EDRS

ecstasy and related drug trends

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bulletin

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Key findings

- Numerous sources have indicated that ecstasy (MDMA) has continued to decline in use and availability globally as well as nationally
- A feasibility study was undertaken to assess whether broader range of stimulant use is a better sentinel sample group to target rather than sole use of ecstasy
- Regular stimulant users (RSU) were recruited and compared to regular ecstasy users (REU) across a variety of variables
- A total of 34 RSU participants were recruited in NSW, VIC, TAS and WA
- Compared to REU, RSU had a similar profile across a range of variables such as: demographics, mental health and alcohol use. However differences were evident in lifetime use of certain drugs, recent use of emerging psychoactive substances (EPS) and some risky behaviours
- Despite fluctuation in the ecstasy market, the evidence would suggest to continue to incorporate ecstasy as a hallmark criterion to monitor drug trends in regular drug consumers

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What consumers are using now: Which drug is on top? Feasibility study of regular stimulant users

Introduction

The estimate of the annual prevalence of ecstasy use globally is between 0.2 and 0.6% of the population aged 15-64 years. This equates to between 11-28 million people (UNODC, 2010). Oceania (primarily Australia and New Zealand) is considered to have the highest prevalence of ecstasy use in the world, being between 3.6-4% of the adult population (see figure 1). However, in recent years there appears to be a declining trend in ecstasy (MDMA) purity and availability and this has been associated with a decline in self-reported ecstasy use. The most recent United Nations World Drug Report reported a declining global trend, in part associated with reductions in the manufacture of ecstasy associated with increasing control of MDMA precursor chemicals (UNODC, 2010).

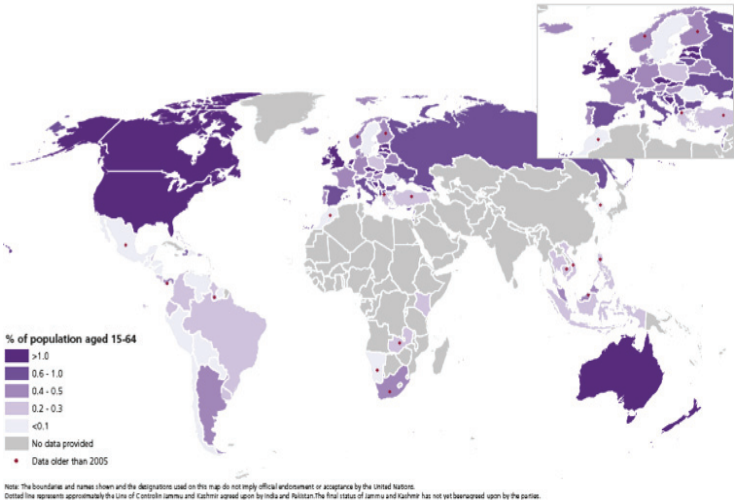
Australia has also begun to report declining trends in ecstasy use. The 2010 National Drug Strategy Household Survey reported the first population decrease in annual ecstasy use since 1995 with 50,000 fewer users from the previous survey year 2007(AIHW, 2011). The weight of MDMA detections at the Australian border also continues to decline from 12.9 kilograms in 2008/09 to half that (6.5 kilograms in 2009/10) (ACC, 2010). Studies which monitor particular sub-groups of regular illicit drug consumers such as the Ecstasy and Related Drugs Reporting System (EDRS) and the Sydney Gay Community Periodic Survey have also reported declines in preference for and use of ecstasy (see Scott & Burns, 2011).

The EDRS developed initially from the need to monitor trends in the use, harms and market characteristics of ecstasy and related drugs (ERDs) in Australia. The EDRS methodology is based on that used for the annual surveillance system the Illicit Drug Reporting System (IDRS; see Topp et al., 2004). The methodology consists of three components: interviews with Regular Ecstacy Users (REU); interviews with key experts

[KE, i.e. health, law enforcement and entertainment (DJs) professionals who have regular contact with REU through their work]; and examination of indicator data sources regarding ecstasy and related drugs. The EDRS was trialled in a feasibility study in 2001 and was then rolled out nationally in 2003, thus nine years of ERD market trend data is available.

The entrenchment of ecstasy in Australia's illicit drug markets, underpinned the decision that regular use of ecstasy would be the defining characteristic of the target population REU for the EDRS project (Topp & Darke, 2001). However, given the declining trend of ecstasy use globally and also in Australia, a feasibility study was undertaken to assess whether those who use of a broader range of other stimulants [eg cocaine, methamphetamine, emerging psychoactive substances (EPS) such as mephedrone , would be a better sentinel group to target i.e. regular stimulant users (RSU)].

Figure 1: Annual global prevalence of ecstasy use 2009



Source: UNODC, 2010

Study Aims

The aims of this study were to compare ease of recruitment and the characteristics of participants based on the current EDRS criteria (REU) to those using a wider range of stimulants (RSU) (see Table 1).

Variables compared were: demographics, drug use patterns and harms, mental health and risky behaviours. The study was carried out in the states of New South Wales, Victoria, Tasmania and Western Australia.

Methods

Eligibility Criteria

Table 1: Eligibility criteria

Existing EDRS Criteria (REU)	Feasibility Study Criteria (RSU)
To meet the eligibility criteria REU must: • Be at least 17 years of age (due to ethical constraints, however it may vary by jurisdiction due to ethical approval); • Have used ecstasy regularly (monthly or on at least six occasions) during the preceding six months; • Have been a resident of the capital city in which the interview took place for at least the preceding 12 months	To meet the eligibility criteria RSU must: • Be at least 17 years of age (due to ethical constraints, however it may vary by jurisdiction due to ethical approval); • Have used ecstasy at least twice in the preceding six months; • Have used illicit psychoactive substances/ stimulants including: MDA, methamphetamine, cocaine, ketamine, GHB, LSD, mephedrone, or emerging psychoactive substances (EPS) such as 2CB, 2CI on at least four separate occasions or more • Have been a resident of the capital city in which the interview took place for at least the preceding 12 months • Route of administration for the majority of drug use could not be injection (as this would meet criteria for the IDRS study)**

**It was essential to stipulate that participants should not regularly inject drugs since they would otherwise be eligible for the IDRS. It was therefore a criterion that occasions of injecting drug use should not account for more than 50% of all occasions of drug use over the preceding six months.

Recruitment

Coordinators in each of the chosen jurisdictions screened participants as per usual EDRS (REU) protocol (see Sindicich and Burns 2011). If the criteria for EDRS (REU) was not met, coordinators then continued to screen for the trial pilot criteria (RSU). Participants were initially recruited through a purposive sampling strategy (Kerlinger 1986), which included advertisements in entertainment street press, gay and lesbian newspapers, online advertising on facebook, music sites, blog sites and gumtree, interviewer contacts, and 'snowball[1]' procedures (Biernacki and Waldorf 1981). On completion of the interview, participants were requested to mention the study to friends who might be willing to participate (snowball sampling) and were handed cards containing the researcher's contact details to distribute to their peers.

1 'Snowballing' is a means of sampling 'hidden' populations which relies on peer referral, and is widely used to access illicit drug users both in Australian (Solowij, Hall et al. 1992; Ovendon and Loxley 1996; Boys, Lenton et al. 1997) and international studies (Dalgarno and Shewan 1996; Forsyth 1996; Peters, Davies et al. 1997).

Measures

REU and RSU were compared across a range of variables in accordance with the structured EDRS interview schedule (Topp et al., 1998, Topp et al., 2000). Specific variables for comparison between REU and RSU were: demographics, drug use patterns and preferences including emerging drug classes such as mephedrone, alcohol use patterns, perceptions of ERD price, purity and availability, patterns of risky behaviours including self-reported drug overdose, driving under the influence, sexual behaviour, criminal activity and mental health.

Alcohol use was assessed using the Alcohol Use Disorders Inventory Test (AUDIT; Saunders et al., 1993). The AUDIT is a 10-item scale, designed to assess three conceptual domains: alcohol intake; dependence; and adverse consequences (Reinert and Allen, 2002). Total scores of eight or more are recommended as indicators of harmful alcohol use (Babor et al., 1992).

The Kessler Psychological Distress Scale 10 (K10) was used to obtain a measure of psychological distress. It is a 10-item standardised measure that has been found to have good psychometric properties and to identify clinical levels of psychological distress as measured by the Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV)/the Structured Clinical Interview for DSM disorders (Kessler et al., 2002, SCID; Andrews and Slade, 2001). Self-report of lifetime diagnosis and treatment seeking behaviour in the preceding six months was also used for mental health assessment.

Results

A total of 34 RSU participants were recruited according to the pilot criteria. The majority of those were recruited in NSW (n=16) followed by Victoria (n=9), Western Australia (n=7) and Tasmania (n=2). A total of 304 REU were recruited from NSW (n=100), VIC (n=101), WA (n=28) and TAS (n=75).

Demographics

Table 2 presents the demographic characteristics of the RSU sample compared with REU. There were no significant demographic differences between the groups. Both groups were young, predominantly male and from English-speaking backgrounds. The majority had completed year 12 and approximately half of each group had completed tertiary training. Approximately one-quarter of both groups were unemployed.

Table 2: Demographic characteristics of the RSU sample compared to REU data, 2011

	RSU (n=34)	REU (n=304)
Age (median,range)	24 (18-47)	24 (16-57)
Male (%)	59	69
English speaking background (%)	100	98
Aboriginal and/or Torres Strait Islander (%)	0	1
Heterosexual (%)	88	85
Completed year 12	71	77
Tertiary qualifications (%)	55	49
Unemployed (%)	24	26
Earned <$250/week last 6 months (%)	21	19
Arrested last 12 months (%)	15	16
Currently in drug treatment (%)	3	4

** p<0.05, ** p<0.0, *** p<0.001*

Substance use

Among REU, ecstasy was the most commonly reported drug of choice (30%) followed by cannabis (18%), cocaine (14%) and alcohol (10%) (Table 3). Among RSU participants, equal proportions reported that ecstasy and cannabis was their drug of choice (21% respectively) followed by cocaine and alcohol (15% respectively).

Table 3: Comparison of drug of choice, 2011

	RSU (n=34)	REU (n=304)
Ecstasy	21	30
Cannabis	21	18
Cocaine	15	14
Alcohol	15	10
LSD	9	8
Ice/Crystal	6	3
Speed	6	5
Other opiates	6	1
Heroin	3	4
Mushrooms	-	2
Ketamine	-	2

** p<0.05, ** p<0.01, *** p<0.001*

Participant patterns of ecstasy use was compared (Table 4). There was a substantial difference in the frequency of ecstasy use which is not surpising considering that REU recruitment was based on more frequent use. Other variables such as age of initiation to use, quantities used, main route of administration and prevalence of ecstasy use among friends was comparable between groups.

Table 4: Comparison of patterns of ecstasy use, 2011

	RSU (n=34)	REU (n=304)
Age first used ecstasy (median, range)	18 (14-31)	18 (13-35)
Median days used ecstasy last 6 mths	4 (2-5)	12.5 (6-150)
Use ecstasy weekly or more (%)	0	26
Typically use >2 tablets (%)	18	29
No. tablets in 'typical' session (median, range)	1.5 (1-15)	2 (0.5-12)
Mainly swallowed ecstasy last 6 mths (%)	100	94
Ever injected ecstasy (%)	3	7
Proportion of friends that use ecstasy (%)		
All	6	8
Most	35	38
About half	27	32
A few	32	22
None	0	0

** p<0.05, ** p<0.01, *** p<0.001*

Participants were asked about lifetime use of a range of drugs and whether they had used them within the past six months (recent use) (Table 5). Significantly higher proportions of RSU reported the lifetime use of GHB (41% vs 20%, *p<0.01*), and illicit pharmaceutical stimulants (71% vs 50%, *p<0.05*). There were no other significant differences in lifetime or recent drug use.

Table 5: Poly drug use (lifetime and recent), 2011

Drug	Lifetime and recent use	RSU (n=34)	REU (n=304)
Alcohol	Ever used Recent use	100 100	100 98
Cannabis	Ever used Recent use	97 85	98 80
Tobacco	Ever used Recent use	94 74	94 86
Meth. powder (speed)	Ever used Recent use	82 62	76 49
Meth. base (base)	Ever used Recent use	29 12	31 12
Crystal meth. (ice/crystal)	Ever used Recent use	56 35	43 24
Cocaine	Ever used Recent use	85 62	78 46
LSD	Ever used Recent use	85 56	75 48
MDA	Ever used Recent use	24 6	26 13
Ketamine	Ever used Recent use	44 15	48 23
GHB/1,4B/GBL	Ever used** Recent use	41 15	20 8
Amyl nitrate	Ever used Recent use	56 21	67 29

** p<0.05, ** p<0.01, *** p<0.001*

Table 5: Poly drug use (lifetime and recent), 2011 (Cont)

Drug	Lifetime and recent	RSU (n=34	REU (n=304)
Nitrous oxide	Ever used Recent use	47 18	51 26
Licit benzodiazepines	Ever used Recent use	21 15	21 14
Illicit benzodiazepines	Ever used Recent use	44 32	55 35
Licit pharm. stimulants	Ever used** Recent use	9 6	7 3
Illicit pharm. stimulants	Ever used Recent use	71 35	50 24
Licit antidepressants	Ever used Recent use	18 6	22 7
Illicit antidepressants	Ever used Recent use	6 0	8 2
Magic mushrooms	Ever used Recent use	71 27	70 28
Heroin	Ever used Recent use	21 3	20 9

Participants were also asked whether they had ever used a range of emerging drugs (Table 6). There were substantial differences in use of emerging drugs with significantly higher proportions of the REU group having used mephedrone (6% vs 33%, *p<0.01*), 2CB (0% vs 18%, *p<0.05*), Salvia (0% vs 16%, *p<0.05*) and DXM (0% vs 15%, *p<0.05*).

Table 6: Recent use of emerging drugs, 2011

	RSU (n=34)	REU (n=304)
Mephedrone (miaow, 4MMC)**	6	33
DMT	15	32
2CB*	0	18
Salvia*	0	16
Mescaline	3	16
DXM (cough syrup) *	0	15
Methylone/bk-MDMA	0	10
2CI	6	9
BZP	0	9
Datura (Angels trumpet)	0	8
Other synthetic cannabinoids	9	8
2C-E (hummingbird, europa)	0	7
LSA	3	7
5-Meo-DMT	0	6
PMA	3	4
MDPV/Ivory Wave	3	3
Melanotan (tanning oil)	0	2
K2/Spice	3	1
DOI (Death on impact)	0	1
MPTP	0	0

** p<0.05, ** p<0.01, *** p<0.001*

Mental health

There were no significant differences between the two groups in the incidence of self-reported mental health problems or in the proportions in the high and very high categories on the K10 (Table 7). Mean AUDIT score was comparable and the majority of both groups consumed alcohol at levels considered harmful.

Table 7: Mental health assessment and alcohol use, 2011

	RSU (N=34)	REU (N=304)
K10 category		
low(score 10-15)	35	35
medium(score 16-21)	32	35
high (score 22-29)	27	23
very high (score 30-50)	6	7
Self reported mental health problem	29	29
Attended a mental health professional[a]	70	60
Mean AUDIT total score	14	15
SD (range)	7 (2-31)	7 (0-36)
Score 8 or above (%)	85%	83%

[a] of those who reported a mental health problem
* p<0.05, ** p<0.01, *** p<0.001

Risky behaviours

The two groups were compared on the incidence of self-reported risky behaviours (Table 8). Similar proportions reported having recently binged on stimulants and having ever overdosed on stimulant or depressant drugs. While the proportions that had recently driven a vehicle were comparable between the RSU group (62%) and the REU groups (68%), a significantly higher proportion of REU admitted to having recently driven over the legal blood alcohol limit (36% versus 64%; p<0.001). Rates of drug driving were fairly comparable across the groups. While the rates of lifetime injecting were also comparable, a significantly higher proportion of REU reported having recently injected a drug (9% versus 64%; p<0.001). Rates of recent arrest were comparable between the groups.

Summary and Concusions

The aim of this pilot study was twofold. Firstly, to compare ease of recruitment of participants for the EDRS based on RSU criteria in comparison to traditional REU criteria. Secondly we sought to examine group differences between RSU and REU groups.

Table 8: Comparison of risky behaviours among RSU and REU participants, 2011

	RSU (n=34)	REU (n=304)
Binged on any ERD in the last 6 months	24	37
Ever overdosed on stimulant drug	35	34
Ever overdosed on depressant drug	44	54
Driven while over the limit of alcohol[a]**	36	64
Driven soon after taking an illicit drug[b]	57	54
Ever injected a drug	21	22
Injected in the last 6 months[c]***	9	64
Arrested during the past 12 months	15	16

[a] Among those who had driven under the influence of alcohol in the last 6 months.
[b] Among those who had driven a car in the last six months.
[c] Among those who had injected
* p<0.05, ** p<0.01, *** p<0.001

The results of this pilot study indicate that using a broader set of criteria for recruitment (i.e. criteria that do not require such frequent ecstasy use but maintain the requirement of regular stimulant use) do not contribute substantially to raise the rate of recruitment above and beyond that resulting from the existing REU criteria.

When the characteristics of RSU and REU were compared, they were found to have a similar profile in many respects including; demographics, patterns of ecstasy use, mental health, alcohol use, and the incidence of risky behaviours. However, there were significant differences in drug use observed, particularly in the use of emerging psychoactive substances. The use of these newer drugs was substantially lower among RSU participants. This is a concern given that the EDRS is intended to serve as a strategic early warning system, identifying emerging trends of local and national interest in ERD markets.

Taken together these findings suggest that broadening the EDRS recruitment criteria is unlikely to lead to substantial changes in rate of recruitment or to improve the quality and breadth of information gathered. In fact, these results serve to provide further support for the suitability of REU as a participant group most suited to informing the EDRS system.

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