these problems are relatively minor, but some constitute significant disruptions to functioning, including loss of employment, the ending of relationships, and the inability to pay for essentials such as food or rent*
- *there have been changes in the proportion of ecstasy users that report recent ecstasy-related problems within each state, although the reasons for this are not clear, and may be an effect of sample variation*

## 3.9 Other trends in party drug markets

In 2000 78%, 82% and 46% of participants in NSW, QLD and SA respectively, reported they had perceived changes in the party drug market in the six months preceding interview. A wide range of changes were reported, however in all states it was consistently reported that more people using ecstasy and that there are also more younger users. It was reported that ecstasy has become 'normalised' and is a more mainstream drug used outside of dance club contexts.

Ecstasy is used by a wide range of people, from a variety of professions and socioeconomic backgrounds.

In NSW in both years, the most consistently reported comment was an increase in availability and use of more potent forms of methamphetamine termed by Topp and Churchill (2002) as ice and base. Consistent with these reports, KIS also reported a recent increase in the availability and use of the potent forms of methamphetamine.

In QLD in 2000 an increase in poly drug use was also commonly reported particularly an increase amphetamine and ketamine use. Users also reported an increases in what they thought was more 'responsible' use of ecstasy, with users aware of its effects and taking precautions to limit harm. Participants also reported that there was far less violence than in contexts where alcohol is the drug of choice. In 2001 respondents in QLD commented on the ease of accessing ecstasy and the positive aspects of ecstasy use.

A common theme, reported by 39% of the respondents in SA in 2000, related to concerns or fears about the content and purity of drugs. Participants commented on unreliability of the market with increases in 'dodgy/fake' drugs that could not be trusted. In 2001 many participants commented on the changes in methods of ecstasy use, with increases in injecting or snorting for greater intensity.

In 2001 the majority of respondents commented on changes in the markets for party drugs (83% in NSW, 80% in QLD and 94% in SA). As in 2000, a trend frequently reported by participants in all states was that there are more people using ecstasy, in particular more young people and that the age of initiation into ecstasy use has declined. There was consistent reports in both 2000 and 2001 that ecstasy has become a 'mainstream' illicit drug that is firmly established in Australia's illicit drug markets; is used by a wide variety of people, of both genders and of all ages, professions and socioeconomic backgrounds; and is widely used outside of dance contexts.

It is interesting to note that the same general trends of increased ecstasy use, increased use among young people, and the increasingly 'mainstream' profile of ecstasy, were reported by the ecstasy users interviewed in the 1997 study. A similar concordance over time has been noted in the general trends noted by injecting drug users (IDU) in the main IDRS (e.g., between 1997 and 2000, most IDU who commented on general trends in NSW illicit drug markets reported increases in the number of people using heroin, and the number of younger people in particular, along with increases in the number of 'mainstream' people who use the drug (Darke *et al.*, 2002). That the same general trends are reported over some years in both the main IDRS and the party drugs IDRS suggests that sudden and dramatic changes in illicit drug markets are uncommon. Instead, it appears that for the most part illicit drug markets undergo steady and gradual changes that appear manifest over some time.

### *3.9.1 Summary*

- *users and KIS in all states perceived an increase in the number of people using ecstasy, and in particular in the number of young people using ecstasy*
- *users and KIS in all states perceived an increase in the number of 'mainstream' people using ecstasy.*
- *the availability and use among party drug users in NSW of the potent forms of methamphetamine known as base and ice continue to increase*

## 4.0 METHODOLOGICAL CONSIDERATIONS IN MONITORING PARTY DRUG MARKETS

As outlined in Section 1.1, the primary aim of this two year trial was to examine the feasibility of monitoring trends in the markets for party drugs using the extant IDRS methodology. This section evaluates the utility of the methodology in terms of the achievements of the trial, points to areas where improved data collections could in the future allow more comprehensive and rigorous monitoring of party drug markets, and discusses some of the methodological issues encountered during the conduct of the trial.

### 4.1 Overall evaluation of the methodology

#### *4.1.1 What can be achieved in monitoring party drug markets*

The trial demonstrated that the methodology employed herein allows the successful monitoring of the market for ecstasy. It was possible to collect data related to ecstasy that was as comprehensive as the data collected in the main IDRS to monitor trends in the markets for the main drug classes. Ecstasy is the most widely preferred and widely used of all the drugs that could be classed as party drugs, and can rightfully be considered one of Australia's main illicit drugs, along with cannabis, methamphetamine, cocaine and heroin. Given the demonstrations of the capacity of the main IDRS to successfully monitor trends in the markets for these drugs (e.g., Darke *et al.*, 2002a,b,c,; Topp *et al.*, in press; Topp & McKetin, in press), it is consistent that the methodology can be adapted to allow the effective monitoring of trends in a fifth major illicit drug market.

#### *4.1.2 What cannot be achieved in monitoring party drug markets*

The trial also suggested, however, that the methodology is unlikely to enable the rigorous monitoring of trends in the markets for other party drugs, such as ketamine, LSD or GHB. This is directly related to the size of the markets for these drugs relative to the size of the market for ecstasy. The demand for other party drugs is not as great as the demand for ecstasy, and as a result, the market is much smaller. In other words, the prevalence of use of other party drugs is much lower than the prevalence of use of ecstasy. Moreover, even among those that do use the less common party drugs, patterns of use tend to be less frequent than ecstasy use. Much of the use of these drugs is opportunistic in nature, and there are many fewer dedicated users of these drugs than there are dedicated users of ecstasy. As a result, even among those who report the recent use of other party drugs, the extent of knowledge relating to their price, purity and availability tends to be relatively limited.

If it were deemed necessary to monitor trends in the markets for drugs such as ketamine, LSD or GHB, this would be possible; however, the results of the current trial suggest that to do so would require that specific sentinel populations of drug users be recruited. For example, it is possible to identify regular users of GHB, and such users would inevitably be sufficiently knowledgeable about GHB to discuss trends in its price, purity and availability. However, those who are knowledgeable about GHB may not be knowledgeable about ketamine, and vice versa. It is likely that it would be necessary to recruit a sample of users of each of the different party drugs to allow the rigorous monitoring of trends in their markets. The investment of resources that would be required to recruit samples able to discuss each particular party drug is substantial.

Given that, at least currently, these markets are relatively small, it may be difficult to justify the investment. We recommend, therefore, that any future monitoring of trends in the markets for

party drugs employ regular ecstasy users as the target sentinel population. Although such methodology is unlikely to allow rigorous monitoring of trends in the markets for other party drugs, it is likely to detect significant changes in the size of these markets. If the results of such monitoring suggested that there had been a rapid or significant expansion of any of these markets, further examination and monitoring of those markets would be justified.

## 4.2 Consideration of each of the methodological components

### *4.2.1 Quantitative survey of regular ecstasy users*

The quantitative survey of regular ecstasy users was successfully conducted, and the results validated our choice of this population as the appropriate sentinel group. Participants were readily accessible and willing to participate. Through the administration of the quantitative interview schedule to the samples of regular ecstasy users, information was collected regarding demographic characteristics, self-reported patterns of drug use and experience of associated harms, criminal behaviour, the price, purity and availability of ecstasy and other party drugs, and general trends in party drug markets.

### *4.2.2 Qualitative survey of key informants (KIS)*

The qualitative survey of key informants (KIS) was also successfully conducted, and the data thus collected were used to validate and contextualise the quantitative reports of the ecstasy users. Some consideration was required of who would constitute an appropriate KI for the party drugs IDRS, and the nature of these KIS differed fundamentally from the types of KIS recruited for the main IDRS. This is a direct consequence of the less 'visible' nature of party drug users compared to users of the main illicit drugs. In contrast to users of the main illicit drugs, party drug users generally do not present to services such as treatment agencies or needle and syringe programs, they tend to have little contact with the criminal justice system, and they experience serious health consequences of their drug use only relatively rarely. As a result, there are fewer professionals in the law enforcement, health and criminal justice sectors who are knowledgeable about party drug users than there are who are knowledgeable about users of the main illicit drugs. Whereas the majority of KIS for the main IDRS are recruited from government and non-government agencies that provide services relevant for illicit drug users, it proved necessary in the party drugs IDRS to recruit the majority of KIS from within the party drug subculture itself. In other words, although such KIS do have regular contact with ecstasy users through the nature of their work, they do not necessarily discuss in detail with users their drug use and associated topics, as many KIS who participate in the main IDRS are likely to do. As a result, their knowledge of the population and its practices tended to be less systematic and specialist than among KIS recruited in the main IDRS. Notwithstanding these differences, it is still considered that the KIS component of this methodological trial was successful, and provided an important source of data relating to trends in illicit drug markets against which to triangulate others.

### *4.2.3 The collation of extant indicator data sources*

The collation of extant indicator data sources relating to party drugs was the least successful methodological component of this trial. There were difficulties in identifying and accessing extant data sources relevant to party drugs. Fewer relevant data sources exist for party drugs than for the main illicit drugs, even for ecstasy. Ecstasy is a relatively new drug in Australia's illicit drug markets, having been widely used for only a decade. Moreover, as we have argued above, users of ecstasy and other party drugs are a less 'visible' population than users of other illicit drugs, and are less likely to come into contact with various government and non-

government agencies. As a result, compared to the data sources that exist for the main illicit drugs, fewer data sources exist which could provide information about trends in party drug markets.

It was difficult to readily identify extant indicator data relevant to party drug markets. The lack of indicator data prevented a triangulation of the three data sources. It is the triangulation of data from different sources that is a major strength of the main IDRS, because the process allows the weaknesses inherent in each data source to be overcome such that more confidence can be placed in the reported trends. The party drugs trial therefore pointed to the need for improvements in the identification and collection of data that could be used to monitor trends in party drug markets. Until such time as these improvements are implemented, systems designed to monitor trends in party drug markets will be forced to rely more heavily on the reports of users and KIS than is the case in the monitoring of the main illicit drug markets conducted in the main IDRS.

There are a number of reasons why it is difficult to identify indicator data relating to so-called 'party drugs'. First, psychostimulant drugs are by the very nature of their actions less amenable to monitoring via indicator data because the negative consequences of their use are less apparent than those of CNS depressant drugs such as opioids, for whom indicators such as statistics on opioid overdoses and methadone treatment numbers are, in theory, readily available. In contrast, the use of psychostimulant drugs is less likely to result in an overdose requiring medical attention. Furthermore, there are relatively few treatment possibilities for persons with problematic psychostimulant use, in contrast to numbers such as methadone clients for heroin use. Furthermore, for some of the newer 'party drugs', indicator data may not be currently available due to the time lag between the spread of use of a drug and the development of reliable recording systems to note their negative side effects.

The National Illicit Drug Indicator Project (NIDIP) is currently being conducted by NDARC with a view to making some headway towards resolving these issues. NIDIP is aimed at completing a more comprehensive system of collection of indicator data around the country. The first step in this project is the identification of possible sources of indicator data that may reflect the use and problematic use of illicit drugs. These indicators will be evaluated and ultimately, NIDIP will be able to provide clear directions on necessary modifications or additions that may be made to the collection of indicator data around the country.

At a level even more fundamental than identifying and collating data extant data sources, however, is the need for standardised data collection procedures. A consensus view of the way in which drugs should be classified would greatly increase the precision with which indicator data could inform our understandings of the market. For example, in some data collection systems, such as hospital separations, ecstasy and amphetamines are grouped into a single class known as 'amphetamine-type stimulants', whereas in other systems, such as those recording the purity of drug seizures, the two classes are considered separately. Another way that our understanding of the market for ecstasy could be improved is the collection, where possible, of two sources of information about the specific drug involved. The first is information about the specific chemical compound confirmed by laboratory testing as being present (such as is conducted by forensic laboratories on seizures of illicit drugs, or by toxicological laboratories on biological samples obtained from drug users). The second is information collected about what the market considered the drug to be, in other words, what it was sold as or purchased as. The two sources of information are likely to be discrepant in many cases, such as when a tablet containing methamphetamine is sold as ecstasy. The extent of the discrepancies would allow a more accurate estimation than has been possible to date, of the proportion of illicit drug markets that

are satisfied by specific compounds. In other words, a comprehensive understanding of party drug markets might seek to determine not only what participants are actually using, but also what they think they are using.

## 4.3 Other methodological issues to be considered in monitoring party drug markets

The following sections discuss the methodological lessons learnt through the conduct of the trial of the party drugs IDRS, and are intended to provide guidance to future efforts directed toward documenting trends in such markets.

### *4.3.1 Number of participants to be interviewed*

As discussed above, the appropriate sentinel population of drug users was accessed for the party drug IDRS. The funding contract required that a sample of 50 participants from this sentinel population be interviewed for the study. However, as the absence of established and varied indicator data sources became more obvious, it became clear that the results would rely on data obtained from the sentinel population more heavily than is the case in the main IDRS. For this reason, a sample of 50 participants was considered insufficient. 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. In the first year of the trial, 194 users were interviewed (NSW n=94; QLD n=50; SA n=50), but the participation of a larger number of party drug users was deemed desirable. In the second year, a total of 350 users were interviewed (NSW n=163; QLD n=117; SA n=70). A minimum of 100 ecstasy users should participate in any future party drug IDRS conducted in any jurisdiction, and interviewing up to 150 users, where possible, will allow more confidence to be placed in the results of the study.

### *4.3.2 Timing of interviews*

Notification of funding approval for the party drugs IDRS was received in June 2000, and data collection for the first year of the trial commenced in August. In 2001, data collection took place in April-May. This is because the focus of the party drug interviews for both users and KIS is on the six months preceding the interviews. There are more events in the summer than the winter during which party drugs are likely to be consumed. Including the Christmas and New Year festive season, the Sydney Gay and Lesbian Mardi Gras in early March, and the outdoor summer music festivals. Demand for party drugs is highly likely to increase at such times, and manufacturers and distributors are highly likely to respond to that demand by increasing supply. Thus, it is considered that the interview must include in its timeframe of reference all such events. April-May, as the summer party season is winding down, is an appropriate time to collect such data.

### *4.3.3 Drawing comparisons over time*

When considering methodological issues, it is appropriate to consider the methodological limitations inherent in drawing comparisons between different samples across time, such as those that were drawn in this report between the ecstasy users recruited in 2001 and 2000.

In survey research, such as that described and reported here, inferences about the entire population are drawn from the results of studies of sample (Kerlinger, 1986). By definition, illicit drug use is a hidden and socially stigmatised activity. Due to the inherently 'hidden' nature of such drug use (Griffiths, Gossop, Powis & Strang, 1993), it is impossible to define the

parameters of an illicit drug-using population (such as ecstasy users in Sydney, for example), and therefore to obtain a random sample of that population. Although it is perfectly appropriate to draw comparisons across time between random samples drawn from the same population, because such samples can be considered to represent the entire population (Kerlinger, 1986), it is somewhat less appropriate to do so when the samples to be compared are not random and it cannot be confidently ascertained that they represent the entire population from which they were drawn.

The ecstasy users recruited for both the two year trial of the party drugs IDRS and for the study conducted in 1997 (Topp et al 1998) were obtained through purposive sampling (characterised by the use of judgement and a deliberate effort to obtain representative samples by including presumably typical groups in the sample; Kerlinger, 1986), rather than the more desirable probability sampling (in which each sampling unit has a known probability of being selected such that inferences about the population can be derived from the sample with a measurable degree of precision; Lilienfeld & Lilienfeld, 1980). Although in both studies every effort was made to recruit as wide a cross-section of participants as possible, it is not possible to state with complete confidence that one or both samples represented the entire population of ecstasy users in Sydney. Therefore, caution must be exercised when interpreting differences between the two samples as indicative of changes in the ecstasy market over the intervening years.

However, in support of the notion that drawing such comparisons is a reasonable analysis strategy, it should also be noted that the methodology of the two studies was identical. Recruitment methods (street press, dance music publications, gay and lesbian 'niche' market publications) and entry criteria were the same in both studies, the questions asked of participants were the same, and the first author of the present report interviewed the bulk of participants in both studies. It is therefore considered that drawing comparisons between the samples is an appropriate strategy and that doing so provided valid information on changes in the ecstasy market between 1997 and 2001. It is also considered that continuing to implement the same methodology in the future will allow the successful monitoring of trends in this market over time, as has now occurred in the main IDRS for five years (e.g., Darke *et al.*, a,b,c, 2002; Topp *et al.*, in press).

### 4.4 Cost Implications

NDLERF provided funding for the party drugs module to be conducted in two states; NSW and QLD. As researchers in SA were interested in, and saw the need for, further research to examine the party drugs markets, they attained funding from DASC to conduct the study. This report provides information from all three states, giving a broader indication of ecstasy and other party drug use in Australia.

The additional funding provided by NDLERF facilitated the collection of data that provides a picture of the type of people using ecstasy, patterns of ecstasy and other drug use and information on the price, purity and availability of ecstasy. Information of the harms associated with ecstasy use and emerging trends in the party drugs market were also reported on.

This feasibility study was designed to provide information on ecstasy use in two states and examine whether the extant IDRS methodology could be utilised with party drug users. Information in this report provides details on party drug use in three states and the IDRS methodology, particularly the user and key informant surveys, are appropriate with this population. The indicator data sources reported on are consistent with the user and key

informant surveys, however the limited availability of existing indicator data for 'party drugs' needs to be noted and sources identified as they emerge (Section 4.2.3).

The additional data collected with NDLERF funding allowed the documentation of the differing drug markets in different jurisdictions and, crucially, allows for greater power to detect trends in drug use in these jurisdictions. Conducting the party drugs module in a few jurisdictions is important to highlight that although there are consistencies across jurisdictions there is not a single Australian drug market and patterns of drug use that are problematic in one jurisdiction may not be observed in others.

As with the main IDRS, another benefit of regular data collection is in its provision of a vehicle to which additional data collections can be easily attached to the core questionnaire to address emerging questions of jurisdictional importance in reducing drug-related harms. For example, additional data was collected from the IDU survey on a national level, in the 2001 IDRS, in each jurisdiction to gauge the perceptions, length and effects of the heroin drought. The IDRS provides an opportunity to collect such additional data in a timely and cost efficient manner. This would not be the case if alternate funding sources had to be accessed by submission of a proposal in order to develop a new project from scratch. This applies to the party drugs component of the IDRS.

The importance of continued data collection in a standardised manner is imperative in the reporting of trends over time. The implementation of the two-year trial for the party drugs module provides a wide range of data to be used as the base for future data collections to allow the reporting of trends over time in the party drugs market, as well as detecting emerging issues and directing future research in this area. NDARC and DASC appreciated the value of a continued data collection and funded the party drugs module in 2002. Therefore, there are four years of comparable data (including the study conducted in 1997) in NSW and three years in SA. The value of the main IDRS became increasingly apparent as the number of years over which comparable data has been collected increased (Darke *et al.*, 2002 a,b,c; Topp *et al.*, in press; Topp & McKetin, in press). It seems likely that this would be the case in the party drugs IDRS if in the future the collection of comparable data on an annual basis was maintained.

# 5.0 SUMMARY AND IMPLICATIONS OF RESULTS

## 5.1 Summary of results

### *5.1.1 Demographic characteristics*

The results obtained in both years of this trial indicated that party drug users, a population defined at least monthly use of tablets sold as 'ecstasy', tend to be young, relatively well-educated, and likely to be employed or engaged in studies. A variety of cultural backgrounds were represented in the two samples, with the majority of participants from English speaking backgrounds. The majority of participants had not had contact with police or other social authorities, did not come from socially deprived backgrounds, and few engaged in crime other than drug dealing. Small proportions of participants were currently in drug treatment or had previously been incarcerated.

### *5.1.2 Patterns of ecstasy use*

The regular ecstasy users interviewed as part of this trial described a wide range of patterns of ecstasy and other drug use. Participants interviewed in both 2000 and 2001 typically began to use ecstasy in their late teens, and current frequency of use varied from once per month to several days per week. Approximately one-third of both samples reported the use of ecstasy on at least one day per week in the six months preceding the interviews. Recent 'bingeing', or the continuous use of ecstasy for more than 48 hours without sleep, was reported by 44% of the 2000 sample and 58% of the 2001 sample. Between one-third and one-half of both the samples reported that they had used more than four tablets in a single use episode in the preceding six months, and the majority of both samples 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 of both samples (10%-12%) had injected ecstasy. Multivariate analyses suggested that this practice was an extension of the intravenous use of other drugs; very few users nominated injection as their preferred route of ecstasy administration.

### *5.1.3 Patterns of polydrug use*

As with other Australian samples of party drug users (e.g., Boys, Lenton & Norcoss, 1997), it is accurate to characterise the participants interviewed in both 2000 and 2001 as extensive polydrug users, more than half of whom had a preference for ecstasy. Participants in both samples had used an average of 10 drugs in their lifetime, and an average of seven in the six months preceding the interview. Substantial minorities of both samples regularly used other drugs concurrently with ecstasy, including alcohol, cannabis, tobacco, methamphetamine, and cocaine. Most participants also used drugs such as cannabis, alcohol and benzodiazepines to ease the 'come down' or recovery period following acute ecstasy intoxication. These apparently normative patterns of polydrug use emphasise the need for research and education on the effects and risks of such practices. The prevalence and frequency of use of party drugs other than ecstasy suggest that there are relatively few dedicated users, and much use of these drugs appears to be opportunistic in nature.

### *5.1.4 Price, purity and availability of ecstasy*

The average price of a single ecstasy tablet is AUD$40. Tablets sold as ecstasy have remained readily available across all three states, the great majority of participants described the drug as 'very easy' or 'easy' to obtain. However, the proportion of the ecstasy market that is sourced by locally produced 'duplicate' tablets has increased markedly since the mid-late 1990s. The Australian Bureau of Criminal Intelligence (ABCI, 2002) recently estimated that up to 80% of tablets sold as ecstasy in Australia are duplicate tablets that contain low-dose methamphetamine, sometimes in combination with another drug such as ketamine, rather than MDMA (3,4-methylenedioxymethamphetamine), the compound to which the term 'ecstasy' originally exclusively referred.

In the financial year 2000/01, only two clandestine MDMA laboratories were seized in Australia (one in WA and one in QLD), compared with 201 methamphetamine-producing laboratories (ABCI, 2002). Clearly, few Australian illicit manufacturers have the capacity to produce MDMA, partly due to the expertise required, and partly due to the difficulty in obtaining the necessary precursor chemicals. The small number of MDMA-producing laboratories seized in Australia suggests that it is highly likely that almost all of the tablets available in Australia that actually contain MDMA are imported. There are, however, numerous websites set up for users to post and access reports about 'pills' they have recently used (e.g., www.pillreports.com), which include detailed descriptions of the colour, weight and logo of the tablets, along with their subjective effects. These sites provide clandestine chemists with all the information they require to produce

duplicate tablets in a timely fashion that are sought after among users, who appear to have little understanding of the ease with which a number of manufacturers can produce tablets that look the same, but using different recipes, such that the tablets contain completely different chemical combinations.

Although all indications are that only a minority of tablets sold as 'ecstasy' contain MDMA, and that this proportion is likely to have decreased steadily since the mid-late 1990s, it is also the case that the average purity of seizures of tablets actually containing MDMA analysed by NSW forensic laboratories have steadily increased in purity since the mid-1990s, rising from an average of 26% purity in 1996/97, to 42% in 2000/01. Imported tablets tend among users to be more highly sought after than locally produced imitations, with users willing to pay more for a tablet they believe is imported. Law enforcement intelligence indicates that most of the MDMA that crosses Australia's Customs border originates in western Europe, and particularly in the Netherlands. However, an increasing trend has also been noted toward the transhipment of drug importations through South East Asian countries, notably Indonesia, prior to their arrival at the Australian border (ABCI, 2002). The supply of imported MDMA tablets cannot match demand, and the market for duplicate pills remains strong, having taken on a life of its own among users who are not overly fussy about which particular stimulant combination is contained in the tablets they consume. The change in terminology among Sydney's ecstasy users, wherein they are just as likely to call tablets sold as ecstasy 'pills' as they are to call them 'ecstasy', is an indication of the changing nature of the market. Demand for 'pills' that contain any stimulant that will give users more energy, make them more talkative and increase their confidence is strong. Whether those 'pills' contain MDMA or some other stimulant is of relatively little importance to a majority of the contemporary ecstasy market.

### *5.1.5 Price, purity and availability of other party drugs*

The relatively small numbers of participants who felt confident enough of their knowledge about party drugs other than ecstasy to comment on their price, purity and availability suggests limited exposure to such drugs among these samples. Much of the use of less common party drugs, such as GHB or ketamine, appears to be opportunistic in nature, and therefore infrequent relative to the use of the widely preferred party drug ecstasy. Whereas many participants who participated in this trial would be willing to expend considerable effort to obtain ecstasy, relatively few would place the same emphasis on obtaining LSD or GHB. Consequently, many people who report the recent use of such drugs may not deliberately seek them out, and hence, are unfamiliar with market indicators such as changes in their price, purity and availability. The relatively low rate of exposure among the sample is in itself an indicator of the smaller size of the markets for them. However ongoing monitoring would allow the detection of any expansion in the market.

### *5.1.6 Self-reported harms arising from ecstasy and other drug use*

In both years of the trial, participants reported a broad range of recent physical and psychological side-effects which they perceived as due, at least in part, to their use of ecstasy. There was a high level of consistency in the side-effects reported in the two years of the trial; for example, energy loss, blurred vision, trouble sleeping, muscle aches, mental confusion irritability and depression had been experienced in the preceding six months by the majority in both years. It appears that current Australian research reports a higher incidence of side-effects among users than earlier, international research (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 among both samples, and although many of

these problems could be considered relatively minor, some constituted significant disruptions to functioning, including loss of employment, the ending of relationships, and the inability to pay for food or rent.

Multivariate analyses consistently found that younger users are more likely to report a wider range of ecstasy-related harms. There are a number of possible reasons for this consistent pattern. These include the possibilities that: i) younger users genuinely experience more harm than older users, perhaps as a result of a particular vulnerability, or perhaps because they are yet to develop their own coping strategies to help them reduce the harms; ii) younger users are more likely and/or more willing than older users to report these harms; and/or iii) those younger users who do experience significant ecstasy-related harm cease their use of the drug, such that only those who experience less harm remain in the market as they get older.

Along with age, multivariate analyses also suggest that indicators of ecstasy and other illicit drug use are likewise related to the reporting of ecstasy-related harm, including quantity and frequency of recent ecstasy use, 'bingeing' on ecstasy and other stimulants for more than 48 hours without sleep, and the extent of recent and lifetime polydrug use

### *5.1.7 The expansion of the market for ecstasy*

The results described above were notable for their similarities across the two years of the trial, along with their concordance with the results from the 1997 study of ecstasy users. To confidently determine trends in the market data would need to be collected on an ongoing basis, however, in NSW where data has been collected for three years, there are some indications that suggest the quantity and frequency of ecstasy use among these samples of regular users may have increased, including increased proportions of the samples reporting recent bingeing and the routine use of more than one tablet in a single use episode. These quantitative self-report data obtained from users are supported by the impressions of some KIS across all jurisdictions in both years, who reported increased use of ecstasy and other drug use among users with whom they had recent contact. The marked similarities between the results of the studies conducted in 2001 and 2000 (and 1997 in NSW) are noteworthy. Given the similarities between the results, particularly in terms of demographics and drug use data, it seems reasonable to suggest that the main change in the party drug market since 1997 has been its expansion. Both users and KIS in both years of the trial consistently reported that the number of people using ecstasy had recently increased and that, in recent years, ecstasy has become a mainstream drug firmly established in the illicit drug landscape in Australia.

These reports by users and KIS are validated by the results of the 1998 NDS Household Survey, which indicated that prevalence of both lifetime and recent use of ecstasy in Australia had doubled since the 1995 survey (see Section 3.1.4). Prevalence of ecstasy use increased again between the 1998 and 2001 Household Surveys, despite methodological differences that may well have led to underestimates of prevalence in the 2001 survey. It can be argued that similar sorts of people are using ecstasy and other drugs in similar sorts of ways to those reported by users interviewed in 1997; it is just that, now, there are more of them than there were previously.

### *5.1.8 Party drugs that are less consistently popular than ecstasy*

Although overall rates of polydrug use remained stable between 1997 and 2001, the results suggest that the availability and use of specific drugs varied over that time. Again ongoing monitoring of party drug use would allow for trends to be detected. It may be that as the demand for and/or availability of one illicit drug wanes, the demand for and/or availability of

another increases, creating its own niche in an ever-changing range of party drug options. Ecstasy is the fundamental 'staple' of the party drug market and is consistently widely available. The demand for and availability and use of other party drugs appear more limited and erratic, and there are relatively few dedicated users of these drugs.

## 5.2 Implications

The results contained in this report clearly demonstrate that, with minor adjustments to the methodology, the IDRS can successfully monitor trends in the market for ecstasy. This enables the collection of information that cannot be obtained through the extant IDRS, due to the low rates of exposure of IDU to party drugs including ecstasy. NDS Household Survey data and the reports of both ecstasy users and KIS 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 (Griffiths *et al.*, 1997).

The evidence continues to mount that ecstasy (MDMA) is neurotoxic to serotonergic regions of the brain and that current heavy users may be at elevated risk of suffering mood disorders and cognitive dysfunctions in the future (Boot, McGregor & Hall, 2000; Hegadoren, Baker & Bourin, 1999). As a result of the wide variation in chemical compounds contained in tablets sold as 'ecstasy', it is difficult to ascertain the exact relevance of findings such as these to Australia's current ecstasy users. However, it remains the case that many ecstasy users report a wide range of harms that they perceive as related to their use of the drug, and that some of these harms constitute significant disruptions to functioning. Continued monitoring of the market for this drug will ensure policymakers are able to respond to changes in the market or in the nature and extent of ecstasy-related harms in a timely fashion, as has been enabled through the routine conduct of the main IDRS since 1996 (e.g., Darke *et al.,* 2002a,b,c; Topp *et al.*, in press; Topp & McKetin, in press). It will also enable the regular collection of indicative data relating to the size of the markets for other party drugs, such as GHB and ketamine, and will point to the need for research specific to such drugs as and when it arises.

## 5.3 Conclusion

Despite Australia's continued effort to reduce the importation and local manufacture of ecstasy, the drug most fundamental to party drug markets, it has remained readily available in recent years. The price of a tablet of ecstasy was has decreased since 1997 and the prevalence of self-reported use among the general population increased to 6.1% (AIHW, 2002). The weight in kilograms of detections of MDMA made at the border by the Australian Customs Service steadily increased from the mid-1990s onward. The average purity of seizures of MDMA (3,4-methylenedioxymethamphetamine, the compound to which the term 'ecstasy' originally exclusively referred) analysed in NSW steadily increased from 26% in 1996/97 to 42% in 2000/01. Data provided by the ABCI indicate that the national average purity of ecstasy seizures in 2000/01 of 39%. The average purity figures are calculated based on ecstasy seized by both the Australian Federal Police (AFP) and state police.

Since the mid-1990s, the market for 'ecstasy' has been characterised by an increasing proportion of locally manufactured 'duplicate' tablets that do not contain MDMA at all. Originally designed to meet the unmet demand for true MDMA (the majority of which is imported into Australia), the preponderance of 'duplicate' tablets has been associated with the evolution and growth of a

less discerning marketplace. Independent of the demand for MDMA, there is now also marked demand for tablets that users are equally as likely to call 'pills' as 'ecstasy', and which may contain a range of stimulant cocktails. Although within this market, 'real Es' (tablets containing MDMA) are more expensive and more sought-after than a 'pill', it is highly likely that a substantial proportion of consumers have never used real MDMA; and that an equally sizeable, if not larger, proportion of less informed users would not recognise whether they had. Thus, in the recent evolution of Australia's ecstasy market, demand that was originally specific to MDMA took on a life of its own when local clandestine manufacturers discovered that some users were willing to purchase an easy-to-manufacture proxy 'pill' rather than refrain from using 'ecstasy' altogether. Those to whom 'pills' proved unacceptable eventually left the market, to be replaced by naïve participants with no experience of any other than contemporary market conditions. The memory of the subjective experience of MDMA, and the capacity to recognise its unique effects in the event that they are re-experienced, is likely to be held by a declining proportion of so-called 'ecstasy' users.

Despite the variability in the contents of tablets sold as 'ecstasy', the market demand for the tablets continues to grow, and that substantial proportions of samples of users report ecstasy-related harm. Continued monitoring of this market will enable the collection and dissemination of information that will allow the implementation of timely policy responses to market developments. The value of the main IDRS became increasingly apparent as the number of years over which comparable data has been collected increased (Darke *et al.*, 2002 a,b,c; Topp *et al.*, in press; Topp & McKetin, in press). It seems likely that this would be the case in the party drugs IDRS if in the future the collection of comparable data on an annual basis was maintained.

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