NSW Party Drug Trends 2001

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

Libby Topp, Courtney Breen, Sharlene Kaye & Shane Darke

National Drug and Alcohol Research Centre
University of New South Wales

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LIST OF ABBREVIATIONS

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 funded a two-year trial in NSW and QLD to examine the feasibility of monitoring trends in the market for party drugs using the extant IDRS methodology. Detailed results of the first year of the trial in NSW are reported elsewhere (Topp & Darke, 2001).

The report presents the results of the two-year trial and those of a comparable study conducted in 1997. Results include 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.

Demographic characteristics

The results of the trial indicated 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 subjects 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. Only two subjects were currently in treatment for a drug-related problem, neither of which were related to ecstasy, and a small proportion had previously been incarcerated.

Patterns of ecstasy use

Subjects in the trial reported great variation in patterns of party drug use. They typically began to use ecstasy in their late teens, and their current frequency of use varied from once per month to a few days per week. Close to one third reported that they had used ecstasy at least once a week in the six months preceding the interview, and a majority had used ecstasy continuously for more than 48 hours in the preceding six months. More than one-third of subjects had used five or more tablets in a single use episode in the preceding six months, and more than half reported that they 'typically' used more than one tablet. Consistent with earlier reports, subjects primarily administered ecstasy orally. Although one in ten reported having injected the drug at some time, very few subjects reported that injection was their preferred route of ecstasy administration.

Patterns of polydrug use

Subjects could be characterised as extensive polydrug users, over half of whom nominated ecstasy as their favourite or preferred drug. On average, subjects had used ten drugs in their lifetime and had used seven in the preceding six months. Substantial minorities regularly used other drugs concurrently with ecstasy, including alcohol, cannabis, tobacco, methamphetamine, and amyl nitrite. Most subjects 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 GHB, ketamine and ice 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

In recent years, there has been a steady decrease in the average price in Sydney of a single ecstasy tablet, from $50 in 1997, to $40 in 2000, to $35 in 2001. Tablets sold as ecstasy have remained readily available in Sydney since 1997; across all three studies, the great majority of users 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 applied. Almost all of the tablets that actually contain MDMA are likely to have been imported; few clandestine manufacturers in Australia have access to the necessary precursors nor 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. '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, 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.

Price, purity and availability of other party drugs

Relatively small numbers of subjects felt confident enough of their knowledge about party drugs other than ecstasy to comment on their price, purity and availability, suggesting of 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 preferred party drug ecstasy. Many subjects who participated in this trial would be willing to expend considerable effort to obtain ecstasy, but relatively few would place the same emphasis on obtaining LSD or GHB. Consequently, 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, subjects 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, trouble sleeping, muscle aches, 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 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.

The expansion of the party drug market

One of the few instances in which it was possible to triangulate data from all three sources was with respect to reports of the expansion of the market for ecstasy. Both users and KIS in the two year trial and in the 1997 study 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 Sydney'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 2001, 2000 and 1997 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 substantially greater numbers than in 1997.

Although overall rates of polydrug use remained stable between 1997 and 2001, the results suggested that the availability and use of specific drugs varied over that time. Between 1997 and 2001, the prevalence and frequency of use of some drugs decreased, including LSD, MDA and inhalants such as amyl nitrite and nitrous oxide. However, over the same period, the prevalence of use of other drugs, including GHB, ketamine and ice, have steadily increased. 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 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.

Conclusion

Despite Australia's continued effort to reduce both the importation and local manufacture of ecstasy, the drug most fundamental to party drug markets, it has remained readily available in Sydney since 1997. Over that time, the price per tablet fell from $50 to $35, 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.

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 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 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', 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 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 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) that has been conducted on an annual basis in NSW since 1996, and in all states and territories of Australia since 1999. The purpose of the IDRS has been to provide a coordinated approach to the monitoring of the use of Australia's main illicit drugs, in particular, methamphetamine, cannabis, cocaine and heroin. It is intended to serve as a strategic early warning system, identifying emerging trends of local and national concern in various illicit drug markets. The IDRS 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 the National Drug Strategy (NDS) Household 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 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 more likely to emerge in large cities rather than regional centres or rural areas.

The findings described in this report include a summary of trends in ecstasy and other 'party drug' use detected in Sydney in 2001, the second year of the two-year trial. These trends have been extrapolated from three data sources:

1. face-to-face interviews with 163 current ecstasy users recruited in Sydney;

2. telephone interviews with 21 key informants who, through the nature of their work, have regular contact with ecstasy users in Sydney; and

3. indicator data sources such as the average purity of seizures of ecstasy analysed in NSW, and prevalence of use data drawn from the NDS Household Surveys.

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 of both of the two years of the trial are presented in this report, along with 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). Thus, the results presented herein summarise three data collections conducted over the four year period 1997-2001. There are statistical constraints of drawing comparisons over time, but it is important to note here that the methodology of the three studies was identical, including the criteria for participation, questions asked, recruitment methods and statistical analyses.

Jurisdictional comparisons of party drug data will be presented elsewhere (Breen et al., *in preparation*). 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, 2001). A national overview of trends in other illicit drug markets was presented in *Australian Drug Trends 2001* (Topp *et al.*, 2002).

1.1 Study aims

In 2001, the specific aims of the NSW party drugs IDRS were:

1. 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;

2. to describe the characteristics of a sample of current ecstasy users interviewed in Sydney in 2001;

3. to examine the patterns of ecstasy and other drug use of this sample;

4. to document the current price, purity and availability of ecstasy and other party drugs in Sydney;

5. to examine subject's perceptions of the incidence and nature of ecstasy-related harm, including physical, psychological, financial, occupational, social and legal harms;

6. to identify emerging trends in the party drug market that may require further investigation; and

7. to compare key findings of the 2001 study with those reported in 2000 and in 1997.

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 the regular use of tablets sold as 'ecstasy'.

Although a range of drugs fall into the category 'party drugs', ecstasy is the most widely used of them all. It is the only party drug that can 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 substantially 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 virtually 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 with 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 2000. However, it became apparent in that year that, because the interview schedule focuses primarily on the six months preceding the interview (see below), a great deal of 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 was conducted in 2001 in April.

A total of 163 ecstasy users were interviewed for the 2001 party drugs IDRS, all of whom resided in the Sydney metropolitan region. Subjects 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). '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, subjects 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

Subjects contacted the researchers by telephone and were screened for eligibility. To meet entry criteria, subjects had to be at least 16 years of age (due to ethical constraints), they must have used ecstasy at least six times during the preceding six months, and they must have been a resident of the Sydney metropolitan region for a minimum of 12 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.

Subjects were informed that all information they provided was strictly confidential and anonymous, and that the study would involve a face-to-face interview which would take approximately 45 minutes. All subjects were volunteers who were reimbursed AUD$30 for their participation. Interviews took place in varied locations, negotiated with subjects, including their homes, the Research Centre, pubs, coffee shops or parks, and were conducted by one of four interviewers trained in the administration of the interview schedule. The nature and purpose of the study was explained to subjects before informed consent to participate was obtained.

2.2.3 Measures

Subjects were administered a structured interview schedule based on a national study of ecstasy users conducted by NDARC in 1997 (Topp *et al.*, 1998; 2000), which 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 χ^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 χ^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).

The data collected in 2001 were compared with data collected from two comparable samples of ecstasy users: the sample interviewed for the trial in 2000 (n=94), and 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 in this report comprised 173 ecstasy users 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.

2.3 Survey of key informants

To maintain consistency with the main IDRS, it was decided that the eligibility criterion for key informant (KI) participation in the party drug IDRS would be regular contact, in the course of employment, with a range of ecstasy users throughout the preceding six months. Twenty-one key informants (KIS) from various metropolitan regions of Sydney described during telephone interviews with the first author the ecstasy users with whom they had contact in the six months preceding the interview. Fifteen KIS were male and six were female.

The 21 KIS interviewed in 2001 for the party drugs IDRS represented a range of occupations. 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 of whom they spoke through both their work and their personal life, and three obtained their knowledge solely through their work. Seven KIS 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 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.

3.0 RESULTS

3.1 Demographic characteristics of ecstasy users

3.1.1 Demographic characteristics of the 2001 sample

More than half (58%) of the sample of 163 ecstasy users interviewed in 2001 was male (Table 1). The mean age of the sample was 24.7 years (SD 6.2; range 17-45), and there was no difference in age between males (25 years) and females (24 years). The majority (68%) of subjects nominated their sexual identity as heterosexual, although gay males (18%), bisexuals (9%; seven males and seven females) and lesbian women (4%) were also represented. The majority (93%) of the sample spoke English as their main language at home. A minority (6%) was of indigenous Australian descent. Subjects resided in a wide range of metropolitan regions of Sydney, including the inner city (35%), northern suburbs (23%), inner west (16%), south (9%), eastern suburbs (8%), and the west, north west and south west (9%). The majority lived in either their own purchased or rented premises (64%), or in their parents' or family's house (29%). Other current accommodation arrangements included boarding houses/hostel (3%), shelters/refuges (1%), and campus accommodation (1%); 2% of the sample was currently homeless.

Table 1: Demographic characteristics of the 2001 sample (*n*=163)

Variable	2001 sample (*n*=163)
Mean age (years)	25
% male	58
% English speaking background	93
% ATSI	6
% own accommodation (includes renting)	64
% live with parents/family	29
% heterosexual	68
Mean number school years completed	12
% tertiary qualifications	54
% employed full-time	48
% full-time students	20
% unemployed	9
% previous conviction	3

The mean number of years of school education completed by the sample was 12.4 (SD 0.93; range 10-13), and more than two thirds (69%) of subjects had completed high school education. More than half (54%) had completed courses after school, with 26% possessing a trade or technical qualification, and 28% having completed a university degree or college course. Almost one half (48%) was presently employed full-time, and one-fifth (20%) was employed on a part-

time or casual basis. One fifth (20%) were full-time students, 9% were unemployed and 3% were active in the sex industry. One subject was currently in methadone maintenance treatment and another was in Naltrexone treatment for problematic opiate use. A minority (3%) of the sample had a previous criminal conviction for which they had served a custodial sentence (see Table 1).

3.1.2 KIS' reports

KIS' descriptions of the ecstasy users with whom they had recent contact were consistent with the characteristics of the present sample of ecstasy users. KIS described groups of ecstasy users that comprised an average of 65% males (range 40%-100%). There was wide geographical variation in the areas of Sydney in which the users resided, with most KIS (n=13) suggesting that their clients resided right across Sydney, and some also pointing out that some users who frequent Sydney nightclubs and parties come from the NSW Central or South Coasts for the weekend to do so. Estimated age ranges were from 14-50 years, with an average minimum age of 19 years (range 14-26), an average maximum age of 34 years (range 22-50) years, and a mean age of 25 years (range 18-35). Seven of the 21 KIS spoke exclusively of groups of ecstasy users aged 25 years or below, although almost all agreed that the majority of ecstasy users are in their 20s.

It is worth noting that many of the KIS worked in nightclubs or promoting parties that occur in nightclubs, such that the majority of the users with whom they had contact were at least 18 years of age. This does not mean there are not younger people using ecstasy. Indeed, one of the comments most frequently made by subjects during the user interview component was that users are getting younger and that the age of initiation into ecstasy use continues to steadily decrease. Although some spoke of 12 and 13 year old users, 14 and 15 were more common ages to be mentioned as the youngest users that subjects themselves had had contact with. Moreover, the ethical constraints placed on the survey of ecstasy users by the University's Research Ethics Committee prohibited the recruitment of users under the age of 16 years, and thus, the youngest subject in the user interview component of the study was 17.

The majority of KIS described predominantly English-speaking background groups of ecstasy users, with an average estimate of 83% English-speaking users (range 50%-98%). Seven KIS stated that they had recent contact with ecstasy users of Aboriginal or Torres Strait Islander descent, and all reported that the proportions were small (<5%). The estimated proportions of ecstasy users from a non-English speaking background ranged from 2%-50%, with an average of 15%. Persons of Indochinese, Mediterranean and Middle Eastern backgrounds were considered by some KIS to be over represented in the groups they described, although most commented that the range of cultural backgrounds was extremely broad and difficult to narrow down to certain groups.

Almost all KIS considered that the great majority of ecstasy users with whom they had recent contact had at the minimum completed high school, and high proportions of many groups were also estimated to also have completed tertiary education or to currently be studying at the tertiary level. The majority of almost all groups were considered to be either working or studying full-time, and only relatively small proportions (0-20%) were estimated to be currently unemployed.

Twelve KIS described groups of ecstasy users that were mainly comprised of people identifying as heterosexual, whereas the other nine KIS had recent contact with groups of ecstasy users that contained high proportions of gay males, and lower proportions of people identifying as lesbian,

bisexual or queer. As could be expected, those KIS who had contact with high proportions (80%+) of gay males were employed by organizations such as ACON and AFAO.

Eight KIS had recent contact with ecstasy users who were in treatment, although all estimated that the proportions were small (1-5%), 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 illicit drug use. Ten KIS estimated that small proportions (1-5%) of the ecstasy users with whom they had recent contact 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. These impressions are consistent with the demographic data self-reported by the 163 ecstasy users interviewed for the 2001 IDRS.

3.1.3 Comparison with 2000 and 1997 samples

Table 2 presents key demographic data for the 2001 sample of ecstasy users (*n*=163), the ecstasy users of the 2000 IDRS sample (*n*=94) and the ecstasy users drawn from the 1997 study (n=173). Subjects in the 2001 sample were, on average, the same age as the sample from 2000. They were three years older, on average, than subjects in the 1997 sample. In all samples, the majority of subjects was from English speaking backgrounds and identified as heterosexual. Only small proportions of each sample were of Aboriginal or Torres Strait Islander descent or had a previous criminal conviction.

Table 2: Demographic characteristics of ecstasy users recruited in 2001, 2000 and 1997

Variable	**2001 sample (*n*=163)**	**2000 sample (*n*=94)**	**1997 sample (*n*=173)**
Mean age (years)	25	25	22
% male	58	69	47
% English speaking background	93	95	90
% ATSI	6	6	2
% heterosexual	68	78	83
Mean number school years	12	12	12
% tertiary qualifications	54	55	40
% employed full-time	48	33	33
% full-time students	20	12	36
% unemployed	9	21	17
% previous conviction	3	6	3

In all three samples, the average duration of school education was 12 years. The 2001 sample contained a greater proportion of subjects that were employed full time and a smaller proportion

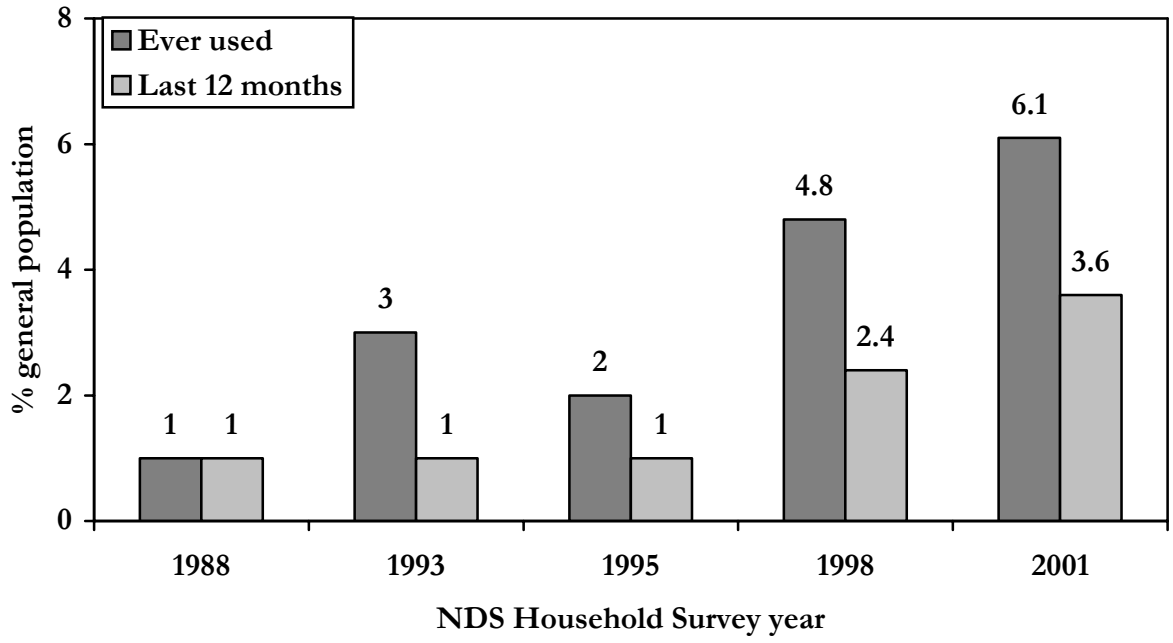
that were unemployed than both the earlier samples. The 1997 sample contained a higher proportion of full-time students, whereas the 2000 and 2001 samples contained a higher proportion of subjects who had completed tertiary or trade qualifications. These differences may relate in part to the age difference between the samples; given that the 2000 and 2001 samples were older, perhaps they were more likely to have completed their tertiary qualifications than the younger sample recruited in 1997, who were more likely to be engaged in full-time study.

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, then 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 1998 NDS Household Survey (the detailed results of the 2001 survey are not yet available), 1.6% of females and 3.3% of males reported ecstasy use (Higgins, Cooper-Stanbury & Williams, 2000). This is consistent with data from previous surveys; for example, in 1995, males reported a higher lifetime (3% versus 2%) and recent (2% versus 1%) prevalence than females (Commonwealth Department of Health and Family Services, 1996).

In the 1998 Survey, prevalence of both lifetime and recent ecstasy use were most common among those aged 20-29 years. Approximately 18% of males and 10% of females in this age bracket reported lifetime ecstasy use, and 12% of males and 5% of females reported having used ecstasy in the preceding 12 months (Darke *et al.*, 2000).

The availability of ecstasy increased over the same time frame, as indicated by the proportion of the population who have been offered ecstasy. In 1998, 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.

3.1.5 Summary

- *although both males and females of all ages 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 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 in Sydney appear to have changed little since 1997. 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 of the 2001 sample

The median age at which subjects in the 2001 sample first used ecstasy was 19 years (range 13-40) (Table 3), and they reported a mean duration of use of 5.1 years (SD 3.6; range 6 months to 15 years). There were no gender differences in age of initiation. All subjects had used ecstasy at least monthly at some time, and reported having first done so at a median age of 20 years (range 14-40).

Subjects had used ecstasy on a median of 20 days in the preceding six months (range 6-96 days). Thirty nine percent had used between monthly and fortnightly, 32% between fortnightly and weekly, and 29% had used ecstasy more than one day per week. Two-thirds (63%) of the sample nominated ecstasy as their favourite or preferred drug. The next most commonly preferred drug was cocaine, nominated by 17% of the sample, followed by cannabis (9%), methamphetamine base (4%), ice (4%) and alcohol (4%).

The median number of ecstasy tablets taken in a 'typical' or 'average' use episode in the preceding six months was 1.5 (range 0.25-6). Almost two-thirds (62%) of the sample reported that they typically used more than one tablet, and 4% typically used five or more tablets in a single use episode. During their 'heaviest' use episode in the preceding six months, subjects reported the use of a median of 3.5 tablets (range 0.5-30); 50% of the sample had taken four or more tablets in a single use episode in the preceding six months.

Table 3: Patterns of ecstasy use of the 2001 sample (*n*=163)

Variable	2001 sample (*n*=163)
Age first used ecstasy (years)	19
Median no. days used ecstasy last 6 months	20
% ecstasy 'favourite' drug	63
% use ecstasy weekly or more	29
Median no. ecstasy tablets in 'typical' session	1.5
% typically use >1 tablet	62
% recently binged on ecstasy (>48 hours)	58
% ever injected ecstasy	10
% mainly swallowed ecstasy last 6 months	98
% mainly snorted ecstasy last 6 months	1
% mainly injected ecstasy last 6 months	<1
% injected any drug	20
Number drugs ever used	10
Number drugs used in last 6 months	7

More than half (58%) of the sample had 'binged' on ecstasy in the preceding six months, defined as using the drug on a continuous basis for more than 48 hours without sleep (Ovendon & Loxley, 1996). The median length of the longest binge was 3 days (range 2-10 days). In almost half (45%) of these cases, other drugs, primarily methamphetamine, had also been used during the binge.

There were no gender or age differences between those who had binged on ecstasy in the preceding six months and those who had not, but those who had binged had used ecstasy on a significantly greater number of days in the preceding six months (median 24 versus 12 days; U=1728; p<.001), and used significantly more ecstasy in both typical (median 2 versus 1 tablet; U=1780.5; p<.001) and heavy (median 4 versus 2 tablets; U=1337.5; p<.001) use episodes. Those who had binged on ecstasy in the preceding six months also had a more extensive polydrug use history than those who had not; they had used significantly more drugs both ever (11.0 versus 9.1 t_{161}= 3.6; p<.001) and in the preceding six months (7.9 versus 6.3; $t_{161,}$= 4.8; p<.001).

3.2.2 Routes of administration of the 2001 sample

In the six months preceding the interview, almost all (99%) of the 2001 sample had swallowed ecstasy, 44% had snorted it, and 6% had smoked it. The smokers usually mixed ecstasy with cannabis in order to smoke it ('snow-cones'), but two subjects had 'chased' the drug (i.e., smoked the vapours by crushing the tablet and heating it on foil, a relatively common way to administer heroin in Sydney; Swift, Maher & Sunjic, 1999). Almost all subjects (98%) nominated oral ingestion as their main route of ecstasy administration in the preceding six months (Table 3), although two subjects mainly snorted the drug, and one mainly injected it.

One fifth (20%) of the 2001 sample had injected a drug (Table 3). The mean number of drugs ever injected by injectors was 3.4 (SD 2.8; range 1-12). A total of 10% of the sample had injected ecstasy at some time, and 5% had done so in the preceding six months. The median age of first injection of ecstasy was 21 years (range 16-38 years). Ecstasy was the first drug injected for only two subjects, with most of the injectors having commenced injecting with either methamphetamine (61%), heroin (13%) or cocaine (13%). Multiple logistic regressions indicated that, as in 2000, the only variable independently associated with having injected ecstasy was having injected a wider range of drugs other then ecstasy (OR 4.7; 95% CI 2.4 - 9.3).

To ensure that intravenous polydrug or primary opiate users were not oversampled and that this was primarily a sample of party drug users, a number of comparisons were drawn between those who had injected a drug at some time and those who had not. There were no differences between the two groups in age, but there was a difference in gender composition: males were significantly more likely to have injected a drug than females (25% of males versus 12% of females; χ^2_1=4.6; p<.05). There was no significant difference between injectors and non-injectors in duration of education, likelihood of previous imprisonment, nor employment status.

There were, however, 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 (median 24 days versus 18; U=1377; p<.01), and had used more ecstasy in both their heaviest use episode (median 4 versus 3 tablets; U=1550.5; p<.05) and their typical use episodes (median 2 versus 1.5 tablets, U=1365, p<.01). They had also used a wider range of other drugs, both ever (13 versus 10; t_{160}=-5.4; p<.001) and in the preceding six months (9 versus 7; t_{160}=-5.2; p<.001). In particular, those who had injected a drug were significantly more likely to have used heroin, both ever (52% versus 11%; χ^2_1=27.8; p<.001) and in the preceding six months (23% versus 2%;

Fisher's exact test $p<.01$). Thus, a small proportion of past and current heroin users were included in this sample. Despite this, we can be confident that the majority of this sample comprised primary party drug users and was therefore the appropriate sentinel population to interview to meet the aims of the party drug IDRS. Only one subject was currently in methadone treatment and another in Naltrexone treatment. No subject nominated heroin as their favourite drug, and heroin had been used in the preceding six months by only 6% of the sample, on an average of less than once per fortnight.

3.2.3 KIS' reports

All KIS agreed that the majority of ecstasy available in Australia continued to come in the form of tablets, although some KIS also reported that capsules were available, on a seemingly erratic basis, to a small proportion of users. KIS' reports of patterns of ecstasy use were widely varied and were heavily influenced by the occupation of the KI and the particular group of ecstasy users with whom they had recent contact. Frequency of use ranged from only three or four times per year for special occasions (generally big dance parties such as Mardi Gras, Pride or Sleaze, or international DJs) to three or four days per week, but use between monthly and fortnightly was considered an average pattern of use. Quantity of use was strongly related to frequency, with those who used ecstasy more often also reported to use greater quantities per use occasion due to the development of tolerance; but about two tablets per use occasion was considered fairly typical (range 0.5-10 tabs).

Substantial minorities of many groups of ecstasy users were reported to engage in weekend 'binges', in which ecstasy and other drugs were used continuously for a number of days, generally between Thursday and Sunday. Those who binged were reported to consume the greatest quantities of ecstasy; consumption of 10 tablets in a weekend, in conjunction with other drugs, was considered not uncommon among binge users. Many KIS specifically noted that patterns of ecstasy use, as with all illicit drugs, were widely varied.

The qualitative reports of KIS were consistent with the quantitative data derived from the interviews with users in suggesting that the majority of ecstasy users administer the drug orally; only small proportions of those with whom KIS had recent contact were considered to regularly snort or inject ecstasy. KIS who had contact with homosexual populations of ecstasy users also reported that small proportions of users administer the drug anally or vaginally (practices referred to by users as 'shafting' or 'shelving'). Among those users who snorted, injected or shafted ecstasy, route of administration was related to context of use: in a setting in which discretion is required, such as a nightclub, swallowing is the most convenient way to administer ecstasy, even for those who may prefer to snort or inject it under other circumstances.

Four KIS commented on a recent increase in the quantity of ecstasy use as a result of an increase in the proportion of tablets which are locally manufactured and which are of more variable quality than imported tablets, thereby encouraging users to take more in an effort to achieve the desired effects. However, a fifth KI noted that the decrease in the availability of quality imported tablets had led to a decrease in both the frequency and quantity of ecstasy use among those party drug users with whom he had had recent contact. It would appear that the response of users to the increased proportion of locally manufactured tablets may differ depending on the accepted wisdom and norms among their social group.

The reports of a decreased proportion of imported tablets are consistent with intelligence collected by law enforcement agencies; the Australian Bureau of Criminal Intelligence (2002) recently estimated that 80% of 'ecstasy' tablets available in Australia are actually locally

manufactured methamphetamine tablets sold as ecstasy. The use of the term 'pills' rather than ecstasy by many ecstasy users today is a tacit acknowledgement of their awareness that they are unlikely to obtain a tablet which truly contains MDMA (3,4 methylenedioxymethamphetamine), the compound to which the term 'ecstasy' originally exclusively referred. Moreover, it is only a minority of the total ecstasy market that is discerning enough to either know or care whether the tablets they take actually contain MDMA - or at least, to care enough that it would impact on their patterns of drug use.

Twelve KIS commented on a recent increase in the number of people using ecstasy, and two commented that in certain subcultural groups, it is more unusual to have never tried ecstasy than to have used it. Most agreed that these increases were not specific to the last six months, suggesting instead that in recent years there has been something of a cultural revolution, with ecstasy use among some groups becoming a normalized part of many social interactions, just as is alcohol. Many KIS commented on the broader range of people who use ecstasy now, and that 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. Subcultural groups that in the past may have been more attracted to other drugs, for example, those in the punk scene, or patrons of a pub, were reported to also prefer ecstasy to the more traditional LSD, amphetamine or alcohol. Seven KIS commented specifically on the increased use of ecstasy among young people, and five reported that the age of initiation continues to drop, with 14 years being the most frequently estimated age at which young people first try ecstasy.

3.2.4 Comparison with the 2000 and 1997 samples

A number of key indicators of ecstasy use are consistent in suggesting that the quantity and frequency of ecstasy use among regular users may have increased between 1997 and 2001. Compared to the earlier samples, a higher proportion of the 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). A greater frequency of recent use was also reported among the 2001 sample. The concordance between a number of variables that suggest an increase in the quantity and frequency of ecstasy use allows more confidence to be placed in these findings. For example, if frequency of use was to increase, then logically, quantity of use should follow a similar pattern, and such concordance was observed in the reports of ecstasy users recruited for the 2001 study. Although the non-random nature of the three samples precludes the drawing of definite conclusions regarding frequency and quantity of use, the reports are supported by those of the four KIS who described an increase in quantity and frequency of ecstasy use among the users with whom they had recent contact (see preceding section).

Table 4: Patterns of ecstasy use among users recruited in Sydney in 2001, 2000 and 1997

Variable	2001 sample (*n*=163)	2000 sample (*n*=94)	1997 sample (*n*=173)
Age first used ecstasy (years)	19	18	17
Days used ecstasy last 6 months (median)	20	12	12
% ecstasy 'favourite' drug	63	53	55
% use ecstasy weekly or more	29	34	27
Median no. ecstasy tablets in 'typical' session	1.5	1.5	1.5
% typically use >1 tablet	62	53	56
% recently binged on ecstasy (>48 hours)	58	44	42
% injected ecstasy	10	12	14
% injected any drug	20	28	31

3.2.5 Summary

- *on average, ecstasy users start using the drug in their late teens, although there are consistent reports from both users and KIS that the age of initiation is decreasing*
- *the great majority of ecstasy users consume the drug orally*
- *there are a wide range of patterns of ecstasy use, but, on average, regular users use the drug between weekly and fortnightly*
- *even 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*
- *a substantial proportion of regular ecstasy users have recently used four or more tablets in a single use episode*
- *some data suggest that the quantity and frequency of ecstasy use among regular users may have increased*
- *substantial proportions of those who could be considered primary 'party drug' users have injected a drug at some time. Although a significant minority of these have experimented with injecting ecstasy, very few report that injection is their preferred route of ecstasy administration*

3.3 Other drug use

3.3.1 Patterns of polydrug use among the 2001 sample

Polydrug use was the norm among this sample (Table 5), with a mean of 10 drugs (SD 3.5; range 4-19) having been tried, and a mean of 7 drugs (SD 2.3; range 3-15) having been used in the preceding six months. Sixty one percent of the sample had binged on one or more party drugs in the preceding six months, including methamphetamine powder (45%), cocaine (18%), ice (9%), ketamine (7%), amyl nitrate (7%), and methamphetamine base (6%)[1].

Table 5: Patterns of drug use of the 2001 sample (*n*=163)

Drug Class	Ever used (%)	Used last 6 months (%)	No. days used last 6 months (median; range) #
Ecstasy	100	100	20 (6-96)
Alcohol	99	98	48 (1-180)
Cannabis	95	82	48 (1-180)
Methamphetamine powder	99	87	10 (1-180)
Tobacco	82	77	180 (2-180)
LSD	74	23	5 (1-70)
Cocaine	77	57	3 (1-96)
Amyl nitrate	62	36	12 (1-180)
Benzodiazepines	45	31	8 (1-100)
Nitrous oxide	48	11	2 (1-50)
Methamphetamine base	34	20	7 (1-70)
MDA	43	14	2 (1-30)
Heroin	19	6	10 (1-60)
Antidepressants	22	9	90 (2-180)
Ketamine	31	15	5 (1-24)
Other opiates	12	3	2 (1-30)
Other drugs *	17	6	2 (1-14)
Ice (crystalline methamphetamine)	43	26	1 (1-50)
Methadone	3	1	3 (1 subject)
GHB	23	15	2 (1-10)

Among those who had used * Other drugs included anabolic steroids and hallucinogenic mushrooms

[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').

Most subjects 'typically' (defined as on two-thirds or more occasions of ecstasy use in the preceding six months) used other drugs in combination with ecstasy (92%) and in the 'come down' (i.e., acute recovery period) following ecstasy use (82%). A mean of 2.4 other drugs were typically used in conjunction with ecstasy (SD 1.3; range 0-7), most frequently tobacco (64%), alcohol (56%), methamphetamine powder (42%) and cannabis (34%). Smaller proportions reported typically using amyl nitrate (17%), cocaine (7%), methamphetamine base (4%), ice (4%) and ketamine (3%) in conjunction with ecstasy. Of those who typically drank alcohol while using ecstasy, 59% usually consumed more than five standard drinks. A median of 2 other drugs was typically used during the acute recovery period following ecstasy use (range 0-7), most frequently cannabis (54%), tobacco (53%), alcohol (32%), benzodiazepines (15%) and methamphetamine powder (14%).

Table 6 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.

Table 6: Quantity of party drug use in preceding 6 months (among those who reported use in this time)

Drug class (measure) [1]	**'Typical' episode (median, range)**	**Heaviest episode (median, range)**
Methamphetamine powder (grams) [2]	1 (0.1 – 6)	1 (0.1 – 6)
Methamphetamine base (points[3]) [4]	1 (0.5- 10)	1.5 (1 – 10)
Ice (points) [5]	1 (0.5 – 7)	2 (1 – 3)
Cocaine (grams)	0.5 (0.1 – 3)	1 (0.1 – 7)
LSD (tabs)	1 (0.25 – 4)	1 (0.25 – 1)
MDA (capsules) [6]	1 (1 – 2)	1 (1 – 2)
Amyl nitrate (snorts)	5 (1 – 25)	8.5 (1 – 80)
Nitrous oxide (bulbs[7])	5 (1 – 60)	8 (1 – 60)
Ketamine (bumps[8])	5 (1-15)	4 (1 – 30)
GHB (ml)	5 (1-35)	5 (1-50)

Table legend:

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

2 All of the 142 subjects who reported using methamphetamine powder in the preceding six months reported their use quantities in grams or lines; were lines were reported, an average of 0.1 grams was assumed. Three subjects also reported use of 5mg dexamphetamine tablets, using an average of 6 tablets.

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

4 Of the 33 subjects who reported using methamphetamine base during the preceding six months, 24 described their use quantities in points, while nine referred to grams. It appears that both quantities are available on the market.

5 Of the 42 who reported using ice in the preceding six months, 27 described their use quantities in points, whereas 15 referred to grams.

[6] Of the 23 subjects who reported using MDA in the preceding six months, all reported that the drug came in capsules. Three subjects also reported use of grams of MDA, suggesting use of powder form.

[7] 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.

[8] 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.

3.3.2 KIS' reports

Consistent with the quantitative data of ecstasy users, patterns of extensive polydrug use among ecstasy users were described by KIS. Indeed, one KI described the population of party drug users as 'pharmacological professionals', meaning that they know exactly what to take and when in order to achieve the desired effects.

Substantial proportions (10-100%) of all groups of ecstasy users described by KIS 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'. The different forms of methamphetamine are considered in more detail by Topp and Churchill (2002), but suffice to say here that 10 KIS reported a recent increase in the availability and use of the more potent forms of methamphetamine. KIS reported the administration of ice and base through a variety of routes including snorting, swallowing, smoking and injecting.

It appears that in the gay, lesbian and transsexual community, 'ice' may be referred to as 'crystal meth' (Topp & Churchill, 2002); little evidence supports the common assertion among members of this subculture that the two are in fact different drugs. We tentatively suggest that it may be more parsimonious to consider the term 'crystal meth' as another name for ice, that is used by this particular subculture. Seven KIS commented that the use of crystal meth is associated with prolonged and vigorous sexual activity among some gay men, who administer it specifically for this purpose. Three of these reported that a small proportion of gay men combine crystal meth with Viagra™ for sexual activity, and another four KIS commented on the use of Viagra™ alone as an effective way for a small proportion of gay men to overcome ecstasy-induced impotence. Fifteen KIS stated that the use of amyl nitrite 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 nitrite.

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.

Four KIS commented on an increase in the use of anti-depressants, specifically those of the SSRI class (e.g., Aurorix™), in combination with ecstasy. KIS reported that some users consider that concurrent use of an SSRI will be protective against neurotoxicity, whereas others consider that such practices will heighten and prolong the effects of their illicit drugs. Some users were also reported to take anti-depressants while 'coming down' from ecstasy. The concurrent use of ecstasy and anti-depressants may place users at increased risk of developing a 'serotonin syndrome' (Gillman, 1998).

The use of benzodiazepines was also reported by KIS to be widespread among party drug users; 17 of the 21 KIS reported that between 10% and 75% of the party drug users with whom they had recent contact used benzodiazepines. Four KIS commented on an increase in the proportion of party drug users who share their benzodiazepines in a formalized fashion, with users in defined social networks taking it in turns to obtain a prescription for benzodiazepines from a GP so that the drugs could be shared among friends.

All KIS reported cannabis use among substantial proportions of ecstasy users (10-100%), for some users only while acutely intoxicated or recovering from ecstasy (and other drug) use, but many KIS considered that substantial proportions of ecstasy users smoke cannabis daily. Two KIS who worked with HIV+ people pointed out that cannabis may be used by this population to self-medicate HIV-related symptoms such as muscular atrophy, depression or chronic pain.

All KIS reported that ecstasy users drink alcohol, although all commented that alcohol use patterns are widely varied, from complete abstinence to regular binge drinking. Further, eleven of the 21 KIS specified that even among those who drink, many choose not to consume alcohol while using illicit drugs. One commented that the dangers of mixing alcohol and GHB are so visible (in terms of people suffering GHB overdoses in dance clubs or parties) that many people who do not use GHB have stopped combining alcohol with all illicit drugs as a result. However, nine KIS also reported that many ecstasy users regularly consume large amounts of alcohol in combination with illicit drugs.

Eight KIS had recent contact with people who used GHB, but another nine reported that GHB retains a bad reputation among party drug users and that its use has not yet spread far beyond the gay dance party scene. Even so, six KIS had perceived a recent increase in the availability and use of GHB among party drug users. Clearly, some party drug users seek to take risks and to become as intoxicated as possible, although it appears that this extreme kind of user remains in the minority. Although use of the drug is relatively limited, negative side effects of GHB use are common. In a recent study of 76 GHB users (Degenhardt *et al.*, 2001), the majority of the sample reported significant negative side effects. Half (53%) of the sample reported GHB overdose in which they had lost consciousness. More than half reported vomiting and profuse sweating, and 8% reported a fit or seizure due to GHB use. The authors concluded that the high rate of problems reported by a group of users with relatively limited exposure to GHB suggests that its use is associated with significant harms.

A number of KIS described recent trends in the use of ketamine. Five KIS had perceived a recent increase in the availability and use of ketamine. Ten KIS reported that rather than buying grams of ketamine in powder form, as has traditionally been the case, an increasing proportion of users were buying it in liquid form and baking it down to powder form in the oven. This is an economical way to purchase the drug. 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 Comparison with the 2000 and 1997 samples

The similarities in overall levels of polydrug use among the samples interviewed in 2001, 2000 and 1997 are noteworthy (Table 7). However, the data suggest changes over time in patterns of use of specific drugs. For example, the data presented in Table 7 suggest that the prevalence of use among party drug users of LSD, MDA and inhalants such as amyl nitrate and nitrous oxide, have all declined substantially since 1997.

Table 7: Patterns of polydrug use among ecstasy users recruited in Sydney in 2001, 2000 and 1997

Variable	2001 sample (n=163)	2000 sample (*n*=94)	1997 sample (*n*=173)
Number drugs ever used (mean)	10	10	10
Number drugs used last 6 months (mean)	7	7	7
LSD			
% ever used	74	80	97
% used last 6 months	23	37	72
days used last 6 months	5	2	5
MDA			
% ever used	43	36	60
% used last 6 months	14	16	41
Amyl nitrate			
% ever used	62	66	84
% used last 6 months	36	29	56
Nitrous oxide			
% ever used	48	54	69
% used last 6 months	11	22	41
Ketamine			
% ever used	31	25	16
% used last 6 months	15	14	6
days used last 6 months	5	5	2
Anti-depressants			
% ever used	22	31	22
% used last 6 months	9	14	10
days used last 6 months	90	30	13
GHB			
% ever used	23	5	-
% used last 6 months	15	<1	-
Ice (crystalline methamphetamine)			
% ever used	43	12	-
% used last 6 months	26	6	-

Although the use of some illicit drugs appears to have declined in recent years, the prevalence of use of others appears to have increased over the same timeframe. For example, the increase in prevalence and frequency of ketamine use observed between 1997 and 2000 was sustained in 2001, consistent with reports of KIS. Between 2000 and 2001, there was a substantial increase in

the proportions of the samples that reported recent use of ice and GHB. Once again, these data are consistent with the KIS reports described earlier.

It is noteworthy that, despite the significant increase in the availability and use of cocaine recorded among injecting drug users in Sydney since 1998 (McKetin *et al.*, 2000), little difference in the prevalence of either lifetime or recent use of cocaine was found among the party drug users interviewed in 2001, 2000 and in 1997. The prevalence of lifetime use of cocaine has varied between 72% in 1997 to 78% in 2000; whereas prevalence of recent use of cocaine has varied between 50% in 1997 and 55% in 2001. Average frequency of recent cocaine use among cocaine users has also remained relatively stable, ranging between two and four days in the six months preceding the interview. As discussed in the report of the first year of the party drugs trial (Topp & Darke, 2001), these data clearly suggest that the majority of the increase in cocaine use in Sydney in recent years may be accounted for by its increased use among injecting drug users, and particularly among primary heroin users (Darke *et al.*, 2002).

Compared to the 1997 sample, a higher proportion of the 2001 sample reported typically drinking alcohol while using ecstasy (56% versus 41%). Further, in the 2001 sample, 59% of those who typically drank alcohol in conjunction with ecstasy use, typically consumed more than 5 standard drinks compared to 45% in 1997. These data suggest that a higher proportion of ecstasy users may be consuming larger quantities of alcohol in conjunction with their ecstasy use. Consistent with this, a higher proportion of the 2001 sample reported typically drinking alcohol during the recovery period following ecstasy use (32% versus 19% in 1997). A higher proportion of the 2001 sample also reported that they typically used benzodiazepines when recovering from ecstasy use (15% versus 4% in 2000).

Although the prevalence of anti-depressant use has fluctuated over the three studies (Table 7), among those who reported using recently, there has been a substantial increase in the number of days on which they had been used, up to an average in 2001 of 90 days in the preceding six months. 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.

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*
- *concurrent polydrug use (i.e,, 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 prevalence of use of LSD, MDA and inhalants appears to have decreased among party drug users since 1997*
- *the prevalence of use of ketamine, ice and GHB appears to have increased since 1997, although the majority of use remains opportunistic and relatively infrequent*
- *the changes since 1997 in patterns of use of specific drugs among party drug users suggest that, whereas ecstasy remains ubiquitous in party drug markets, the demand for and/or availability of other drugs can be limited and erratic*

3.4 Price, purity and availability of party drugs in Sydney

3.4.1 Ecstasy

3.4.1.1 Price

The majority (95%) of the sample of users was able to comment on the price, purity and availability of ecstasy in Sydney (Table 8). All agreed that ecstasy available in Sydney in the six months preceding the interview came in tablet form. In line with these reports, all KIS stated that the great majority (95%+) of ecstasy currently available in Sydney comes in the form of tablets. Forms of ecstasy other than tablets (capsules or powder) currently constitute a small minority of the market and are available only erratically.

The median price of ecstasy was reported by users to be AUD$35 per tablet (range $10-$70). Most subjects (84%) reported that the price had either remained stable or decreased in the preceding six months (Table 8). KIS reports of the price of ecstasy were consistent with the prices reported by ecstasy users, with most agreeing that the standard price for a single tablet is between $30 and $40. Many also 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). The price range per tablet reported by KIS was $25 to $60, depending on these different factors. Of the 18 KIS who commented on recent changes in the price of ecstasy, all agreed that the price had either remained stable (n=12) or decreased (n=6).

Table 8: Price, purity and availability of ecstasy in Sydney, 2001

Price (AUD$)	
Median price (per tab)	$35 (range 10-70)
Median lowest price	$30 (range 5-50)
Median highest price	$50 (range 25-70)
Price changes (% sample)	
Increasing	4
Stable	55
Decreasing	29
Fluctuating	10
Purity (% sample)	
High	28
Medium	30
Low	10
Fluctuates	31
Don't know	1
Purity changes (% sample)	
Increasing	14
Stable	32
Decreasing	19
Fluctuating	33
Don't know	3
Availability (% sample) **('How easy is it to get ecstasy?')**	
Very easy	72
Easy	23
Moderately easy	4
Difficult	1
Availability changes (% sample)	
More difficult	3
Stable	68
Easier	28
Fluctuates	1
Don't know	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 (95%) considered that ecstasy was either very easy or easy to obtain (Table 8), and a similar proportion (96%) reported that the availability had either remained stable or increased in the preceding six months. Nineteen of the 21 KIS reported that it was currently 'very easy' to obtain ecstasy, and two described it as 'easy'. Twenty reported that availability had remained stable over the preceding six months, whereas the other KI reported

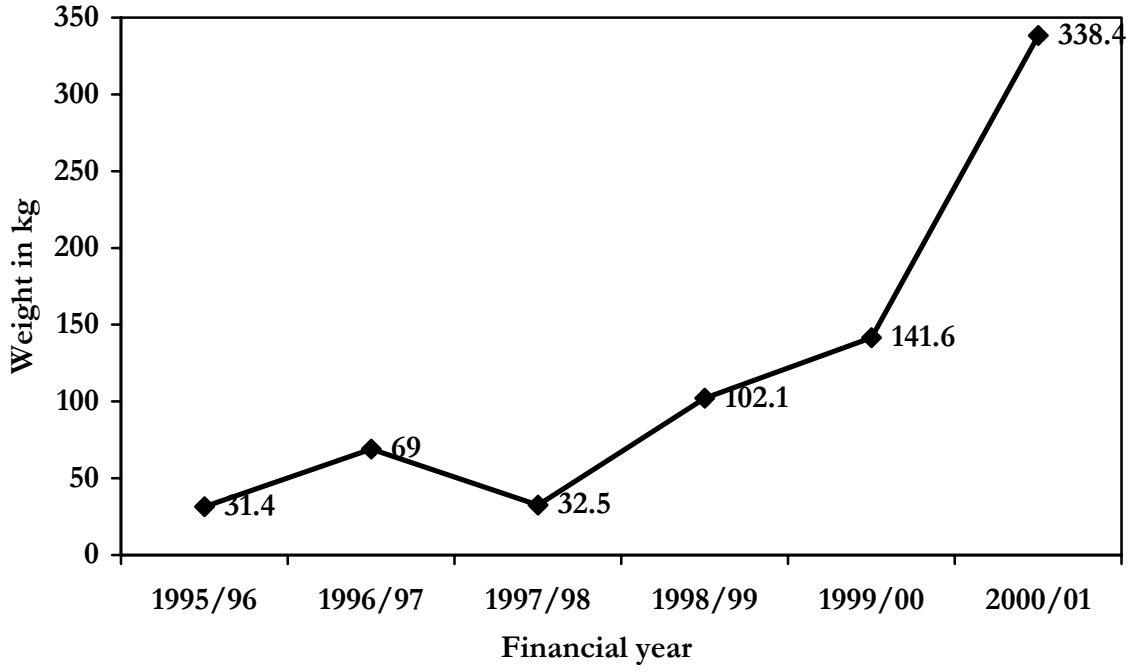
that although the availability of tablets sold as 'ecstasy' is extremely high, the availability of quality imported tablets containing MDMA has in fact decreased markedly in recent years.

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: (1) changes in law enforcement activity, such as increased detection capabilities or a shift in focus to high-level trafficking syndicates; (2) increased demand for the drug, and a consequent increase in the size of its market; or (3) some 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 (1) that importations of MDMA have increased in recent years; and (2) 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 majority of subjects reported that in the six months preceding the interview they had obtained ecstasy from friends (90%) or dealers (50%). Other people from whom ecstasy had recently been obtained included acquaintances (reported by 28% of the sample); people unknown to subjects (usually dealers selling tablets in entertainment venues; 22%); and work colleagues (12%). Ecstasy was most often obtained at friends' homes (reported by 69% of the sample) and nightclubs (35%). Other purchase locations included dealers' homes (33%), own home (30%); dance parties (21%); raves (11%); and pubs (9%). Twenty percent of the sample reported that they had obtained ecstasy in another location, the majority of which reflects an increase in 'mobile dealing'. A dealer is called on his/her mobile telephone and a public meeting place, such as on a designated corner or close to a venue, is arranged.

A variety of methods of paying for ecstasy in the preceding six months were reported, most frequently paid employment (88% of the sample); being given ecstasy by friends or partner (77%); borrowing money from friends (34%); on credit from dealers (31%); and selling or distributing drugs (36%). Other methods of paying for ecstasy included bartering other drugs or goods for ecstasy (18%); obtaining money from parents (12%); unemployment or sickness benefits (10%); government study allowances (7%); pawning goods (6%); sex work (4%); property crime (3%); and fraud (2%).

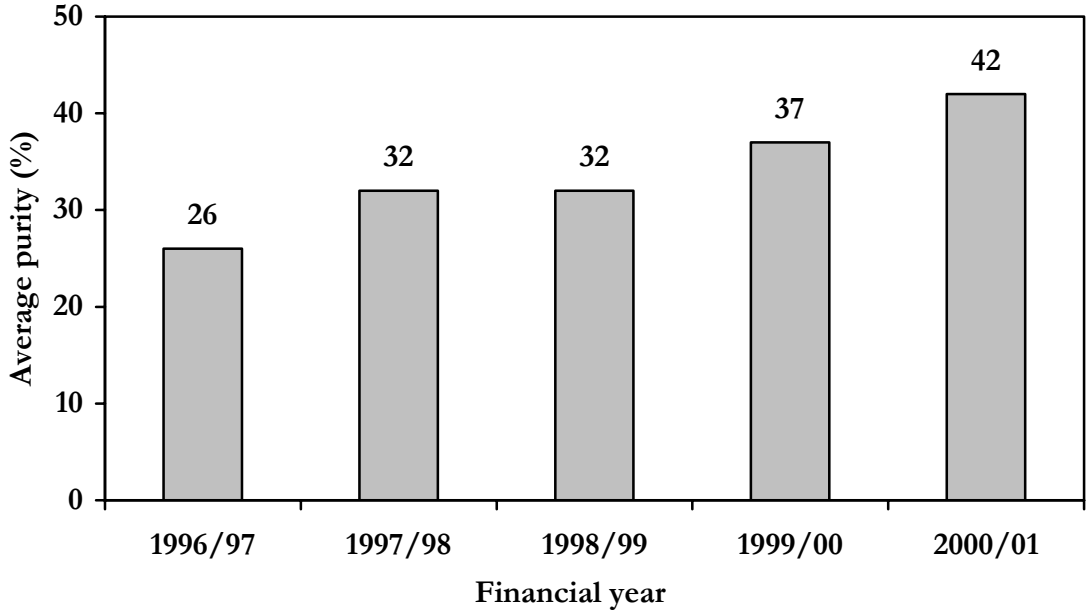
3.4.1.4 Purity

Table 8 indicates that there was little consistency between users' estimates of the current purity of ecstasy, and in reports of changes in purity in the preceding six months. This inconsistency was also reflected in the reports of KIS, which did not vary in any systematic fashion. Twelve of the 20 KIS who commented on the current purity of ecstasy reported that the purity fluctuates widely, and all agreed that this had been the case over the preceding six months. Current purity was also described by KIS as medium (n=4), high (n=2) and low (n=2).

Estimates of purity are necessarily subjective and depend, among other factors, on users' tolerance levels. Clearly, 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, namely, that not all illicit drugs seized by Australia's law enforcement agencies are analysed for purity. In some instances, seized drugs will be analysed only in a contested court matter. The purity figures therefore relate to an unrepresentative sample of the illicit drugs available in Australia. Notwithstanding this limitation, it remains the case that 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 indicated that the average purity of seizures of MDMA analysed in NSW during the 2000/01 financial year was 42% (range 3-90%; *n*=218 analysed seizures). This was little different to the national average in 2000/01 of 39%, and slightly higher than the average purity in NSW in recent years. Figure 3 indicates that the purity of NSW seizures of MDMA has steadily increased since the mid-1990s.

Figure 3: Average purity of seizures of MDMA analysed in NSW, 1996/97 - 2000/01



The average purity figures are calculated based on ecstasy seized by both the Australian Federal Police (AFP) and NSW 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. There was little difference in the average purity of the two sorts of seizures (AFP: 41% versus NSW Police Service: 42%), which suggests that little cutting and re-pressing of imported MDMA tablets occurs as they filter down the distribution chain.

Despite the equivalent purity of MDMA tablets seized by the AFP and NSW Police, the figures do not necessarily contradict the common perception of both users and KIS that imported ecstasy tablets are inevitably of 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, 2000). It is likely that almost all tablets containing MDMA that appear on the streets of Sydney 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, it is likely that the common user perception that imported tablets are of higher quality is correct; it is just that the variable quality and ingredients of locally manufactured tablets are 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 consumer considers both to be 'ecstasy'.

3.4.2 Comparison with 2000 and 1997 samples

The median price of a tablet of ecstasy decreased by $15 since 1997, including by $5 between 2000 and 2001 (Table 9). In all years, almost all subjects 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 Sydney in 2001, 2000 and 1997

Variable	2001 sample (*n*=163)	2000 sample (*n*=94)	1997 sample (*n*=173)
Median price per tablet (range)	$35 ($10 - $70)	$40 ($30 - $50)	$50 ($40 - $60)
% sample reported price stable	55	53	62
% sample reported price decreased	29	38	29
% sample reported 'very easy' to obtain	72	70	67
% sample reported 'easy' to obtain	23	27	31
% sample availability stable	68	69	67
% sample availability increased	28	21	25
% sample score from friends	90	83	90
% sample score from work colleagues	12	12	8
% sample score from dealers	50	63	34
% sample score from acquaintances	28	30	12
% sample score from unknown people	22	27	6
% score at own home	30	45	35
% score at dealer's home	33	35	23
% score on the street	20	20	12

In all three samples, similar proportions of subjects reported that they normally obtained ecstasy from friends and from work colleagues (Table 9). However, in 2000 and 2001, greater proportions of subjects reported that they normally obtained ecstasy through dealers, acquaintances, or persons unknown to them. Further, it was more common for subjects in the 2000 and 2001 samples to report that they obtained ecstasy at a dealer's home and on the street. These changes may reflect a change in the structure of the ecstasy market wherein more people now sell the drug such that there are now more options as to where and from whom it can be obtained. They 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.

3.4.3 Summary

- *the average price of ecstasy in Sydney is $35 per tablet, a decrease from 2000 ($40) and 1997 ($50)*
- *the proportion of tablets sold as 'ecstasy' which are locally manufactured methamphetamine tablets is estimated to be 80%*
- *although the proportion of the market that is served by 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*
- *both users and KIS consistently report that ecstasy has been readily available in Sydney since at least 1997, and that is availability has remained stable or increased*
- *it appears that the number of low-level user-dealers of ecstasy has increased in recent years. As a result, there may now be a wider range of options in terms of people from whom and places from which ecstasy can be purchased*

3.4.4 Other party drugs

Much smaller proportions of the sample were able to comment on the price, purity and availability of other party drugs in Sydney, and accordingly, these data should be interpreted cautiously. Indeed, the paucity of data relating to these drugs suggests there was relatively limited recent exposure to them 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, commented on in 2001 by 46 subjects; methamphetamine base, commented on by 13 subjects; MDA, commented on by 24 subjects; ketamine, commented on by 12 subjects and GHB, commented on by 6 subjects. Where relevant, comparative data from 1997 are also presented. The results relating to purity and availability of these drugs are not presented because the majority of data is missing, and too few subjects provided answers to consider the data as reliable.

Table 10: Price of other party drugs in Sydney in 2001, 2000 and 1997

Drug	2001 sample	2000 sample	1997 sample
LSD	**(*n*=46)**	**(*n*=16)**	**(*n*=68)**
Median price (per tab)	$10 (range 5-45)	$10 (range 3-25)	$15 (range 2-25)
Median lowest price n=14	$10 (range 1-30)	$10 (range 1-15)	$10 (range 2-25)
Median highest price n=14	$15 (range 10-45)	$20 (range 10-25)	$25 (range 10-30)
Methamphetamine base	**(*n*=13)**	**(*n*=9)**	
Median price (per 'point')	$50 (range 10-80)	$50 (range 50-80)	Data not collected in 1997
Median lowest price		$50 (range 30-120)	
Median highest price		$70 (range 50-140)	
MDA	**(*n*=24)**	**(*n*=8)**	**(*n*=32)**
Median price (per capsule)	$50 (range 20-80)	$50 (range 40-60)	$50 (range 30-60)
Median lowest price	$40 (range 20-60)	$40 (range 35-50)	$40 (range 25-60)
Median highest price	$50 (range 45-100)	$55 (range 40-60)	$50 (range 35-70)
Ketamine	**(*n*=3)**	**(*n*=3)**	**(*n*=6)**
Median price (per gram)	$150 (50-200)	$200 (no range)	$200 (range 200-220)
Median lowest price	$170(50-180)	$170 (range 140-200)	$200 (range 100-200)
Median highest price	$200 (150-200)	$200 (no range)	$250 (range 200-250)
GHB	**(*n*=6)**		
Median price (per ml)	$50 (10-80)	Data not collected in 2000	Data not collected in 1997
Median lowest price	$20 (n=1)		
Median highest price	$50 (n=1)		

3.5 Criminal activity

3.5.1 2001 sample

Less than half (44%) of the 2001 sample had committed a crime in the month preceding the interview (Table 11). Drug dealing was the criminal activity in which subjects were most likely to have recently engaged, with 38% of the sample having sold drugs at least once in the month preceding the interview. Twenty-two percent of the sample reported that they had sold drugs less than once a week in the preceding month, 7% had sold drugs once a week, 9% had sold drugs between weekly and daily, and 1 subject had sold drugs daily during the preceding month. It should be noted that many of these 'dealers' would not identify themselves as such, buying drugs to distribute among their friends only, and making little if any profit in the process.

Consistent with this impression, twelve 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. Five commented that there is a huge range of options as to where to buy ecstasy, and that even those without a trusted connection can obtain tablets within a very short period of time. Three KIS reported that it is possible to buy ecstasy in on the street in Kings Cross, on the southern side of Darlinghurst Road near where the cannabis dealers tend to congregate. Two KIS reported that the dealing done in nightclubs has become much more discrete in recent years as dealers attempt to adjust to the greatly increased security in these venues.

Table 11: Self-reported **c**riminal activity among ecstasy users (*n*=163)

	% sample
Crime committed in preceding month	
Property crime	12
Drug dealing	38
Fraud	4
Violent crime	4
Any crime	44
Arrested in last 12 months	13

Twelve percent of the sample (*n*=19) had committed a property crime in the preceding month, 90% of whom (*n*=17) had done so less than once per week. One subject reported committing property crime about once a week in the preceding month, and the other subject committed property crime on a daily basis. Seven subjects had committed violent crime in the preceding month, all of whom had done so less than once a week. Six subjects reported that they had committed fraud in the preceding month, all of whom said they had done so on a less than weekly basis.

Thirteen percent of the sample (*n*=21*)* had been arrested in the preceding 12 months. Two subjects were arrested for illicit drug use or possession and another subject had been arrested for dealing/trafficking. Three subjects had been arrested for violent crime, three for property crime and three for driving under the influence of alcohol. Only a minority (3%) of the sample had a previous criminal conviction for which they had served a custodial sentence.

3.5.2 Comparison with the 2000 and 1997 samples

Compared to the 1997 sample, substantially smaller proportions of the 2001 and 2000 samples reported having engaged in the preceding month in any crime (Table 12). 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. Across all three samples, similarly low rates of fraud and violent crime in the preceding month were reported.

Table 12: Self-reported criminal activity among ecstasy users recruited in 2001, 2000 and 1997

Criminal activity	2001 sample (*n*=163)	2000 sample (*n*=94)	1997 sample (*n*=173)
Any crime in last month	44	49	62
Drug dealing in last month	38	40	51
Property crime in last month	4	11	25
Fraud in last month	4	3	3
Violent crime in last month	4	2	2
Paid for ecstasy through dealing drugs	36	35	49
Paid for ecstasy through property crime	3	4	13

Along with an apparent decrease since 1997 in ecstasy use funded through criminal activity, other changes in the sources of financial support for ecstasy use appeared to be manifest over time. Steady decreases between 1997 and 2001 were recorded in the proportion of the samples that reported that in the preceding six months they had obtained ecstasy: (1) on credit from dealers (from 47% in 1997 to 36% in 2000 to 31% in 2001); (2) by bartering drugs or goods (from 36% in 1997 to 21% in 2000 to 18% in 2001); or (3) through pawning goods (from 22% in 1997 to 12% in 2000 to 6% in 2001). It is difficult to specify exactly the reasons for these apparent decreases. However, the results relating to crime and to sources of financial support for ecstasy use are consistent with the notion that, compared to the 1997 sample, the 2001 and 2000 samples had fewer financial problems related to their ecstasy use. This is consistent with the self-reports of the samples (Section 3.8.1). This may relate to the fact that subjects in the more recent samples were older than the 1997 sample, were more likely to be employed full-time, and were less likely to be either unemployed or full-time students. Such characteristics render it reasonable to speculate that the more recent samples experienced less financial problems in general, not just ecstasy-related financial problems.

3.5.3 Summary

- *relatively few ecstasy users are involved in criminal activity apart from dealing drugs. Drug dealing among the majority of these users is low-level and often involves little or no profit*
- *relatively few ecstasy users are arrested and very few report a history of incarceration*
- *there were apparent decreases between 1997 and 2000 in prevalence of drug dealing and property crime among ecstasy users. These apparent decreases were sustained throughout 2001*
- *a number of different data obtained through the interviews with users were consistent in suggesting that the more recent samples were less likely to report financial problems than the sample recruited in 1997*

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

3.6.1 2001 sample

Almost half (49%) of the 2001 sample perceived increases over the six months preceding the interview in visible police activity directed towards participants in the party drug market (Table 13). The emergence of drug detector (sniffer) dogs was the most common change noted by subjects, and they were unanimous in their disapproval of the routine use of the dogs to detect illicit drugs carried by patrons waiting in the queues outside venues. Other perceived changes in police activity included more undercover agents in dance venues such as clubs or raves, and an increase in the visibility of uniformed police around venues, and on the streets between venues, at night.

Despite such marked perceptions of a recent increase in police activity, and the fact that a substantial proportion of subjects reported that more of their friends than in the past had recently been in trouble with the police (Table 13), the overwhelming majority of the sample reported that police activity had failed to make it more difficult for them to obtain illicit drugs recently.

Table 13: Perceptions of police activity among ecstasy users (*n*=163)

Perception	% sample
Changes in police activity last 6 months	
Don't know	12
More activity	49
Stable	34
Less activity	5
More difficult to obtain drugs	
Yes	6
No	94
Friends in trouble with the police recently	
Less	1
Stable	83
More	16

3.6.2 KIS' reports

The reports of KIS regarding police activity were consistent with those reports of users. All 21 KIS agreed that in recent years there had been marked increases in visible police activity, particularly around dance and other entertainment venues, and especially in the form of drug detector dogs. Many commented that such practices served only to 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. Indeed, informal anecdotes derived during interviews with users supported such speculation. Five KIS had perceived a recent decrease in covert police activity within venues, but all agreed that this was a result of a change in police policy and procedures wherein the levels of overt police activity had markedly increased.

3.6.3 Comparison with the 2000 and 1997 samples

Between 2000 and 2001, there was a marked increase in the proportions of the samples that had recently perceived more police activity towards ecstasy users and the party drug market in general (Table 14). As discussed above, the great majority of the perceived increase could be accounted for by the enhanced profile and prominence afforded to the NSW Police Service drug detector dogs. In all three samples, very few subjects reported a perceived decrease in recent police activity, and between one-fifth and one-half of the samples reported that more of their friends had recently been in trouble with the police than in the past (Table 14). However, the great majority of all three samples reported that police activity had failed to make it more difficult recently for them to obtain illicit drugs.

Table 14: Perceptions of police activity among ecstasy users recruited in 2001, 2000 and 1997

Perception	2001 sample (*n*=163)	2000 sample (*n*=94)	1997 sample (*n*=173)
Recently been more police activity	49	32	35
Recently been less police activity	5	5	4
Police activity remained stable	34	52	38
Unable to comment on police activity	12	11	23
Police activity not made more difficult to score	94	87	82
No. of friends in trouble with police stable	83	80	76
More friends in trouble with police recently	16	18	24

3.6.4 Summary

- *the enhanced profile of drug detector drugs in NSW has led to a marked increase in the proportion of ecstasy users and KIS who perceive recent increases in police activity*
- *in 2001, 2000 and in 1997, substantial minorities of ecstasy users reported that more of their friends had experienced recent trouble with the police*
- *despite these results, 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 2001 sample

Tables 15 and 16 respectively, display the physical and psychological side-effects attributed by subjects, at least in part, to their use of ecstasy in the preceding six months, and the duration and perceived origins of these side-effects among those subjects who reported them.

Table 15: Physical side-effects of ecstasy in preceding six months (*n*=163)

SYMPTOM	Last 6 months (%) *	Median length of worst case #	Only related to ecstasy (%) #
Trouble sleeping	78	8 hours	79
Loss of energy	75	2 days	62
Muscular aches	73	2 days	56
Profuse sweating	68	3 hours	73
Blurred vision	64	1 hour	76
Numbness/tingling	56	2 hours	86
Hot / cold flushes	51	2 hours	68
Weight loss	51	4 days	53
Dizziness	47	15 mins	82
Joint pains/stiffness	45	2 days	49
Tremors/shakes	42	2 hours	76
Headaches	38	3 hours	54
Inability to urinate	34	4 hours	80
Stomach pains	34	2 hours	56
Teeth problems	31	2 days	64
Vomiting	30	5 mins	76
Heart palpitations	30	15 mins	66
Shortness of breath	29	12.5 mins	38
Chest pains	12	1 min	50
Fainting/pass out	7	10 min	55
Fits/seizures	1	15 min	82

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

Table 16: Psychological side-effects of ecstasy experienced in the preceding six months (*n*=163)

SYMPTOM	Last 6 months (%) *	Median length of worst case #	Only related to ecstasy (%) #
Confusion	90	2 days	70
Irritability	66	1 day	61
Depression	55	2 days	63
Anxiety	51	4 hours	67
Blackout/memory lapse	47	2 hours	69
Paranoia	44	2.5 hours	68
Visual hallucinations	34	2 hours	76
Sound hallucinations	33	17.5 mins	74
Loss of sex urge	20	8 hours	79
Flashbacks	14	2.5 mins	68
Panic attacks	12	1 hour	82
Suicidal thoughts	12	2 hours	60
Anger/hostility (n=11)	7	3 hours	46 (n=5)
Violent behaviour (n=11)	7	15 mins	83
Suicide attempts (n=5)	3	-	20 (n=1)

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

Subjects reported a mean of 9 physical side-effects in the preceding six months (SD 3.8; range 0-19). Similar to the reports of users in 2000, the most common physical side-effects were trouble sleeping, energy loss, muscle aches, profuse sweating and blurred vision, each of which had been experienced in the preceding six months by two thirds of more of the sample (Table 15). A mean of 5 psychological symptoms were also reported (SD 2.8; range 0-14), most commonly mental confusion (disorientation, short-term memory loss and vagueness), irritability, depression, anxiety and blackouts/memory lapses (Table 15). As with the reports of physical side-effects, reported psychological side-effects were consistent with those reported in 2000.

In 2001, results relating to prediction of the number of side-effects reported by subjects were different to those found previously. In both 1997 and 2000, subjects who reported having binged on ecstasy in the preceding six months reportedly a significantly higher number of both physical and psychological side-effects than those who had not binged. Contrary to expectation, in 2001, there was no difference in the number of side-effects reported by those who had recently binged on ecstasy and those who had not.

On the other hand, 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 quite different in 2001. Compared to subjects who had never injected ecstasy, subjects who had injected ecstasy reported a significantly higher number of recent physical (11.6 versus 8.6; t_{21}=-3.5; p<.05) and psychological (6.5 versus 4.7; t_{20}=-2.4; 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 (8.9 versus 12.4; t_9=-4.1; 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 subjects who had ever (n=17) and recently (n=8) injected ecstasy 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, methamphetamine and cocaine use, route of administration variables and extent of polydrug use. Both models indicated that the significant univariate relationship between the number of side-effects reported and injection as a route of administration of ecstasy and/or other drugs did not hold when the effects of other variables were held constant. In other words, route of administration variables were less important than other variables in explaining the variance in the number of ecstasy-related side-effects reported by subjects.

The final regression model predicting number of physical side-effects indicated that the frequency of recent ecstasy use (β=.21; p<0.01), the extent of recent polydrug use (β=.23; p<0.05), being younger (β=-.23; p<0.05) and the extent of lifetime polydrug use (β=.27; p<0.05) were independently associated with reporting a higher number of physical side-effects. This model was significant ($F_{4.158}$=16.2; p<0.01), and accounted for 27% of variance in the number of ecstasy-related physical side-effects reported by subjects. Consistent with the results of both 1997 and 2000, which showed that younger people were more likely to report ecstasy-related harm, the negative β coefficient in this regression equation indicates that age was inversely related to number of physical side-effects, such that older subjects reported fewer side-effects than younger subjects. This relationship did not appear to be mediated by duration of ecstasy use, the inclusion of which into regression models (at the expense of age) reduced their explanatory power.

The final regression model predicting number of psychological side-effects indicated that the extent of lifetime polydrug use (β=.39; p<0.01), the frequency of recent ecstasy use (β=.24; p<0.01), and being younger (β=.-.33; p<0.01) were independently associated with more psychological side-effects. This model was significant ($F_{3,159}$=20.5; p<0.01), and accounted for 27% of variance in the number of ecstasy-related psychological side-effects reported by subjects. Consistent with the model predicting number of physical side-effects, the age of subjects was inversely related to the number of psychological side-effects they reported, such that younger users reported more side-effects.

All physical side-effects were attributed, by half or more of those who reported them, solely to ecstasy use, with the exceptions of shortness of breath and joint pains/stiffness (Table 15). In contrast to the results of earlier years, in 2001, most subjects did not consider that factors other than ecstasy use, such as concurrent use of other drugs, lack of sleep, lack of food, sustained exertion, hot, crowded environments or pre-existing conditions, had contributed to physical ecstasy-related side-effects. Similarly, all psychological side-effects were attributed solely to ecstasy use by more than two-thirds of those who reported them except for suicide attempts and

anger/hostility. These were perceived by the majority of those who reported them as caused by a combination of factors (Table 16).

3.7.2 KIS' reports

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. One of the two reported that he had seen a person lose consciousness following GHB use one night, requiring resuscitation by First Aid personnel, and the next night had observed the same person out doing it all over again, with apparently little insight into the dangers his drug use behaviour posed to his health.

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 caveat, 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 types of 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 such relatively minor problems were more likely to be handled within a peer group through peer support. One KIS also reported that some users were content to deal with their friends who experienced more serious drug-related problems, such as falling into a 'K-hole' following use of ketamine (Jansen, 2001), without the assistance of First Aid personnel. He attributed the increased confidence among users in dealing with such conditions to their increased familiarity with such issues, as a result of gradual and steady increases in the prevalence of use and subsequent problems.

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 smaller 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.

3.7.3 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*
- *the majority of these symptoms are perceived as relatively minor, although the symptoms are aversive enough that many users choose to self-medicate them with other drugs such as cannabis or benzodiazepines*
- *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 appear 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*
- *qualitative reports from KIS engaged in providing First Aid in entertainment venues suggest that the number of patrons overdosing and losing consciousness following GHB use may be increasing*

3.8 Other ecstasy-related problems

3.8.1 2001 sample

About half (52%) of the sample had experienced occupational or study problems in the preceding six months (Table 17), which they perceived as related, at least in part, to their use of ecstasy. Of those that reported experiencing recent work/study problems, almost two thirds (65%) of these problems were relatively minor, involving trouble concentrating, reduced work performance or feeling unmotivated. Twenty-nine percent involved taking sick leave or not attending classes, while a minority (6%) were serious problems such as being dismissed from or quitting a job, or inability to obtain employment.

More than one third (36%) of the sample reported ecstasy-related relationship or social problems in the preceding six months. Of those problems, 60% 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 (24%), violence (9%), being forced to leave home (5%) or alienation from family (1 subject).

Table 17: Other ecstasy-related problems experienced in the preceding six months (n=163)

Ecstasy-related problem	% sample
Occupational/study problems	52
Relationship/social problems	36
Financial problems	31
Legal/police problems	7

Financial problems related to ecstasy use were also relatively common (31%). Nine percent of these were relatively minor, such as having no money for other recreational activities. Fifteen percent of those who had experienced recent ecstasy-related financial problems reported being in debt, and 7% had been unable to pay for essentials such as food or rent. Only a small minority (7%, n=11) of the sample had recent legal problems related to ecstasy. Of these, three subjects had been arrested, three had been cautioned, three perceived that they were under surveillance by police, one had lost their driver's license after driving erratically while intoxicated on ecstasy, and the last had been detected by venue security as carrying illicit drugs, but had bribed security personnel to release him prior to the arrival of police.

There were no gender differences in likelihood of subjects reporting various ecstasy-related problems in the preceding six months. Subjects who had ever injected any drug, those who had ever injected ecstasy and those who had injected ecstasy recently, were no more likely to report ecstasy-related problems than those who had not. In contrast to the results of 2000, in which bingeing on ecstasy was demonstrated to be strongly associated with the experience of ecstasy-related problems, among the 2001 sample, recent bingeing on ecstasy was unrelated to the likelihood that subjects reported occupational, financial or relationship problems.

An index of total ecstasy-related problems was calculated by adding together the number of different problems reported (occupational, relationship, financial and legal). The mean number of problems experienced was 1.3 (SD 1.1; range 0-4). Multiple linear regressions indicated that being younger (β=-3.5; p<0.01), quantity of ecstasy consumed in heaviest use episode (β=3.3; p<0.01) and extent of recent polydrug use (β=3.2; p<0.01) were independently associated with extent of ecstasy-related problems. This model was significant ($F_{3,90}$=12.6; p<0.01), and accounted for 30% of the variance in the extent of self-reported ecstasy-related problems.

As was the case in multivariate analyses predicting self-reported physical and psychological problems (see preceding section), these multiple regression analyses demonstrated that being younger was associated with an increased likelihood of reporting other types of ecstasy-related harm. This relationship was not mediated by duration of ecstasy use; when duration of use was substituted for age in the multivariate models, their explanatory power was reduced. As in both the 1997 and the 2000 studies, the 2001 results suggest that younger users are more likely to report experiencing more ecstasy-related problems.

3.8.2 Comparison with the 2000 and 1997 samples

The three samples of ecstasy users interviewed in 2001, 2000 and 1997 were relatively similar in terms of the ecstasy-related harms they reported (Table 18). Compared to the previous samples,

the 2001 sample reported similar numbers of recent physical and psychological symptoms that they perceived as being related, at least in part, to their ecstasy use, and similar proportions of the three samples reported recent work or study problems that they related to their use of ecstasy.

Table 18: Ecstasy-related problems among ecstasy users recruited in 2001, 2000 and 1997

Ecstasy-related problem	2001 sample (*n*=163)	2000 sample (*n*=94)	1997 sample (*n*=173)
Mean no. physical side-effects	9	9	10
Mean no. psychological side-effects	5	5	4
Occupational/study problems (%)	52	59	53
Relationship/social problems (%)	36	49	52
Financial problems (%)	31	27	54
Legal/police problems (%)	7	6	4

Despite the similarities between the three samples, there were two noticeable differences across time in subjects' reports of ecstasy-related problems. The first was that, compared to the 2001 and the 2000 samples, a substantially larger proportion of the 1997 sample reported financial problems that they related to their use of ecstasy. The reasons for this are not clear. The data collected do not allow the teasing out of the reasons for this difference, but it is interesting to note that there are also differences between the groups in terms of crime (see Section 3.5.2). The second difference over time in reports of ecstasy-related problems was that, compared to the 2000 and the 1997 samples, a smaller proportion of the 2001 sample reported experiencing recent relationship or social problems related to their ecstasy use. Again, the reasons for this apparent decrease are not clear and data are not available from which it would be possible to draw valid inferences.

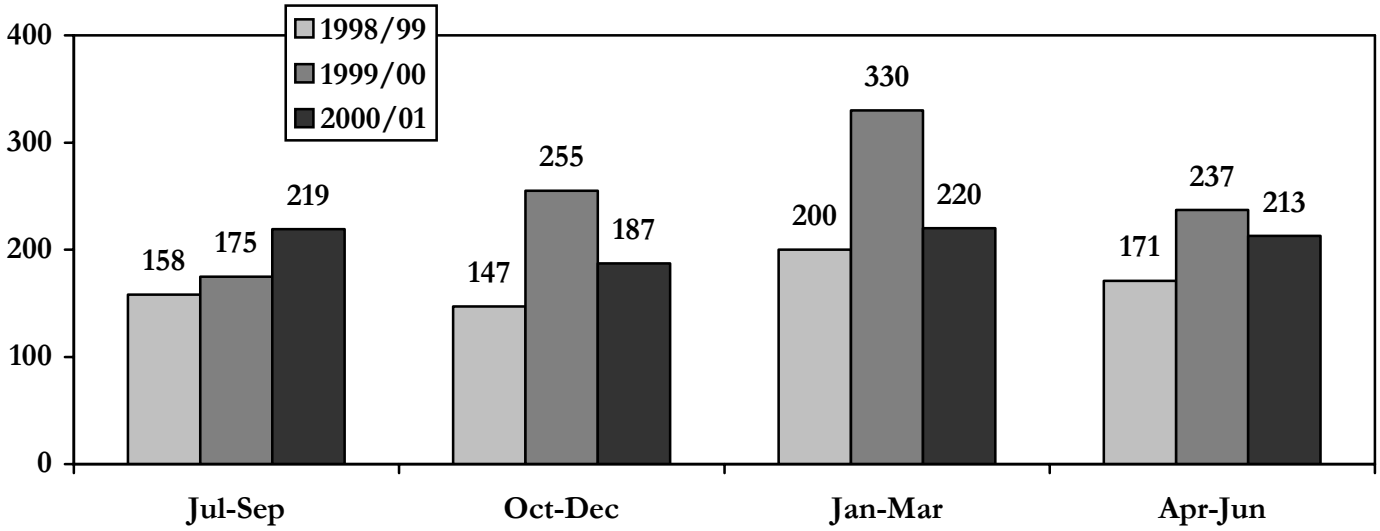
3.8.3 Alcohol and Drug Information Service data

The NSW Alcohol and Drug Information Service (ADIS) telephone information, referral and counselling service received 45969 telephone inquiries during the 2000/01 financial year, compared to 44744 in 1999/00 and 48842 in 1998/99. The number of calls that related *mainly* to ecstasy fluctuated from 452 in 1998/99 to 675 in 1999/00, to 504 in 2000/01. Similarly, the number of callers who made *any* inquiries about ecstasy increased from 676 in 1998/99 to 997 in 1999/00, and then decreased in 2000/01 to 839. Changes in recording practices at ADIS are likely have affected this variation, and render it difficult to draw meaningful interpretations of the data.

Figure 4 compares ADIS data relating to ecstasy by quarter across the 1998/99, 1999/00 and 2000/01 financial years. It depicts an increase between 1998/99 and 1999/00 in the comparative number of calls received in each of the four quarters, followed by a decrease between 1999/00 and 2000/01 that was observed in all quarters. The data suggest that inquiries relating to ecstasy may peak in the first quarter of the calendar year, when, presumably, more people are using the drug due to the prominence of the Christmas/New Year holiday season, as well as the Sydney

Gay and Lesbian Mardi Gras. However, given the changes in data recording procedures at ADIS over this time, the data should be interpreted cautiously. Recently, NSW ADIS has received an increase in funding from the state government, and it is likely that the quality of the data produced will improve markedly as a result.

Figure 4: Number of NSW ADIS enquiries relating to ecstasy, 1998/99 - 2000/01



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*
- *multivariate analyses suggest that younger users are more likely to report such ecstasy-related problems. Indices of ecstasy use and polydrug use were also related to the likelihood of reporting these problems*
- *there has been a decrease over time in the proportion of samples of ecstasy users that report recent ecstasy-related financial and relationship problems, although the reasons for the apparent decrease are not clear, and may be an effect of sample variation*
- *the number of telephone enquiries received by the Alcohol and Drug Information Service relating to ecstasy, and the proportion of total calls which those enquiries represent, has fluctuated in recent years. Calls appear to peak in the first quarter of the calendar year, which encompasses both the Christmas/New Year Party season and the Sydney Gay and Lesbian Mardi Gras*

3.9 Other trends in party drug markets

Eighty three percent of the 2001 sample of ecstasy users had perceived recent changes in the party drug market in Sydney. A wide range of changes were noted, most frequently an increase in the availability and use of the potent forms of methamphetamine termed by Topp and Churchill (2002) as ice and base. Consistent with these reports, 10 KIS also reported a recent increase in the availability and use of the potent forms of methamphetamine. Clearly, the popularity of these forms of methamphetamine continues to spread among participants of a number of different illicit drug markets.

As in 2000, another trend frequently reported by users interviewed in 2001 was that there are more people using ecstasy, in particular more young people; and that the age of initiation into ecstasy use continues to decline. There was consistent agreement in both 2000 and 2001 that ecstasy has become a 'mainstream' illicit drug that is firmly established in Australia's illicit drug markets. It 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, the scenes in which the drug originally made its appearance in Australia. KIS' reports supported these user perceptions: many KIS commented on the broad range of people who use ecstasy. They reported that although the connection between the dance music industry and ecstasy use is still strong, a huge variety of 'types' of people now use ecstasy. These were reported to include groups that, in the past, may have been more attracted to drugs such as alcohol, methamphetamine or LSD, for example, those in the punk scene, or patrons of a pub. Seven KIS commented specifically on the increased use of ecstasy among young people, and five reported that the age of initiation continues to drop, with 14 years being the most frequently estimated age at which young people first try ecstasy.

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 Sydney's 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 to manifest over some time.

3.9.1 Summary

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

4.0 SUMMARY AND IMPLICATIONS OF RESULTS

4.1 Summary of results

4.1.1 Demographic characteristics

The results obtained in both of the two years of this trial were consistent in indicating that party drug users, a population defined in this trial by monthly or more frequent use of tablets sold as 'ecstasy', tend on the whole 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, including a minority of subjects of indigenous Australian descent. The majority of subjects 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. Just two subjects were currently in treatment for a drug-related problem (neither of which related to ecstasy), and only a small proportion had previously been incarcerated.

4.1.2 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. Subjects 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.

4.1.3 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 subjects interviewed in both 2000 and 2001 as extensive polydrug users, more than half of whom had a preference for ecstasy. Subjects 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 subjects 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. Figures relating to the prevalence and frequency of use of party drugs other than ecstasy suggested that although the use of these drugs appears to have increased, there are relatively few dedicated users, and much use appears to be opportunistic in nature.

4.1.4 Price, purity and availability of ecstasy

There has been a steady decrease in the average price of a single ecstasy tablet in Sydney, from $50 in 1997, to $40 in 2000, to $35 in 2001. Tablets sold as ecstasy have remained readily

available since 1997; across all three studies, the great majority of users 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 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.

4.1.5 Price, purity and availability of other party drugs

The relatively small numbers of subjects who felt confident enough of their knowledge of party drugs other than ecstasy to comment on their price, purity and availability suggests limited exposure to such drugs. 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 subjects 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 do not deliberately seek them out, and hence, are unfamiliar with market indicators such as changes in their price, purity and availability. This relatively low rate of exposure to the regular use of these drugs is in itself an indicator of the small size of the markets for them.

4.1.6 Self-reported harms arising from ecstasy and other drug use

In both years of the trial, subjects 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, trouble sleeping, muscle aches, mental confusion and irritability had been experienced in the preceding six months by the majority of both samples. Reported side-effects were 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 (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. 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: (1) 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; (2) younger users are more likely and/or more willing than older users to report these harms; and/or (3) 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.

The results relating to the importance of gender as a predictor of ecstasy-related harm were less consistent than those for age, although in the cases in which gender has shown to have an effect, females consistently reported more ecstasy-related harm than males. Along with these demographic variables, multivariate analyses also suggest that a number of 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

4.1.7 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. Some indications suggest that the quantity and frequency of ecstasy use among these samples of regular users may have increased since 1997, 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 KIS in both years, some of whom 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 three studies conducted in 2001, 2000 and 1997 are their most noteworthy feature. Given these similarities, particularly in terms of demographics and drug use data, it seems reasonable to suggest that the main change in Sydney's 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 Sydney.

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. In short, it appears reasonable to argue 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.

4.1.8 Party drugs that are less consistently popular than ecstasy

Although overall rates of polydrug use remained stable between 1997 and 2001, the results suggested that over this period, the prevalence and frequency of use of some drugs decreased, including LSD, MDA and inhalants such as amyl nitrite and nitrous oxide. Over the same period, the prevalence of use of other drugs has steadily increased, including GHB, ketamine and ice. 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 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.

4.2 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 well placed 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.

4.3 Conclusion

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 Sydney since 1997. Over that time, the price per tablet fell from $50 to $35, 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.

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', 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 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 also prove 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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