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Sources of Ecstasy Information: Use and Perceived Credibility

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SOURCES OF ECSTASY INFORMATION: THEIR USE AND PERCEIVED CREDIBILITY

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EXECUTIVE SUMMARY

In Australia ecstasy is the third-most popular illicit substance (after cannabis and amphetamines), with patterns of increasing use compared with other illicit drugs over the last 5 years. Given the potential risks associated with ecstasy use, the provision of accurate prevention or harm reduction information is imperative in reducing drug-related morbidity and mortality. In providing this information, it is likely that the credibility of information sources will be crucial in users' perception of the information. Knowing which information sources are deemed credible will aid the efficacy of prevention or harm reduction efforts, as they can ideally be concentrated toward the more credible information sources.

This study recruited 216 ecstasy users, the majority of whom were from the Sydney metropolitan area. Generally, this sample was young, well educated, and likely to be in some form of paid employment. Males were slightly overrepresented within the sample. Consistent with similar recent studies, the average frequency of ecstasy use for this group was about ten days in the last six months, although this ranged from one day in the last six months to four days per week.

Participants had used a variety of information sources, although particularly low usage rates were recorded for family members, government sources, libraries and the police. Friends were overwhelmingly the most popular usual source for ecstasy information, followed by the Internet, dealers and print media. Friends were also rated among the more accessible of information sources, with the Internet and print media also rating highly. The police and the government were sources that received lower average accessibility scores. Friends were also deemed to be the source from which participants felt most comfortable acquiring information. Other sources that received relatively high comfort ratings included dealers, doctors and drug counseling hotlines. The more credible information sources included drug counseling hotlines, doctors, libraries and friends. Parents were judged as the least credible source, with siblings, school teachers, videos/movies, police and government all perceived as being not particularly credible.

The sample also identified four specific sources of information that they did not believe: government agencies, the police, drug dealers and the media. Information from the police or government agencies was generally not believed, because participants felt that these authorities held an anti-drug agenda, and were likely to focus only on the adverse effects of the drug. Facts acquired from the media were usually considered unreliable, as users felt that they were often sensationalised and distorted for the purpose of 'selling a story'. All participants who nominated drug dealers believed that they were likely to be biased in the information they provided, as they possessed a vested interest in selling their product.

When asked what information they acquired from these sources, five categories were outlined: general effects; side effects; personal experiences; purity/quality information; and safety information. Facts on possible side effects were the most popular type of information sought along with general ecstasy effects.

Friends and siblings were used to acquire information on a variety of topics, including their opinion of the purity or quality of the ecstasy pills, information on the general effects or side effects of ecstasy, as well as personal experiences and safety information to a lesser extent. Dealers and the Internet were mainly used for information regarding the purity or quality of ecstasy pills. Participants mainly used doctors for information pertaining to side effects,

particularly around issues relating to potential harms arising from combining ecstasy and related drugs with pharmaceuticals or the consequences of using drugs.

About two-thirds of the sample felt that ecstasy information should be presented to the entire community and almost a third believed information should be specifically aimed at school students. Smaller groups of participants felt that ecstasy information campaigns should be targeted at specific groups such as drug users or the gay community.

Many participants felt that ecstasy information should primarily incorporate a message of harm reduction. A smaller group believed that all effects of ecstasy should be presented in a balanced fashion and that ecstasy use should not simply be discouraged without adequate justification. A small minority believed that ecstasy information campaigns should focus solely on the adverse effects of ecstasy or its potential dangers.

Considering the problems associated with government and law enforcement credibility with this sample, those sources, as well as dissemination through the mainstream media and/or family members do not appear to be effective methods of information delivery, particularly in regards to ecstasy and related drugs.

The findings of this project suggest a number of promising approaches to the reduction of harm associated with the use of ecstasy and related drugs in the Australian community. These include judicious use of the frequently accessed internet sites for the dissemination of information on high risk behaviours and warnings on specific issues; the development and evaluation of peer networks for the dissemination of harm reduction information (including accessing interventions); and the training of medical practitioners and drug hotline staff in their role as highly credible sources of health-related information on ecstasy and related drugs.

INTRODUCTION

'Ecstasy' (MDMA or 3,4-methylenedioxymethamphetamine) was originally developed in the early 20th century, but its widespread use did not become apparent until the early 1990s (Solowij et al. 1992). Since then, ecstasy has become increasingly popular in many developed countries, including Australia, particularly among those within the nightclub or dance party culture.

The prevalence of ecstasy use has been increasing steadily within Australia since 1995 when 1.7% of people aged over 14 reported ever using the drug. In 2001, 6.1% of Australians aged 14 years or older reported life-time ecstasy use, and 2.9% reported recent use. One in 10 (10.4%) of 20-29 year-olds and 5.0% of 14-19 year-olds had used ecstasy recently (AIHW 2002). Following cannabis and amphetamines, ecstasy is the third most widely used illicit drug in Australia.

This increase in ecstasy use has been met with a rising concern about its short-term and long-term effects. Ecstasy use is associated with a variety of adverse effects, including weight loss, racing heart rate, tremors and affective problems during the 'comedown' period (Darke et al. 2000; Parrott et al. 2002; Topp et al. 2002). Due to the rapidly-developing tolerance that often occurs, ecstasy users may be inclined to take larger doses of the drug, which can result in an abundance of adverse side-effects (Topp et al. 1998; Topp et al. 2000).

Occasional reports of neurotoxicity (e.g McKenna & Peroutka, 1990) warrant particular cause for concern, especially given the paucity of data available on the long-term neurological effects of ecstasy. Studies involving human subjects have often been flawed, but several studies suggest that ecstasy may have the potential to reduce the overall number of serotonin transporters, cause the loss of serotonin uptake sites or deplete serotonin levels (McKenna & Peroutka 1990; McCann et al. 1998; NIDA 2003).

Although there are pronounced individual differences with regard to the sensitivity to the toxic effects of ecstasy, life threatening or lethal outcomes have been seen with concentrations between 0.11 and 7.0 mg/l (Theune et al, 1999). It is believed that other factors, such as aggregation in close environments (as in the case with nightclubs or dance parties), together with high ambient temperature and possibly dehydration (Dafters, 1994), may play an important role in increasing the risk of a fatal outcome.

Given the potential risks associated with ecstasy use, the provision of accurate prevention or harm reduction information is imperative in reducing drug-related morbidity and mortality. In providing this information, it is likely that the credibility of information sources will be crucial in users' perception of the information. The credibility of drug information has been shown to be instrumental in the efficacy of prevention measures (Blum et al, 1976), and there is evidence to suggest that drug information sources can shape beliefs, attitudes and behaviours related to drug use (Wax, 2002). Knowing which information sources are deemed credible will aid the efficacy of prevention or harm reduction efforts, as they can ideally be concentrated toward the more credible information sources.

It is also imperative to know what type of information is being sought by ecstasy users and whether different sources are being used for different types of information. A number of information sources appear to have become increasingly popular for health-related information, particularly the Internet (Fox and Ranie 2002). Findings from street intercept surveys in the US indicate substantial computer access at home (62%) and frequent Internet

use (66%). Fifty-five per cent of the sample reported seeking health information on-line (Bleakely et al, 1994). A more recent study found that about half the sample of young adult ecstasy users used the Internet to obtain information specifically about ecstasy (Falck et al. 2004). Several websites, such as Pillreports.com, DanceSafe.com and Erowid.org claim to be visited by thousands of ecstasy users each day. For example, the Vaults of Erowid reports on its homepage that it receives 25,000 visits per day (Erowid, 2003). These websites adopt a harm-reduction approach, and provide information on the safer use of the drug as well as the perceived quality of specific ecstasy pills.

The popularity of these websites may be of concern, given that several researchers have noted that online health information is likely to be inaccurate (Boyer et al, 2001; Silberg et al. 1997; Lindberg & Humphreys 1998). Other researchers express similar concerns, in that the provision of online club drug information can lead to an increase in permissive attitudes toward party drugs (Brewer 2003). However, others have claimed that online drug information is reasonably accurate, and should not be cause for alarm (Bogenschutz, 2000).

Apart from the quality of the information provided there do appear to be particular demographic barriers associated with the Internet. Falck and colleagues (2004) found that younger participants were more likely than older participants to have used the Internet to get information about ecstasy. Also, those participants with more education were more likely than those with less education to have used the Internet. Only 20.4% of the entire sample considered the Internet to be an important or very important source of information for themselves. Rideout (2001) had a different result with regard to the age of Internet users, finding that younger respondents (15-17 years old) were somewhat less likely to say they get 'a lot' of health information online than 18-24 year-olds (20% v. 26%).

In a sample of 13-16 year old school-based young people, Rolinson (1998) identified four 'macro' areas of health information sources – places, written sources, people and multi-media. Within each of these groups, the respondents' top three selections were:

- in the places grouping: GP's surgery, dentists and opticians;
- in the written sources: leaflets, booklets and magazines;
- in the people grouping; doctors, parents and friends; and
- in the multi-media grouping: television, video and films.

The Internet was noticeable by its absence from the top three multi-media information sources, used by merely 3% of the respondents. This is a surprising result considering the apparent Internet awareness of adolescents and the encouraged and extended use of IT equipment in schools, homes and public libraries. When asked their preferred method of receiving health information the respondents were fairly evenly balanced between the places (27%), people (24%) and written sources (32%). The multi-media sources were the preferred source for just 9% of respondents.

Rideout (2001) stated that among all young people aged 15-24 years, the most significant sources of health information continued to be such traditional sources as health classes at school (47% say they have accessed 'a lot' of information this way), parents (45%) and doctors (41%). Only one in four young people (24%) reported that they accessed health information through the Internet. Almost one third (31%) of the sample reported never accessing information from the Internet.

Recent studies show that there is considerable variation in the perceived accuracy of different information sources (Falck et al. 2004). Few young people say they would trust health information from the Internet 'a lot' (Rideout, 2001). The author comments that young people appear to have a great deal of trust in the information they get from doctors and clinics with 85% responding that they trust information from doctors 'a lot'. When asked which they believed to be a better way to access health information, the Internet or by visiting a clinic or doctor's office, 85% chose the health provider while only 14% elected the Internet.

Friends have often been noted to be popular sources for drug information (Falck et al. 2004; Harris et al, 1991; Smart et al, 1972), despite some evidence suggesting their information may be of dubious credibility (Hickey et al, 1991). Many studies have documented that once people have began using drugs they gain most information about their harms and effects from their peers (Korf, 2000; Odgers 1998; Ward et al. 1997). As Odgers (1998) states, young people consider their friends as legitimate authorities in regulating substance use behaviour.

An early study showed that the credibility attributed to sources of drug information varies significantly according to drug use status. Non-users believed that users were the least credible and physicians the most credible, while for users, other users and their own experience were most credible, while for users, other users and their own experience were most credible, law enforcement sources were least credible, and physicians near the middle. Among users, friends who used drugs ranked high in credibility (Sinnett et al, 1975).

Research conducted in the Netherlands by Korf (2000) found that as young people age, they tended to consult their friends outside of the school setting for information about drugs, despite the fact that their friends were not always seen as the most credible source of information (when compared to an information leaflet). This study also revealed that drug users see their drug using peers as 'important and reliable' sources for providing information about drugs. And further, harm reduction information delivered informally by peers at festivals, parties and smart shops (that is also supported by the distribution of written information) is seen as an appropriate method to educate recreational drug users (Korf, 2000).

A process evaluation of Crew 2000 (an Edinburgh based peer education project which aims to provide advice and information regarding recreational drug use and harm reduction information for those in the 'dance scene'), found that the service had access to young people in venues and locations that are normally 'hidden' to other drug services. Further, the service was seen as credible and accessible to young people with many respondents reporting that they never had approached a drugs agency prior to their contact with Crew 2000 (Parkin, 1998).

A study of young Australian cannabis users found that friends were an almost universal choice as their preferred information source (93%), with 57% rating them as their most common source of information (Copeland et al, 2001). Schools/school teachers were also an important source for the majority (87%) and were rated as the second most common source (29.4%) of cannabis information.

While friends were by far the most common information source, they were not seen as the most believable (a median believability of 6 out of a possible 10). Higher believability scores were conferred on doctors, drug counseling telephone lines (median of 10), nurses, the

library and chemists (9). Both school/school teachers (median of 8) and parents (median of 7) were also seen as more credible information sources than friends.

Building upon that study, this survey aims to examine the range of information sources accessed by ecstasy users. Specifically, this study will examine information sources accessed by ecstasy users, the type of information acquired, user's ratings of the accessibility and credibility of each information source and their reasons for not believing in particular sources. This study will also seek users' opinions regarding the effective dissemination of ecstasy information.

In addition, this report will examine the characteristics of ecstasy users, their patterns of ecstasy and other drug use, their context of initial and usual ecstasy use, the nature and extent of ecstasy-related harms, their knowledge about ecstasy and their perceptions of risks regarding the drug.

Study aims

The aims of this study were to examine the drug information needs, sources of information and their credibility among ecstasy users. This information will assist in informing a strategy for the dissemination of factual information on ecstasy and related drugs to current and potential users.

Specifically, this report aimed to examine:

- what information they wish to have on their drug or drugs of choice;
- where they currently access information from and the credibility of these sources; and
- what type of information they do not believe to be credible and who or what organisations/departments they regard as lacking credibility.

In addition, this report will examine the characteristics of ecstasy users, their patterns of ecstasy and other drug use, the context of initial and usual ecstasy use, the nature and extent of ecstasy-related harms and their perceptions of risk.

METHOD

Participants

The sample consisted of 216 adults who had used ecstasy at least once in the previous six months. Participants were considered eligible for the interview if they were aged over 18 years and spoke adequate English. Participants were recruited from the greater Sydney metropolitan area through snowball sampling and via advertisements placed in street press publications, on radio programmes and on ecstasy-related Internet sites.

Procedure

The interview comprised quantitative and qualitative questions relating to the user's experiences of ecstasy and pharmaceuticals. Ethics approval was received from the University of New South Wales Human Ethics Committee for all aspects of the study.

Participants either responded to advertisements for the study or were approached by the researcher directly. Participants were screened for eligibility and assured that any information provided would be kept strictly confidential. If participants were eligible, they were informed that the study would involve either a face-to-face or telephone interview, or self-completion of a questionnaire that would take approximately 45 minutes in duration. Interviews either took place at a public location convenient to the participant or at the research centre. A small number (9%) were surveyed by telephone. All participants were reimbursed with AU$25 at the completion of the interview for travel and related expenses.

Measures

The structured interview assessed the following areas:

1. **Demographics**: including the participant's suburb or town of residence, their age, gender, ethnicity, education, sexual preference, and employment status
2. **Patterns of other drug use**: this section examined any other drugs used, the frequency of their use, and any concomitant use with ecstasy
3. **Patterns of ecstasy use**: this section included ecstasy use history, frequency of use, quantity of use and route of administration history
4. **Severity of dependence scale (SDS)**: participants who had used ecstasy on an average of more than 3 occasions per week in the preceding six months were assessed with the SDS
5. **Context and motivation for ecstasy use**: this section examined the age and context of initial ecstasy use, the user's reasons for initial use and their usual context of ecstasy use
6. **History of pharmaceutical misuse**: examined pharmaceutical use history (both prescribed and non-prescribed), history of pharmaceutical misuse, concomitant use with ecstasy and any reasons for this. This section also examined where the

participant obtained pharmaceuticals and if they had ever sold pharmaceuticals to others[1]

7. **Side effects**: participants were asked if they had experienced a range of physical and psychological side effects which may have resulted from the use of ecstasy or pharmaceuticals (both short-term and long-term). This section examined whether ecstasy use had ever resulted in participants seeking medical help. Participants were also asked if their ecstasy use had ever caused any potentially dangerous situations to arise, where they had put themselves or others at great risk of harm. Participants were specifically asked if ecstasy use had resulted in engaging in high-risk sexual activity, becoming the victim of a drink 'spiking' or driving while under the influence
8. **Perception of ecstasy-related risks**: this section assessed participants' perceptions of the risks associated with ecstasy (both personally and in general)
9. **Factors influencing ecstasy use**: participants were asked to name the three most important factors which contribute to their decision about whether to use ecstasy
10. **Information sources**: participants were asked to identify which sources of information they had ever used or usually used in order to learn about ecstasy. From a range of information sources provided, participants were also asked to rate i) how accessible they felt each source was, ii) how comfortable they were receiving information from that source and iii) how credible they believed the source was.
11. **Views on the dissemination of ecstasy information**: participants were asked for their opinion of ecstasy information campaigns and to express their views on its content and timing.

[1] Results regarding section six can be found in Gascoigne, M., Copeland, J. & Dillon, P. (2004). *Ecstasy and the concomitant use of pharmaceuticals*. Technical Report No. 201. National Drug and Alcohol Research Centre.

RESULTS

Demographics

This sample consisted of 216 participants. The mean age of this group was approximately 26 years (SD 5.2) with a range of 19 to 39 years. From Table 1, it can be seen that over half of the sample (63%) was male and a similar proportion lived with friends or their partner. The majority (93%) indicated that English was their preferred language, and a small minority (2%) were of Aboriginal or Torres Strait Islander descent. Almost two-thirds (68%) had completed Year 12 at school, and a slightly smaller proportion (58%) had gained a qualification from a university or college. About one quarter (23%) were unemployed and about two thirds of the participants (69%) indicated that they were heterosexual.

Table 1: Demographic characteristics of participants

N = 216	**%**
Mean age	26.33 (SD 5.2)
Male	63
Live with friends or partner	60
Aboriginal/Torres Strait Islander Descent	2
English as preferred language	93
Unemployed	23
Finished school in year 12	68
Completed University/College qualification	58
Heterosexual	69

The majority of the sample (88%) resided within the Sydney metropolitan area, while a small number were from regional areas of NSW or other states. About two-fifths of the participants (39%) were from the eastern suburbs of Sydney, and about one-fifth (21%) the inner west. The remainder of the sample mainly resided on the north shore or in the northern beaches area. Details on participants' areas of residence can be found in Table 2.

Table 2: Participant regions of residence

	N %		N %
Eastern Suburbs	79 (39)	Liverpool/Fairfield	5 (3)
Inner West	43 (21)	Macarthur/Camden	2 (1)
Upper North Shore	8 (4)	Western Sydney	1 (1)
Lower North Shore	10 (5)	Northern Rivers	3 (2)
Northern Beaches	15 (7)	Riverina	2 (1)
St. George & Sutherland	10 (4)	Wollongong & Illawarra	2 (1)
Northern Districts	3 (2)	Lower Hunter Valley	5 (3)
Sydney City	3 (2)	Victoria	5 (3)
Canterbury Bankstown	1 (1)	Queensland	2 (1)
Parramatta	3 (2)	Tasmania	1 (1)

Note: 13 participants (6%) did not provide data

Ecstasy use history

Information relating to the age of initial ecstasy use and the reasons for initial use is contained within Table 3. The mean age at which participants had first tried ecstasy was approximately 20 years, and an average period of about seven years had elapsed since their first use occasion. Participants reported an average of about 11 days of ecstasy use in the last 6 months, and an average of about two ecstasy pills per use occasion. No participants had taken enough ecstasy to warrant an assessment of their dependence with the Severity of Dependence Scale (SDS).

Table 3: Ecstasy use history

Mean age of first use (years)	19.8 (SD 3.9)
Mean apparent years of use	6.7 (SD 3.8)
Mean number of ecstasy pills usually taken	2.1 (SD 1.3)
Mean number of ecstasy days in last 6 months	10.56 (SD 11.48)

Initial use

The vast majority (93%) of participants initially used ecstasy in the company of their friends or partner. Curiosity was the most commonly-cited reason for initially using ecstasy. Few people initially used ecstasy alone (less than 1%). Details on the context of initial ecstasy use can be found within Table 4.

Table 4: Context of initial ecstasy use

Who were you with when you used ecstasy the first time?	%	*Reasons for first use*	%
Alone	1	Curiosity	78
Partner	12	Others Pressured	8
Friends	81	To enhance raving/clubbing	7
Relatives	2	To feel good	3
Strangers	1	Other	4
Others	1		

In order to understand the context in which participants typically use ecstasy, all participants were asked questions regarding their usual place of use. The findings from these questions are presented in Table 5. Most subjects had used ecstasy in clubs (86%) and parties (81%), and to a lesser extent at home (64%) and at raves (53%). Almost three-quarters of the sample identified clubs as their usual place of ecstasy use (72%). Participants were also most likely to have last used ecstasy at a nightclub.

Almost all participants (97%) reported having swallowed ecstasy pills, while a substantial proportion (59%) reported using intranasal routes of administration and one-fifth (20%) had administered ecstasy anally. A minority of participants (8%) had ever injected ecstasy.

Table 5: Lifetime and usual ecstasy use locations and route of administration history

Places of use	% Ever Used	% Usually Use	*Routes of administration*	%
Clubs	86	72	Injected	8
Raves	53	27	Snorted	59
Parties	81	44	Swallowed	97
Home	64	21	Smoke	8
Movies	10	1	Inserted anally	20
Beach	26	2		
Park or other public place	39	3		
Pub	14	2		

Other drugs

Participants were asked to report on their lifetime use of a variety of other drugs. Almost the entire sample had used alcohol (94%), and the majority of the sample also reported use of amphetamines (85%), cannabis (81%) and tobacco (80%). Other commonly used drugs included cocaine (61%), LSD (57%) and ketamine (44%). A smaller number reported the use of GHB (25%) or heroin (16%). These data and the list of drugs which participants were presented with are contained in Table 6.

Tobacco, alcohol and cannabis were the most frequently used substances during the preceding six-month period. Apart from ecstasy, amphetamine was the most frequently used club drug, followed by amyl nitrite and various forms of methamphetamine.

Table 6: Lifetime and recent use of other drugs

Drug	*% Ever Used*	*Days in last 6 months*	**Drug**	*% Ever Used*	*Days in last 6 months*
Alcohol	94	63	Crystal Meth	40	7
Amphetamine	85	9	Amyl Nitrite	39	7
Cannabis	81	46	Methamphetamine	35	7
Tobacco	80	91	Nitrous Oxide	31	3
Cocaine	61	4	GHB	25	4
LSD	57	1	Sleeping aids	18	14
MDA	46	1	Heroin	16	16
Ketamine	44	4	Inhalants	14	2
Benzodiazepines	40	20			

Participants were asked if any of these substances were routinely used in conjunction with ecstasy. Data from these questions are presented in Table 7. About half of the sample (ranging from 45% to 54%) indicated that they regularly used alcohol either before or during ecstasy use, while one-third used alcohol after ecstasy use. Cannabis was the most popular drug taken after ecstasy use, as almost one in two participants (47%) indicated that they usually engaged in this practice. Markedly smaller proportions indicated that they used cannabis before or during the ecstasy high (14% and 22% respectively). Over half of the sample (55%) usually smoked tobacco during the ecstasy high, while substantial minorities of the sample also routinely used tobacco before and after taking ecstasy (35% and 40% respectively). Comparatively smaller proportions routinely used cocaine or benzodiazepines with ecstasy. Cocaine was more likely to be used before or during ecstasy use, while the use of benzodiazepines was likely to be reserved for the 'comedown' period.

Participants that used tobacco reported smoking an average of 11 cigarettes a day, but would smoke an average of 19 cigarettes when taking ecstasy. This increase in smoking behaviour was usually explained by a greater craving for tobacco during the ecstasy 'high'. Participants who consumed alcohol reported having an average of four drinks per alcohol use occasion, irrespective of ecstasy use.

Table 7: Timing of concomitant use of ecstasy and other drugs

	Alcohol %	Cannabis %	Tobacco %	Amphetamines %	Cocaine %	Benzodiazepines %
Usually use before ecstasy use	54	14	35	34	13	4
Usually use during ecstasy use	45	22	55	30	11	1
Usually use after ecstasy use	33	47	40	17	6	8

Side effects

In assessing the short-term and long-term negative effects of ecstasy, each participant was presented with a list of symptoms and asked to indicate which effect they had experienced as a direct result of using ecstasy. No time-frame was specified, therefore participants were asked to consider each symptom in either its long-term or short-term context. The data from this section are presented in Table 8.

Overall, participants were more likely to report having experienced symptoms clustered within the 'General' category, such as poor appetite (39%), fatigue/energy loss (45%) and sleeping difficulties (39%).

Aside from these general symptoms, the most common side-effects were memory lapses and muscular aches (both 26%), joint pains/stiffness (24%) and tremors/shakes (23%). The most common psychological side-effects were depression (44%), anxiety (31%), confusion and irritability (both 29%). About 10% of these participants reported experiencing suicidal thoughts as a result of ecstasy use and a small number had attempted suicide (6%).

Table 8: Negative physical and psychological effects

General	%	**Muscular**	%
Profuse Sweating	28	Muscular Aches	26
Hot/Cold Flushes	28	Joint pains/Stiffness	24
Weight Loss	24	Difficulty with reflexes	9
Trouble sleeping	39	**Gastrological**	
Eye/Vision Problems	20	Vomiting	19
Poor Appetite	39	Stomach Pains	20
Fatigue/Energy Loss	45	Diarrhoea	12
Injecting-related		**Psychological**	
Abscesses/Infections	4	Paranoia	28
Overdose	4	Depression	44
Hepatitis B/C	3	Suicidal thoughts	10
Neurological		Suicide attempts	6
Tremors/Shakes	23	Confusion	29
Fainting/Pass Out	9	Irritability	29
Fits/Seizures	6	Flashbacks	10
Memory Lapse/Black Out	26	Anxiety	31
Numbness/Tingling	16	Panic attacks	12
Headaches	21	**Respiratory**	
Dizziness	19	Shortness of breath	14
Tics	7	Chest Pains	9
Sex-related			
Loss of sex urge	14		

About one in seven participants (15%) had sought medical assistance as a result of ecstasy use. The majority of these people (65%) had sought assistance by either calling an ambulance, visiting a hospital emergency room, a medical centre, or a doctor's surgery. About one-third of these people (29%) had consulted a counsellor, psychologist or psychiatrist about ecstasy-related problems. The remaining minority (2%) had consulted a dentist for assistance, either to help with jaw problems or chipped teeth.

Symptoms likely to prompt the seeking of professional medical assistance included depression (22% of people who sought attention), passing out (19%), headaches (19%), paranoia (11%) and overdose (7%).

About one in five participants (22%) reported having engaged in high-risk sexual behaviour as a result of ecstasy use, and roughly the same proportion (21%) reported experiencing sexual regret after ecstasy use. A similar proportion (20%) believed that they had been a victim of a drink 'spiking' on at least one occasion. When asked to justify their suspicion, subjects often indicated that they felt unusually drowsy after a small number of beverages. About three-quarters of these participants (74%) indicated that these alleged drink 'spikings' occurred within a nightclub.

About half of the sample (49%) admitted to having driven a motor vehicle shortly after ecstasy use, and half of this subgroup (49%) believed that the drug had a detrimental influence on driving ability. A substantial minority felt that ecstasy had no influence on their ability to drive (38%), while the remainder (12%) felt that ecstasy increased their ability to

drive. A small number of participants (3%) had actually experienced a road accident shortly after ecstasy use, where they were the driver at fault.

Factors influencing use of ecstasy

All participants were asked to identify the most important risk factor that would influence their decision regarding whether to use ecstasy. These reasons are presented in Table 9. The risk of developing emotional and mood problems was the most commonly cited risk factor (31%), followed by the risk of financial difficulty (19%) and the risk of impact on school or work performance (16%). Factors that were rarely cited as an important risk included the risk of losing motivation after ecstasy use and the risk of starting to use 'hard' drugs regularly (both less than 1%).

Table 9: Factors influencing use of ecstasy

Factor	%	Factor	%
Emotional/mood problems	31	Finding it hard to stop using	4
Financial/money problems	19	Problems with relationships	4
Impact on school/work performance	16	Accidents when stoned	2
Physical health problems	13	Lack of motivation	1
Legal/police problems	7	Starting to use 'hard' drugs regularly	1
Physically addicted/dependence	4		

About two-thirds of the sample (65%) indicated that they had never or rarely worried about any risks that might be associated with their ecstasy use. The remaining third of the sample had worried 'often' or 'a lot' about these risks.
Participants were also asked to indicate the extent to which they believed ecstasy posed a risk of influencing a variety of events or problems. These results are presented in Table 10.

The majority (82%) of participants believed that there was little to no risk of their current ecstasy consumption rate causing harm to themselves personally. A similar proportion (79%) believed that any risk of harm from monthly ecstasy use was small or non-existent. However, most participants (81%) believed that weekly ecstasy use posed a moderate or great risk in causing emotional problems.

About two-thirds of participants felt that weekly ecstasy use carried a moderate or great risk in causing harm to the user (62%), in generating financial problems (62%), relationship problems (67%), and in finding it hard to stop using ecstasy (65%). Similar proportions felt there was a moderate to great risk of ecstasy influencing the likelihood of sexual contact with someone else, increasing the chances of having a car accident and in causing harm if taken concomitantly with alcohol (all 66%).

Participants were more or less evenly divided when assessing the risk of weekly ecstasy use on addiction problems, legal problems and in the risk of ecstasy influencing unsafe sex practices.

Table 10: Perception of ecstasy risks

Risk	No risk or slight risk %	Moderate or great risk %
The risk to people in harming themselves from occasional ecstasy use (once per month)	79	21
The risk to people in harming themselves from regular ecstasy use (once per week/fortnight)	38	62
The risk to people in harming themselves if they take ecstasy at the frequency you currently take it	68	32
The risk to people in harming themselves if they take ecstasy and drink alcohol at the same time	34	66
The risk in harming yourself if you take ecstasy at the frequency which you currently take it	82	18
The risk to people in having legal/police problems if they take ecstasy at least once per week	56	44
The risk to people in having financial/money problems if they take ecstasy at least once per week	38	62
The risk to people in having emotional/mood problems if they take ecstasy at least once per week	19	81
The risk to people in having physical addiction with ecstasy if they take it at least once per week	46	54
The risk to people in finding it hard to stop using ecstasy if they take it at least once per week	35	65
The risk to people in having relationship problems if they take ecstasy at least once per week	33	67
The risk to people in performing worse than they would otherwise at school or work if they take ecstasy at least once per week	26	74
The risk to people in starting to use heroin or cocaine regularly if they take ecstasy at least once per week	66	34
The risk to people in having accidents while intoxicated that they may not have had otherwise, if they take ecstasy at least once per week	58	42
The risk of ecstasy increasing the likelihood of a young person having sexual contact with someone else	34	66
The risk of ecstasy in increasing the chances of having a road accident whilst driving	34	66
The risk of ecstasy in increasing the likelihood of having unsafe sex	48	52

Knowledge of potential ecstasy harms

Participants' knowledge of the potential side effects of ecstasy was also assessed. For a series of side-effects, participants were asked to indicate whether they believed ecstasy either i) increased, ii) decreased, iii) both increased and decreased or iv) had no effect on the average person. No time frame was specified, therefore subjects were asked to consider these symptoms in both short-term and long-term contexts. The results of subjects' responses are presented in Table 10.

Most subjects believed that ecstasy generally decreased one's appetite (89%), memory performance (88%), ability to sleep (77%) and concentration (72%). A substantial number of subjects indicated that they believed ecstasy increased one's tendency to behave impulsively (66%), weight loss (59%) and depression (55%).

About three-quarters (74%) of participants believed that they knew "a lot" or an average amount about the risks and effects of ecstasy.

Table 11: Knowledge of potential ecstasy harms

	Increases %	Decreases %	Both %	Neither %
Stress Levels	35	32	10	23
Sex Drive	51	18	17	14
Concentration	13	72	6	9
Appetite	3	89	2	6
Memory	4	88	2	6
Impulsive Behaviour	66	8	5	21
Ability to sleep	8	77	4	12
Anxiety Levels	52	22	8	18
Depression	55	20	12	12
Weight Loss	59	22	2	18

In addition to assessing knowledge of the effects of ecstasy on the above symptoms, participants were also asked to estimate their personal susceptibility to each of these symptoms from ecstasy use. Within Table 11 are the proportions of participants who believed they are at risk of experiencing each symptom if they were to use ecstasy. Participants were most likely to indicate that they were personally at risk of ecstasy affecting their concentration (85%), appetite (84%) or memory (83%).

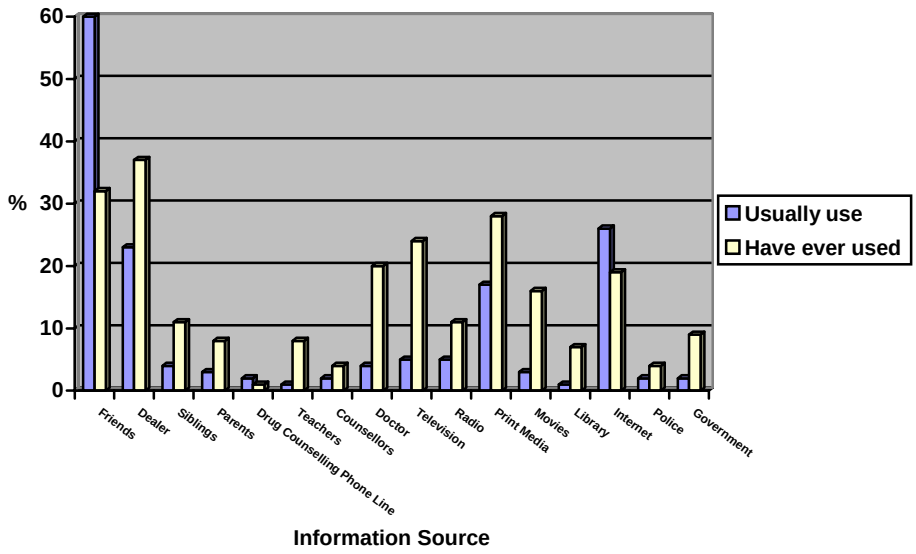
Table 12: Proportion of participants who believe they are personally at risk of experiencing particular symptoms from ecstasy use

Symptom	%
Weight	67
Impulsive behaviour	69
Anxiety	73
Sleep disturbance	77
Depression	79

Use of ecstasy information sources and ratings of accessibility and credibility

Participants were presented with a list of possible information sources and asked to indicate if they had ever used any to acquire ecstasy information, or if any of the sources were usually accessed for ecstasy information. As can be seen from Figure 1, participants had used most of the listed information sources, although particularly low usage rates were recorded for family members (8%-11%), government sources (9%), libraries (7%) and the police (4%). Only four information sources were regularly used by any substantial proportion of the sample. Friends were overwhelmingly the most popular usual source for ecstasy information (60%), followed by the Internet (26%), dealers (23%) and print media (17%).

Figure 1: Drug information sources ever and usually used



Participants were asked to rate i) how accessible they believed each source to be for information, ii) how comfortable they would be receiving information from the source and iii) how credible they believed the information to be. Accessibility, comfort and credibility were rated on a five-point scale, where one represented "very difficult" or "very incredible", and five represented "very easy" or "very credible". The collated results from these questions are presented in Table 13.

Participants were most likely to consider friends for information (82%), followed by dealers (61%), the Internet (45%) and doctors (40%). Among the least popular potential sources of ecstasy information were the government (12%), school teachers (9%) and the police (7%).

Friends were also rated among the more accessible of information sources, with an average accessibility rating of 4.7 out of a possible 5. Other information sources regarded as accessible included the Internet (4.4) and print media (4.0). The police (2.3) and the government (2.5) were sources that received lower average accessibility scores.

Friends were also deemed to be the source which participants would feel most comfortable acquiring information from, receiving an average comfort score of 4.6. Other sources that received relatively high comfort ratings included dealers, doctors and drug counseling hotlines (all 3.3).

The more credible information sources included drug counseling hotlines (4.0), doctors (3.8), libraries and friends (both 3.7). Parents were judged as the least credible source (2.2), with siblings, school teachers, videos/movies, police (all 2.5) and government (2.6) all being perceived as not particularly credible.

Table 13: Rating of accessibility, comfort and credibility for information sources

	Consider Using %	Accessibility Mean Score (SD)	Comfort Mean Score (SD)	Credibility Mean Score (SD)
Friends	82	4.7 (0.8)	4.6 (0.9)	3.7 (0.9)
Dealer/Supplier	61	3.7 (1.2)	3.3 (1.2)	2.9 (1.2)
Siblings	24	3.0 (1.7)	2.7 (1.6)	2.5 (1.5)
Parents	13	2.7 (1.6)	2.0 (1.4)	2.2 (1.5)
Counselling Hotline	31	3.8 (1.2)	3.3 (1.3)	4.0 (1.1)
School Teachers	9	2.6 (1.7)	2.1 (1.3)	2.5 (1.2)
Counsellors	24	3.3 (1.2)	3.1 (1.2)	3.5 (1.2)
Doctors	40	3.7 (1.2)	3.3 (1.2)	3.8 (1.1)
Television	29	3.7 (1.4)	N/A	2.7 (1.1)
Radio	22	3.8 (1.8)	N/A	2.9 (1.1)
Print Media	37	4.0 (1.1)	N/A	3.2 (1.2)
Videos/Movies	20	3.7 (1.5)	N/A	2.5 (1.1)
Local/School Library	22	3.7 (1.1)	N/A	3.7 (1.1)
Internet/Chat Rooms	45	4.4 (1.1)	N/A	3.2 (1.3)
Police	7	2.3 (1.3)	N/A	2.5 (1.4)
Government	12	2.5 (1.2)	N/A	2.6 (1.3)

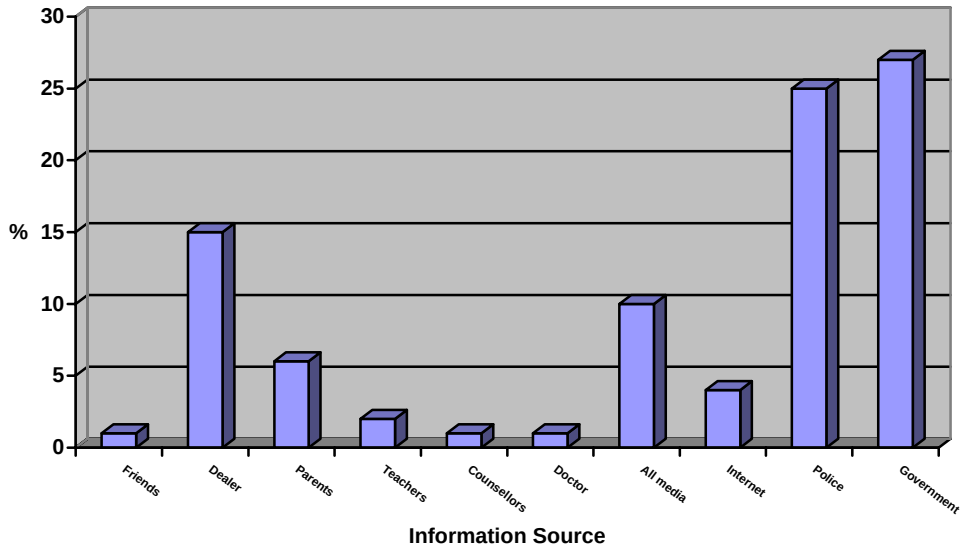
In addition to rating the credibility of each source, participants were asked to nominate up to two sources that delivered information which they refused to believe, and to justify their nominations. From Figure 2, it can clearly be seen participants were particularly skeptical about four sources: government agencies (27%), the police (25%), drug dealers (15%) and the media (10%).

Information from the police or government agencies was generally not believed, because participants generally felt that these authorities held an anti-drug agenda, and were likely to focus on the adverse effects of the drug in any educational efforts. Facts acquired from the media were usually considered unreliable, as users felt that they were often sensationalised and distorted for the purpose of 'selling a story'. All participants who nominated drug dealers believed that they were likely to be biased in the information they provided, as they possessed a vested interest in selling their product.

Participants were asked what information they acquired from these sources, the results of which are presented in Table 14. This information was sorted into five categories: general effects; side effects; personal experiences; purity/quality information; and safety information. Facts on possible side effects were the most popular type of information sought along with general ecstasy effects.

Friends and siblings were used to acquire information on a variety of topics, including their opinion of the purity or quality of the ecstasy pills, information on the general effects or side effects of ecstasy, as well as personal experiences and safety information to a lesser extent.

Figure 2: Information sources not believed by participants



Dealers and the Internet were mainly used for information regarding the purity or quality of ecstasy pills. Participants mainly used doctors for information pertaining to side effects, particularly around issues relating to potential harms arising from combining ecstasy and related drugs with pharmaceuticals or the consequences of using drugs and their impact upon pre-existing medical conditions. School teachers were also utilized for this type of information.

Table 14: Type of information obtained from sources

	General Effects %	Side Effects %	Personal Experiences %	Purity/Quality Information %	Safety Information %
Friends	20	23	17	31	9
Dealer/Supplier	10	10	2	79	-
Siblings	36	17	14	29	14
Parents	17	58	-	8	17
School Teachers	30	70	-	-	-
Doctors	12	79	-	-	9
Television	35	48	-	17	-
Radio	19	57	-	10	14
Print Media	23	51	-	16	9
Internet	15	34	5	45	-

Note: Too few respondents provided information details for some categories, including: Drug Counselling Hotlines, Counsellors, Videos/Movies, Local/School Library, Police, Government.

Participants opinions regarding dissemination of ecstasy information

About two-thirds of the sample (62%) felt that ecstasy information should be presented to the entire community and almost a third (31%) believed information should be specifically aimed at school students. Smaller groups of participants felt that ecstasy information

campaigns could be targeted to specific groups such as drug users or the gay and lesbian community.

Booklets were the most commonly cited method for effective information delivery (by 40% of participants). About one-third (31%) of the participant sample believed that holding discussions within schools or community centres would be an effective way to deliver accurate ecstasy information. Other suggested methods included mail-outs (9%), and dissemination through either the media (9%) or the Internet (6%).

Over half of the sample (57%) believed that ecstasy information should always be made available, while one-fifth (21%) believed it should be presented once or twice a year, and a smaller proportion (11%) believed it should be delivered during specific times throughout the year, particularly when ecstasy and related drugs are more likely to be taken such as New Year's Eve and the Sydney Gay and Lesbian Mardi Gras Festival.

Many participants felt that ecstasy information should primarily incorporate a message of harm reduction (advocated by 39% of the sample). These participants believed that current and potential ecstasy users should be taught how to use the drug in a more responsible and safer manner. A smaller group (19%) believed that all effects of ecstasy should be presented in a balanced fashion and that ecstasy use should not simply be discouraged without adequate justification. Smaller groups (less than 3%) believed that ecstasy information campaigns should focus solely on the adverse effects of ecstasy and/or its potential dangers.

Participants were almost evenly divided on the issue of whether to vary ecstasy information according to age (52% were in favour). Those who were in favour usually justified this by claiming that some information may be inappropriate for a younger audience, such as details on the pharmacology of the drug or in inviting a drug user to present information.

Just over one in ten participants (11%) received ecstasy and related drug education at school and only 39% felt satisfied with their current ecstasy knowledge. Most participants (approximately 68%) wished to learn more about the long-term effects of their drug of choice.

DISCUSSION

This study recruited 216 ecstasy users, the majority of whom were from the Sydney metropolitan area. Generally, this sample was young, well educated, and likely to be in some form of paid employment. Males were slightly over-represented within the sample, and a small minority were of Aboriginal or Torres Strait Islander descent. The majority of the sample resided either in the eastern suburbs or inner west areas of Sydney. This profile is similar to that of the participants in the 2003 NSW Party Drug Initiative (PDI) interviews (White et al., *in press).*

Participants were likely to have first used ecstasy at around age 20 and were likely to have done so out of curiosity. The initial usage occasion was most likely to have been in the company of their friends or partner.

Similar to the NSW PDI interviews (White et al., *in press)* the average frequency of ecstasy use for this group was about ten days in the last six months, although this ranged from one day in the last six months to four days per week (White et al., *in press).* This rate of use is slightly less than that found in a similar study conducted on Sydney ecstasy users in 1997 (12 days in the last six months) (Topp et al. 1998). Users reported taking an average of two ecstasy pills per use occasion, which is slightly higher than the average amount of 1.5 pills found by Topp et al (1997).

These findings suggest that the average rate of consumption by Sydney ecstasy users may have declined, but the average usual quantity of ecstasy taken may have increased slightly. However, the possibility of these differences simply being due to the biases inherent in snowball-sampling recruitment methods cannot be ruled out.

The data pertaining to ecstasy routes of administration was consistent with those found in previous studies of Sydney ecstasy users (Solowij et al. 1992; Topp et al. 1998; White et al., *in press).* Ecstasy was most likely to be taken orally, while a smaller proportion reported intranasal administration and even fewer reported anal administration. The prevalence of ecstasy injection behaviour appears to have decreased, when compared to the earlier study by Topp et al (1997) (down from 13% to 8%).

Clubs were the most popular usual venue for ecstasy use, although the data from this study suggest that ecstasy is also taken in a variety of other settings such as parks, beaches and other public places. This is consistent with evidence found in earlier studies (Topp et al. 1998; White et al., *in press*).

Alcohol, tobacco, cannabis and amphetamines were the most popular other drugs taken by participants within this sample, and these were also the drugs that were most likely to be used in conjunction with ecstasy. Cannabis was likely to be used during the 'comedown' period, whereas the other drugs were primarily taken during the ecstasy 'high'.

The most commonly reported negative side-effects from ecstasy use included depression, anxiety, muscular aches, joint pains and tremors. Few participants reported attempting suicide as a result of ecstasy use. About a fifth of users reported engaging in high–risk sexual behaviour, and about half had driven a motor vehicle shortly after ecstasy use. A minority of the sample reported seeking any form of medical assistance as a result of ecstasy use.

Similar to the 2003 NSW PDI sample (White et al., *in press)* the risk of developing emotional or affective problems was the most commonly cited risk factor that would be of most importance when considering whether or not to use ecstasy. This is in contrast to the results found by Solowij (1992) and Topp (1997), where the cost of ecstasy and the 'comedown' period was found to be the worst thing about the drug. This change may reflect the ubiquitous community and scientific concern regarding the long-term neurological effects of ecstasy. It may also be related to greater experience and longer exposure to the drug since these earlier studies. A study of 66 former ecstasy users who had abstained for at least a year reported that there were two main reasons given for this change, mental health concerns and individual circumstances. Around half of those who quit for mental health reasons scored in the range of clinical depression and their current levels of depression and anxiety were correlated to their cumulative exposure to ecstasy in the preceding years. These findings suggest that some users may be more susceptible to the adverse effects of ecstasy on mood or that a pre-existing mood disorder led them to self-medicate with ecstasy (Verheyden et al, 2003). While only 17 episodes of care in NSW in 2001-2002 were primarily for ecstasy-related concerns, given that there is no accepted ecstasy use disorder and no trials of interventions for ecstasy related concerns this is unsurprisingly low (AIHW, 2003).

When asked to assess their personal risk, rather than risk in general, participants reported impaired concentration, appetite, memory and depression. These may be useful aspects to focus on in public health campaigns rather than the more controversial harms such as "brain damage" or dependence.

Participants believed that their current rate of ecstasy use was unlikely to cause them significant harm, however, most acknowledge that weekly ecstasy use could be moderately or very harmful in a number of ways. These included emotional, financial and relationship problems; finding it hard to stop use; increase the likelihood to sexual contact and car accidents. There appears to be a degree of consensus among current ecstasy users that weekly use is associated with a high probability of experiencing a range of health and social harms.

Friends were rated as the most popular source of ecstasy information, which is similar to that of findings of previous studies (Falck et al. 2004; Harris et al, 1991). Friends were also rated as the source from which participants would be most comfortable acquiring information. Over the last 20 years there has been a burgeoning interest in the concept of 'peer education' with the approach being used in relation to sexual health education; HIV and AIDS; gambling; and substance use. Peer education programs such as the Youth Awareness Programme (YAP) in the UK, where young people are given the 'facts' about drugs and told the 'truth', would appear to have merit. In this context, employing peer educators is seen having the advantage that they will be perceived as offering more credible, less biased information than other potential sources (Shiner& Newburn, 1996).

One of the first UK examples of peer education work in relation to recreational drug use was the Lifeline project in Manchester which was developed in the mid 1980s. This project was developed in response to the increased levels of stimulant drug use (particularly ecstasy) by young people involved in the rave/dance culture at that time. Many of the young people in Manchester at that time did not perceive their drug use as problematic, and as a result services were forced to develop ways of working that were consistent with the way in which the users perceived their own drug use (Parkin & McKeganey, 2000). Although increasingly utilized, peer education has not been well evaluated but based on the limited evidence available one would conclude that such approaches may be more effective at changing

knowledge and attitudes than behaviour. However, there are methodological difficulties in even coming to this judgement (Parkin & McKeganey, 2000).

Peer education makes sense as one approach to reducing drug-related harm and it is likely to be a cost-effective method for imparting drug information to young people. As adolescence is a period when peers tend to have more influence than authority figures such as parents and teachers, peer leaders can model positive patterns of behaviour which endure into adulthood.

Drug counseling hotlines and doctors were rated the most credible information sources, as they were in a similar survey of young Australian cannabis users (Copeland et al, 2001). Even though they were regarded as highly credible, few of the respondents had ever actually accessed a drug counseling hotline for ecstasy information. An increased effort in disseminating the telephone numbers for these services is urgently required. These services, currently available across all jurisdictions, do not appear to be utilized by a great many ecstasy users, even though they regard them as a credible source of information.

Currently the NSW Alcohol and Drug Information Service (ADIS) has a Cannabis Quitline service which is providing confidential advice, information, referral and counseling for cannabis users who believe they have problems with their use, and support for their families and friends. There has been extensive advertising and the development of promotional material to attract this client group to the service. Consideration needs to be given for the development of similar campaigns designed with ecstasy users in mind, however the success of this model is yet to be systematically evaluated.

Even though doctors are regarded by many ecstasy users as the most credible source of drug information only one fifth of those interviewed (20%) had ever seen a doctor for information on ecstasy, with a far smaller proportion rating a doctor as a usual source for such information. However, few doctors regard themselves as particularly knowledgeable in on the issue of ecstasy and related drugs. Further studies are needed to examine doctors' knowledge on ecstasy and related drugs and their attitudes towards ecstasy users in their practices, e.g. how comfortable would they feel talking to a young person about their ecstasy use in their surgery?

It is important to be aware that ecstasy users perceive doctors as useful in providing a very specific type of information around their drug of choice, i.e. side-effects information. These results suggest that we should capitalize on this credibility and create strategies to encourage ecstasy users to feel more comfortable to approach doctors for health information as it would appear that many of the respondents actually approached their doctor about ecstasy effects prior to actually using the drug.

Initiaitives such as the Central Sydney Division of General Practice General Practitioners in Local Schools Project should be considered as an effective model which could be adapted to capitalize on doctors' credibility among potential ecstasy users. This project aims to improve the quality of care provided to young people and to encourage them access their local GPs. As part of the project the Division pays for a number of GPs to visit schools in Sydney's inner western suburbs. There is no cost to schools and the Division provides the small amount of administration involved. A small team of enthusiastic and trained GPs who are experienced in talking to groups of young people about health matters are involved, and recent visits to the Year 11 and 12 students of local schools have been very successful according to student evaluations.

The program fits into the school plans as much as possible, so the visit can be adapted to the school's individual programming needs as part of the PD/Health/PE curriculum. Students are asked to prepare questions for the visiting GP before the visit and have them faxed through to the Division, as this has been the most effective way of running groups in the past.

A key component of the visit is encouraging young people to access health care. Ideally the GPs will talk to students who are over the age of 16, as they are able to access a GP without parental supervision. More often than not, young people in these groups talk about sensitive issues such as drug-taking and contraception and relationships. The GPs give information in line with current Australian policy, i.e. harm minimisation. Although there is a general trend for young people to under-utilise medical services, they identify GPs and hospitals as their main entry point into the health system. Young people have specific health issues which differ from other age groups in the population, and the causes for ill health in young people are often social rather than biological. It is believed that direct contact between GPs and young people can go a substantial way towards addressing these needs.

Among the least popular sources of ecstasy information were the government, the police and school teachers. Schools/school teachers were rated as an important source of information for young cannabis users and also rated highly in terms of credibility in that study, so to see them rated so poorly by ecstasy users warrants further investigation. This difference may be due to ecstasy being a comparatively new drug on the scene and unlike cannabis, teachers may be less able to draw on personal experiences. Their lack of 'first-hand' experience and resulting knowledge about the drug combined with a lack of understanding of the present day youth culture may result in teachers having a perceived lack of credibility by young ecstasy users.

With increasing numbers of young people being exposed to ecstasy it is important that teachers are given as much up-to-date information on the drug, its use and the related health effects. Unfortunately many teachers, like their students and the wider community, access information on drugs such as ecstasy from inappropriate sources such as the media and as a result misinformation is often perpetuated. Specific resources and learning materials need to be designed and disseminated to assist teachers to provide preventative messages around the use of ecstasy.

Currently much of the information provided to ecstasy users regarding the health effects of the drug is disseminated through the two sources which were regarded as least credible, i.e. government and law enforcement agencies. Low accessibility scores, credibility scores and rates of use for the government and police, in addition to their explicit identification as the primary source that was 'not believed' by ecstasy users is a cause of concern. Given that many prevention and harm reduction efforts are channeled through these sources, these results suggest that these efforts may need to take place in additional areas.

There have been a number of studies which have investigated where ecstasy users source their drug information (Falck et al, 2004), and others examining particular sources and their credibility including friends (Smart & Fejer, 1972) and the Internet (Rideout, 2001). However, this study gives us data for the first time on what type of information was sought from the different sources. Participants were asked what type of information they were seeking and these were classified into five major categories. Clearly, users were accessing particular sources for particular information. Doctors and teachers were regarded as the

main source of side effects information, e.g. what are the negative consequences of using the drug, and what may happen when you mix ecstasy with other drugs?

When seeking information, participants were most likely to inquire about the side effects of ecstasy, or its general effects. Doctors were especially popular for side-effects information, while dealers and the Internet were commonly used for information on ecstasy purity and quality. Participants were reasonably accurate in describing the effects of ecstasy, thus demonstrating a sound knowledge of the potential side-effects involved. Once again it is vital that we provide adequate information and training to doctors on the basic facts around ecstasy and related drugs and keep them informed about the latest trends and research findings.

Internet sites such as *Pillreports.com* have become increasingly popular with ecstasy users as they provide the information that many users are seeking, i.e. purity information. Even though the quality of this information is dubious at best, potentially damaging at worst, thousands of potential ecstasy users access this site every week to obtain information from other users regarding the perceived quality of the drug that they used the previous weekend. *Pillreports.com* is the daughter site of *www.bluelight.nu* and its focus is on harm reduction through the use of "accurate, unbiased reports of pills that are 'doing the rounds'"(Pillreports, 2004). The information is subjective and is based on a 'peer review' process. There are posting guidelines attached to the website and one of the key rules includes no soliciting of pills.

There is the opportunity for government agencies to utilize the credibility of this site and to post up-to-date and accurate information on ecstasy and related drugs, particularly information on potentially life-threatening adulterants discovered through routine testing for prosecution purposes. In the past there have been times when particularly toxic substances have been identified in ecstasy seizures, such as PMA (paramethoxyamphetamine), and warnings have been issued to potential users by law enforcement agencies, usually via media alerts. The results of this study would seem to indicate that these warnings may not be regarded as credible and opportunities for partnership between popular websites and government agencies in disseminating potentially life-saving information should be encouraged.

Although particular websites may prove useful for providing information to particular populations, it is important to remember that less than a fifth of the sample had ever consulted the Internet for ecstasy information, which is in stark contrast to the high rates of online drug information sought in other US studies (Falck et al 2004). This finding may simply reflect differences in Internet accessibility between Australia and the US, but even so, the result is surprising considering the age of the sample and the fact that a proportion of the respondents were recruited through the Internet. However, given the rates of use for online drug information identified in this study, it would be ill-advised to aim information provision and harm-reduction efforts solely at websites designed for ecstasy users.

In addition to the problems associated with government and law enforcement credibility with this sample, the mainstream media does not appear to be an ideal gateway for information given the low credibility ratings found in this study, which is in agreement with previous research (e.g. Dembo et al, 1977; Sinnett et al, 1975).

Similarly, family members (such as parents and siblings) received low usage rates and low credibility scores. This suggests that government efforts to disseminate accurate drug

information via family members may not be as effective as other means of delivery, particularly in regards to ecstasy and related drugs.

Given that friends were the most popular usual source of information, and among the highest rated sources in terms of accessibility, comfort and credibility, it would seem prudent to concentrate prevention and harm reduction measures toward peer networks.
These results also suggest that prevention or harm-reduction measures may be effective if delivered via doctors or drug counseling hotlines. Both of these sources received high credibility and accessibility ratings and reasonable comfort scores.

The findings of this project suggest a number of promising approaches to the reduction of harm associated with the use of ecstasy and related drugs in the Australian community. These include judicious use of the frequently accessed internet sites for the dissemination of information on high risk behaviours and warnings on specific issues; the development and evaluation of peer networks for the dissemination of harm reduction information (including accessing interventions); and the training of medical practitioners and drug hotline staff in their role as highly credible sources of health-related information on ecstasy and related drugs.

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APPENDIX A: STRUCTURED QUESTIONNAIRE USED IN STUDY

Participant ID Number : |___|___|___|

Date of interview: ___/___/___

Interviewer: |___|___|___|

PATTERNS OF USE AND EXPERIENCES OF PARTY DRUG USERS

2003

QUESTIONNAIRE

Funded by the Australian Government Department of Health & Ageing

DEMOGRAPHICS

1. Gender

Male	Female
1	2

2. Date of birth …….

3. Were you born in Australia?

Yes ...……1 No ...…….0

4. [IF NO] Where were you born?……

5. Were both of your parents born in Australia?

Yes ….. 1 No ...…. 0

i. [IF NO] Where were they born? Mother:……
Father:…….

6. What is your preferred language?……..…….

7. Are you of Aboriginal (AB)/ Torres Strait Islander (TSI) origin?

Yes, AB …..1 Yes, TSI…..2 Yes, ATSI …..3 No..…. 0

8. Which suburb do you live in? ……..……

9. Who do you usually live with?

Alone	……	1
Spouse/partner	……	2
Alone with child/children	……	3
Spouse/partner & child/children	……	4
Parent(s)	……	5
Other relative/s	……	6
Friend/s	……	7
Other (specify)	……	8
Not stated/known	……	99

10. In what grade did you finish school?

Grade…….

11. Have you completed any courses since leaving school?

No……... 0
Yes, trade/technical……. 1
Yes, university/college……..……..…….. 2

Specify Qualification(s)……..

12. What is your current employment situation?

Full-time employed…….…….. 1
Part-time/casually employed……..…..…… 2
Unemployed…….. 3
Studying full-time……..……. 4
Studying part-time…… 5
Sex Industry…….. 6
Other…….. 7

13. Which of the following describes your sexual identity?

Heterosexual …… 1
Gay Male …… 2
Lesbian …… 3
Bisexual …… 4
Other …… 5

OTHER DRUG USE

14. Have you ever used other drugs apart from ecstasy?*

15. How often have you used these in the last 6 months?

If you take these drugs in conjunction with ecstasy, please specify whether, over your entire lifetime, you have usually taken these drugs:
i) before, **ii) during** and/or **iii) after** using ecstasy.

	Tick (✓)	How many **days** during last 6 months? or **days/week** or **days/month**	Do you usually use **before** ecstasy use? **Tick (✓)**	Do you usually use **during** ecstasy use? **Tick (✓)**	Do you usually use **after** ecstasy use? **Tick (✓)**
Tobacco					
Alcohol					
Cannabis					
Amphetamines					
Cocaine					
Heroin/Opiates					
Benzodiazepines					
Inhalants					
Sleeping aids Eg Stilnox, Valerian					
Other Eg 5-HTP (specify)……					

15. If you use tobacco, how many cigarettes would you typically consume per day (or per week)?

……per day ……per week NONE ☐

16. If you smoke whilst taking ecstasy, or whilst under the influence of ecstasy, how many cigarettes would you smoke **during that time**?

None	……		0
Fewer cigarettes than you would otherwise	Specify ……	amount	1
More cigarettes than you would otherwise	Specify ……	amount	2
Same amount as you normally would	Specify ……	amount	3

17. If you smoke more or less than you otherwise would whilst taking ecstasy, or whilst under the influence of ecstasy please give a reason for this change in behaviour:

……..……

……..

18. If you drink alcohol, how many drinks would you typically consume per day (or per week)?

……per day ……per week NONE ☐

19. If you drink alcohol whilst taking ecstasy, or whilst under the influence of ecstasy, do you usually drink:

None	……		0
Less alcohol than you would otherwise	Specify ……	amount	1
More alcohol than you would otherwise	Specify ……	amount	2

20. If you drink more or less than you otherwise would whilst taking ecstasy, or whilst under the influence of ecstasy please give a reason for this change in behaviour::

……..……

……..

21. Which alcoholic beverages do you usually consume when taking ecstasy?

None	……	1
Beer	……	2
Spirits	……	3
Wine	……	4
Pre-mixed drinks	……	5
Other	……	6

ECSTASY & OTHER PARTY DRUG USE

22. Which of the following party drugs have you intentionally used?*

Please indicate the various routes of administration you have employed for each drug by ticking (✔) the appropriate column(s).

Also, indicate how many **days** you have used this drug in the last 6 months (or the average number of **days per week** or **days per month**)

DRUG	**Ever Used** (✔)	Inject (✔)	Snort (✔)	Swallow (✔)	Smoke (✔)	Shaft (✔)	How many **days** in last 6 months	When using, how many doses do you **usually** take?	What is the highest number of doses do you **have** ever taken?
1.Ecstasy							*	Pills	Pills
2.Amphetamines (speed/goey/whiz)								Lines Grams	Lines Grams
3.Methamphetamine (paste/base/pure)								Lines Grams	Lines Grams
4.Crystal Meth (ice/shabu)								Pipes Points Grams	Pipes Points Grams
5.Cocaine								Lines Grams	Lines Grams
6.GHB								mls Vials	mls Vials
7.MDA								Caps	Caps
8.Ketamine								Bumps	Bumps
9.Amyl Nitrate								Snorts	Snorts
10.Nitrous Oxide								Bulbs	Bulbs
11.LSD								Tabs	Tabs
12.Other Specify…….									

*If ecstasy use is more than **2 days/week, 8 days/month** or **48 days/6 months** complete the following SDS.

Severity of Dependence (SDS) Scale

23. During the past 3 months did you ever think your use of ecstasy was out of control?

Never or almost never	☐	0
Sometimes	☐	1
Often	☐	2
Always or nearly always	☐	3

24. During the past 3 months did the prospect of missing ecstasy make you very anxious or worried?

Never or almost never	☐	0
Sometimes	☐	1
Often	☐	2
Always or nearly always	☐	3

25. During the past 3 months did you worry about your use of ecstasy?

Not at all	☐	0
A little	☐	1
Quite a lot	☐	2
A great deal	☐	3

26. Do you wish you could stop using ecstasy?

Never or almost never	☐	0
Sometimes	☐	1
Often	☐	2
Always or nearly always	☐	3

27. How difficult would you find it to stop or go without ecstasy?

Not difficult	☐	0
Quite difficult	☐	1
Very difficult	☐	2
Impossible	☐	3

SDS SCORE /15

28. How old were you when you first tried ecstasy? …….yrs

29. How did you use it the first time?

Injected		……	1
Snorted		……	2
Swallowed		……	3
Shelved/Shafted		……	4
Other	Specify	……	5

30. Who were you with?

Alone		……	1
Partner		……	2
Friends		……	3
Relatives		……	4
Strangers		……	5
Other		……	6
Don't remember		……	99

31. Why did you use ecstasy the first time?

Curiosity		……	1
Others pressured you		……	2
Peer pressure		……	3
To enhance raving/clubbing		……	4
To feel good		……	5
Other	Specify	……	6

32. Please tell me the sorts of situations in which you are most likely to use ecstasy.

<u>I am more likely to use…….</u> When I feel… When I'm with… (prompt friends or alone)

33. In what places have you used ecstasy?

Clubs		……	1
Raves		……	2
Parties		……	3
Home		……	4
Movies		……	5
Beach		……	6
Park or other public place		……	7
Other	Specify	……	8

34. Where do you usually use ecstasy?

Clubs		……	1
Raves		……	2
Parties		……	3
Home		……	4
Movies		……	5
Beach		……	6
Park or other public place		……	7
Other	Specify	……	8

35. Where did you use ecstasy **last**?

Clubs		……	1
Raves		……	2
Parties		……	3
Home		……	4
Movies		……	5
Beach		……	6
Park or other public place		……	7
Other	Specify	……	8

PHARMACEUTICAL DRUG USE

36. Did you regularly take protease inhibitors (eg Norvir [Ritonavir], nelfinavir [Viracept], indivar [Crixivan] or saquinavir [Fortovase]) or any other anti-HIV medication (eg efavirenz, nevirapine) over the last 6 months?

Yes ...……1 No ...…….0

If so, please specify the medication……

37. When taking anti-HIV medication with ecstasy, do you find that it increases or decreases the effect of ecstasy?

Increase ..... …1 Decrease ...…. 2 No change …… 3 Not applicable… 4

38. Have you ever taken any of the following pharmaceutical drugs?*

Were any of these drugs prescribed?
[IF SUBJECT HAS NEVER TAKEN A PHARMACEUTICAL DRUG, GO TO QUESTION 50]

	Ever Taken (✓)	Currently Taking (✓)	Specify Drug(s)	Was this drug prescribed to you? (✓)
Anti-Depressants Prompt names: Prozac, Luvox, Xanax				
ADHD Medication Prompt names: Ritalin/Dexamphetamine				
Sildenafil Citrate (Viagra)				
Other (specify) …….. e.g. Anti-Psychotic Agents, Anti-Anxiety Agents, Anti-Parkinsonian				

39. If you have been prescribed Viagra, please specify why you were originally given this prescription?

……

……

40. Which of the following pharmaceutical drugs have you ever used in ways other than those prescribed?*

How often have you used this drug other than as prescribed?

What were the average amounts you took, when misusing these drugs?
[THIS DOES NOT INCLUDE MIXING WITH OTHER LICIT OR ILLICIT DRUGS]

	Tick (✓)	Specify Drug(s)	On how many occasions?	How many tablets/capsules would you take, on average?
Anti-Depressants				
ADHD Medication				
Sildenafil Citrate (Viagra)				
Other (specify) …… Eg Anti-Anxiety Agents				

41. Which party drugs have you deliberately taken with pharmaceuticals?*

[NB: THIS DOES **NOT** INCLUDE THE INCIDENTAL CONSUMPTION OF PHARMACEUTICAL DRUGS FOR PRESCRIPTION PURPOSES]

Please specify the pharmaceutical(s) you usually take with each party drug.
Please specify whether you usually take this pharmaceutical:

i) before party drug use
ii) whilst under the influence of party drugs
iii) whilst coming down.

Also, please specify the **number of pharmaceutical tablets/capsules** usually taken at each time period, per party drug dose.

Party Drug	Which pharmaceutical drug(s) usually mixed with? e.g. Anti-Depressants, Viagra	Do you usually take this pharmaceutical **i) before**, **ii) during** or **iii) after** party drug use? Also, specify amount of pharmaceutical usually taken per party drug dose		
		Before	**During**	**After**

42. What effect(s) were you expecting from these drug combinations?

Drug Combination	**Expected Effect(s)**

43. If you have taken Viagra with Ecstasy, please state whether this is the only context in which you would take Viagra.

Yes ..... …1 No ..…. 0 N/A……..9

44. If you take non-prescription pharmaceutical drugs, where do you usually obtain them from?

Friends		……	1
Clubs		……	2
Dealers		……	3
Internet		……	4
Doctor		……	5
Vet		……	6
Medical Supplier		……	7
Other	Specify	……	8
Not applicable		……	9

45. Have you ever sold or given your pharmaceutical drugs to anyone?
[IF NO, GO TO QUESTION 48]

Yes ..... …1 No ..…. 0

46. If so, which drugs were they and how much did you charge?

Drug	**Amount Charged (none if given)**

PHYSICAL, PSYCHOLOGICAL AND SOCIAL EFFECTS

47. If you have ever taken anti-depressant drugs with ecstasy did you experience any of the following symptoms?

Not Applicable (✓)	

Symptom	Tick (✓)
euphoria	
drowsiness	
'jumpy' vision	
overreaction of the reflexes	
Rapid muscle contraction	
abnormal movements of the foot	
clumsiness	
restlessness	
feeling drunk and dizzy	
muscle contraction and relaxation in the jaw	
Rapid heart rate	
sweating	
intoxication	
muscle twitching	
rigidity	
hot flushes	
shivering	
diarrhea	

48. If you have ever taken Viagra with ecstasy, did you experience any of the following symptoms?

Not Applicable (✓)	
Symptom	Tick (✓)
headache	
flushing of the face	
upset stomach	
temporary distortions in colour vision	
eyes being more sensitive to light	
blurred vision	
Irregular heart beats	
prolonged erection (ie longer than 2 hours)	

49. What negative effects have you experienced from your ecstasy use that would alter the way you take these drugs next time?*

[FIRST, DO NOT PROMPT SUBJECT. THEN, PROMPT RESPONDENT WITH EACH ITEM]

SYMPTOM	UNPROMPTED (✓)	PROMPTED (✓)
General		
Profuse Sweating		
Hot/Cold Flushes (circle)		
Weight Loss		
Trouble sleeping		
Eye/Vision Problems		
Poor Appetite		
Fatigue/Energy Loss		
Respiratory		
Shortness of breath		
Chest Pains		
Injecting-related		
Abscesses/Infections		
Overdose		
Hepatitis B/C		
Neurological		
Tremors/Shakes		
Fainting/Pass Out		
Fits/Seizures		
Memory Lapse/Black Out		
Numbness/Tingling		
Headaches		
Dizziness		
Tics		
Muscular		
Muscular Aches		
Joint pains/Stiffness		
Difficulty with reflexes		
Gastro		
Vomiting		
Stomach Pains		
Diarrhoea		
Sex-related		
Loss of sex urge		
Psychological		
Paranoia		
Depression		
Suicidal thoughts		
Suicide attempts		
Confusion		
Irritability		
Flashbacks		
Anxiety		
Panic Attacks		
Other		

50. Have you ever sought medical help because of a symptom experienced due to your party drug usage?

Yes ..... …1 No ...…. 0
Go to Q.54

If so, through what channels?

Ambulance		……	1
Hospital Emergency Room		……	2
Counsellor		……	3
Psychologist		……	4
Psychiatrist		……	5
Other	Specify	……	6

51. What were your symptoms on these occasions?

……

……

52. Have you ever engaged in high-risk sexual behaviour (e.g. engaging in unprotected sex) or experienced sexual regret (e.g. after having sex with someone that you would not have otherwise) as a consequence of your behaviour whilst using ecstasy and/or pharmaceuticals?

No	……	0
High-Risk Sexual Behaviour	……	1
Experienced Sexual Regret	……	2

53. Have you ever driven a vehicle soon after taking ecstasy?

Yes ..... …1 No ...…. 0

54. Did this drug increase or decrease your ability to drive?

Increase ..... …1 Decrease ...…. 2 No change …… 3

55. Have you ever experienced a road accident soon after taking ecstasy, where you were the driver at fault?

Yes ..... …1 No ...…. 0

56. Do you think you have ever had one of your drinks spiked?

Yes ..... …1 No 0
GO TO Q. 62

57. What makes you think your drink had been spiked?

……

58. Where did this occur?

Clubs		……	1
Raves		……	2
Parties		……	3
Home		……	4
Movies		……	5
Beach		……	6
Park or other public place		……	7
Other	Specify	……	8

59. What happened as a result of this?

……

……

RISK PERCEPTION

60. Below is a table listing some long-term and short-term effects that people say might be associated with ecstasy use.

For ecstasy users in general, please place an "up-arrow" (↑) if you think ecstasy use increases this effect or improves it, a "down-arrow" (↓) if you think ecstasy use decreases this effect or makes it worse, or write 'both' or 'neither'.

Finally, please indicate how much you believe that you are **PERSONALLY** at risk of experiencing these symptoms due to your ecstasy use.

Effect	**(for ecstasy users in general)** **↑** **or** **↓** **both or neither**	**How much are you personally at risk of experiencing this symptom?** **1=No risk** **2=Slight risk** **3=Moderate Risk** **4=Great Risk**
Stress levels		
Sex drive		
Concentration		
Appetite		
Memory		
Impulsive Behaviour		
Ability to sleep		
Anxiety levels		
Depression		
Weight Loss		

[INTERVIEWER: ASK SUBJECT TO COMPLETE QUESTIONS 63 TO 82]

61. How often have you **worried** about any risks that might be associated with your ecstasy use?

Never	Rarely	Often	A lot
0	1	2	3

62. How much do you think people risk harming themselves physically or in other ways if they take ecstasy *occasionally (once per month)*?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

63. How much do you think people risk harming themselves physically or in other ways if they take ecstasy *regularly (once per week, once per fortnight)*?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

64. How much do you think people risk harming themselves physically or in other ways if they take ecstasy *at the frequency you currently take it*?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

65. How much do you think people risk harming themselves physically or in other ways if they take **ecstasy and drink alcohol** at the same time?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

66. How much risk is there of **you** harming ***yourself*** physically or in other ways if you take ecstasy *at the frequency you currently take it*?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

67. How much do people of your age risk having **legal or police problems** if they take ecstasy at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

68. How much do people of your age risk having **financial/money problems** if they take ecstasy at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

69. How much do you think people of your age risk having **emotional / mood problems** if they take ecstasy at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

70. How much do people of your age risk becoming **physically addicted or dependent on** ecstasy if they take it at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

71. How much do you think people of your age risk finding it **hard to stop using** ecstasy if they take it at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

72. How much do you think people of your age risk **having problems with their relationships** (friends, parents, partners) if they take ecstasy at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

73. How much do you think people of your age risk performing worse than they would otherwise at **school or work** if they take ecstasy at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

74. How much do you think people of your age risk starting to use **heroin and/or cocaine regularly** if they take ecstasy at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

75. How much do you think people of your age **risk having accidents when they have taken ecstasy** that they may not have had otherwise, if they take it at least once per week?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

76. Do you think taking ecstasy increases the chances that a young person will have sexual contact with someone else?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

77. How much do you think ecstasy increases the risk of causing you to have a road accident whilst driving?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

78. Do you think that taking ecstasy increases the risk of having unsafe sex?

No risk	Slight risk	Moderate risk	Great risk
0	1	2	3

79. How much do you think you know about the effects and risks of using ecstasy?

Nothing	A little	Average amount	A lot	Everything
0	1	2	3	4

80. Please rank **up to three risks** which might be most important to you in making your decisions about whether or not/how frequently you take ecstasy.*

If you believe there are risks involved, place a "1" next to the most important risk. If you believe that there are other lesser risks, place a "2" next to the second-most important risk and a "3" next to the third-most important risk (if applicable).

- ❑ Financial / money problems
- ❑ Legal / police problems
- ❑ Physical health problems
- ❑ Emotional / mood problems
- ❑ Physically addicted / physically dependent
- ❑ Finding it hard to stop using
- ❑ Lack of motivation
- ❑ Problems with relationships
- ❑ Impact on school / university / work performance
- ❑ Accidents when under the influence
- ❑ Other (specify):

  ……

SOURCES OF INFORMATION

81. Where do you find your information on the effects of party drugs?*

Please tick (✓) each source that you **usually use** or have **ever used** and briefly describe the information given.

Source	Ever used ✓	Usually use ✓	**What was the information?** e.g. Side Effects Information Purity Information
Friends			
Dealer/Supplier			
Siblings			
Parents			
Drug counselling phone line			
School Teachers			
School Counsellors			
Doctor			
Television Specify channel and program ……			
Radio Specify channel and programme ……			
Print Media Specify newspaper or magazine ……			
Video/Movies			
Local/School library			
Internet/Chat room Specify site(s) ……			
Chemist			
Police			
Government e.g How will you feel tomorrow?			
Other (specify) ……			

RESPONDENT TO FILL OUT THE FOLLOWING LIST

82. Using the following scales, please rate:

i) the **accessibility** to each of these sources

ii) how **comfortable** you would be in acquiring information from these sources, and

iii) the **credibility** of the information from each of these sources

Also, please indicate if you would consider using each of these sources.

	1	**2**	**3**	**4**	**5**
Credibility	Very incredible	Incredible	Neutral	Credible	Very credible
	1	**2**	**3**	**4**	**5**
Comfort	Very uncomfortable	Uncomfortable	Neutral	Comfortable	Very comfortable
	1	**2**	**3**	**4**	**5**
Accessibility	Very difficult to access	Difficult to access	Neutral	Easy to access	Very easy to access

Source	**Would you consider using?** If Yes, tick (✓)	**Accessibility** circle one number	**Comfort** circle one number	**Credibility** circle one number
Friends		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Dealer/Supplier		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Siblings		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Parents		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Drug counselling phone line		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
School Teachers		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Counsellors		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Doctors		1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Television Specify channel and program ……		1 2 3 4 5 Or rate each program 1 2 3 4 5	[redacted]	1 2 3 4 5 Or rate each program 1 2 3 4 5
Radio Specify channel and program ……		1 2 3 4 5 Or rate each program 1 2 3 4 5	[redacted]	1 2 3 4 5 Or rate each program 1 2 3 4 5
Print Media Specify publication ……		1 2 3 4 5 Or rate each source 1 2 3 4 5	[redacted]	1 2 3 4 5 Or rate each source 1 2 3 4 5

Video/Movies		1 2 3 4 5		1 2 3 4 5
Local/School library		1 2 3 4 5		1 2 3 4 5
Internet/Chat Rooms Specify site ……		1 2 3 4 5 Or rate each site 1 2 3 4 5 1 2 3 4 5		1 2 3 4 5 Or rate each site 1 2 3 4 5 1 2 3 4 5
Police		1 2 3 4 5		1 2 3 4 5
Government e.g. How will you feel tomorrow?		1 2 3 4 5		1 2 3 4 5
Other (specify) ……		1 2 3 4 5		1 2 3 4 5

83. Which information sources do you **not believe**?

……

……

84. Why?

……

……

Ideas for Future Ecstasy Education

85. What role do you think the Government should have in educating the community on ecstasy?

……

……

86. Where should this information be presented? (eg specifically targeting young people, or the entire community)

……

……

87. How should the dissemination of this information be conducted (e.g., confronting dramatizations, information booklets, discussions)?

……

……

88. When and how often should this information be presented (e.g., several times per week, once a fortnight, only before NYE)?

……

89. What should people be taught about ecstasy, and what do you think the main ecstasy education message should be?

……

……

90. At what age do you think people should be targeted with ecstasy information? [Prompt: Should it vary according to the age of the person? How?]

……

……

91. Should the approach for ecstasy education be different than that for alcohol and tobacco?

……

……

92. Did you receive school ecstasy education? If so, did it have any influence on your use of ecstasy? How?

……

……

93. Are you satisfied with your level of knowledge regarding ecstasy? If not, what would you like to know?

……

……

94. Do you have any other comments?

……

……

THANK & PAY RESPONDENT. GIVE ECSTASY BOOKLET AND CONTACT DETAILS.