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National Drug & Alcohol Research Centre

ECSTASY AND RELATED DRUGS REPORTING SYSTEM
DRUG TRENDS BULLETIN
APRIL 2016

The Difference is Research

Misuse of pharmaceuticals by regular psychostimulant users: are there mental health problems?

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Medicine | National Drug and Alcohol Research Centre

KEY FINDINGS

- Extra-medical or illicit use of pharmaceutical substances was examined among regular psychostimulant users (RPU) interviewed in 2015 for the Ecstasy and Related Drugs Reporting System (EDRS; n=763)
- Illicit use of pharmaceutical substances is common among regular psychostimulant users and far higher than in the general Australian population
- Few of the RPU in 2015 cited pharmaceuticals as their drug of choice (5%) or the drug used most often in the last month (4%)
- The pharmaceutical substances most commonly used over the previous six months were stimulants, benzodiazepines and over the counter codeine preparations
- Pharmaceuticals were used less frequently than ecstasy: most use was monthly or less often
- Greater psychological distress was reported by those who had recently used stimulants, codeine, opioids and benzodiazepines
- Recent users of OTC codeine, opioids and antipsychotics were more likely to self-report a mental health problem

INTRODUCTION

Against a background of increasing pharmaceutical drug use in Australia (1, 2) and overseas (3), concerns have been raised over the misuse of such substances, particularly by young people (4). In the US, attention has often focussed on the rise in illicit use of opioids and other analgesics (5) but emergency responses linked to misuse of other substances have also risen significantly (6, 7). There are well-documented health issues associated with use of each of these substances, however further risks may be incurred when these substances interact with other drugs in an uncontrolled manner. Additionally, mental health issues are more likely to be reported by poly-substance users (8), placing young adults, among whom poly-substance use is common (9), at high risk. As such, groups who regularly use multiple substances are of public health concern (6), despite many regarding their substance use as non-problematic.

Concern has been expressed about these harms in Australia (7, 10), but few reports have been published on levels of use among non-clinical populations (11), and most focus on a single class of substance or on prescription medications only (12). One recent study from NZ described significant illicit use of a range of pharmaceuticals in a sample of regular drug users (13). Other research in New South Wales highlighted diversion of pharmaceutical stimulants (14), however little is known about the risks associated with this type of use. Here we report on mental health issues in a recent national data set of individuals who are regular psychostimulant users and report using multiple substances (15).

AIM

To examine extra-medical or illicit use of pharmaceutical substances among a group of regular psychostimulant users (RPU) and to examine links between mental health problems and illicit pharmaceutical use. All substance use described in this Bulletin refers to illicit or extra-medical use.

ISSN 1835-8233

Funded by the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund

METHOD

The annual Ecstasy & Related Drugs Reporting System study recruits people who regularly use psychostimulants in each state and territory of Australia as a sentinel population to demonstrate trends in patterns of use and associated health issues. The 2015 sample comprised 763 regular psychostimulant users (RPU). Face to face interviews yielded information about recent illicit use (consumption of a substance not directly prescribed to the user, or for purposes other than the intended medical use, during the preceding six months) of pharmaceutical stimulants, over-the-counter (OTC) codeine, other opioids, benzodiazepines, antidepressants and antipsychotic medications.

Participants also self-reported on any mental health problems experienced in the last six months, and were assessed for symptoms of psychological distress using the Kessler-10 scale (K10) (16). Both composite scores (as a continuous variable) and a binary variable indicating high levels of psychological distress (K10 score over 21) were used. Help seeking behaviour (having visited a mental health professional) and receipt of medication for MH problems were reported for the last six months, the latter as a proxy for severity.

Demographic factors considered included participant gender, age, relationship status (single/not single), sexual identity (heterosexual/not heterosexual), employment (at least part time/less than part time) and education level (any tertiary qualification/no tertiary qualification).

Differences in group means (e.g. mean age or K10 scores) were assessed by paired t-tests. Proportional differences were assessed for binary variables. Where available, figures from 2014 were compared. A threshold of $p<0.05$ for difference was applied in all cases. Analyses were conducted in Stata 13 (StataCorp, Texas, USA).

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A significant proportion of RPU in this study reported extra-medical or illicit use of pharmaceuticals. Over half (52%) had used pharmaceutical stimulants illicitly during their lifetime; 43% had used benzodiazepines, 24% had used OTC codeine and 20% other opioids. Lifetime illicit use of antidepressants and antipsychotics was lower: 5% and 3% respectively.

As shown in Table 1, recent illicit use was also common in this sample: 51% had consumed any pharmaceutical in the last six months. Most commonly used were pharmaceutical stimulants (31%), benzodiazepines (27%), opioids (10%) and OTC codeine preparations (16%). This represented a significant rise from 2014 for pharmaceutical stimulants ($p<0.05$) and OTC codeine ($p<0.001$). In comparison, licit use was less common: only 3% used prescribed stimulants as intended in the last six months; 5% used opioids, 8% antidepressants, 7% benzodiazepines and 3% antipsychotic medications.

These figures are far higher than those in the general Australian population, where among 20-29 year olds (the closest group in age to this sample) only 5.8% had illicitly used any pharmaceutical in the past year (17). Illicit use of pharmaceuticals was likely to have begun after the age of 18. The majority of RPU using pharmaceuticals did so less than monthly, which was similar to the frequency of use in the general population (54% used less than monthly) (17), but less frequent than their use of ecstasy tablets.

Table 1: Prevalence, intensity and initiation of illicit pharmaceutical use in a national sample of regular psychostimulant users (RPU; n=763), 2015

	Prevalence	Intensity of use			Initiation to use		
Substance	Last 6 months	< monthly	Monthly-weekly	> weekly	Mean age	< 16	< 18
	%	%	%	%	Years (SD)	%	%
Any pharmaceutical	51	-	-	-	-	-	-
Stimulants	31	61	27	12	18.8 (3.6)	11	41
OTC codeine	16	63	23	13	19.0 (3.6)	6	33
Other opioids	10	80	16	4	20.3 (7.5)	9	30
Benzodiazepines	27	63	29	9	19.7 (3.9)	6	23
Antidepressants	1	82	9	9	18.4 (2.8)	13	40
Antipsychotics	3	65	22	13	20.1 (4.6)	10	34
Ecstasy pills as comparison	*85*	*24*	***58***	*18*	*17.8 (2.8)*	*12*	*49*

Table 2 shows the characteristics of those misusing pharmaceuticals in this sample: RPU in general were mostly male, single and heterosexual; only 27% were unemployed and nearly half had a tertiary qualification (either TAFE or university). Younger participants were more likely to have used stimulants or OTC codeine. Non-heterosexual participants were more likely to have used stimulants, and those without tertiary qualifications, OTC codeine. Those who were unemployed were more likely to have used opioids or antidepressants. Females were less likely to have recently used opioids, benzodiazepines or antipsychotics.

Mental health problems were common in this sample. A recent MH problem was more likely to be reported by those who had recently used OTC codeine, opioids or antipsychotic medications (Table 3). Those who had used OTC codeine, opioids, benzodiazepines or antipsychotics were also more likely to have attended a MH professional during the last 6 months. Of those receiving medications for their MH problem, the majority of prescriptions were for antidepressants (70%). Other medications included benzodiazepines (28%), antipsychotics (14%), mood stabilizers (8%) and stimulants (6%). Considering the substance preferences in Table 1, these visits appear not to involve "doctor shopping" for illicit use.

Higher levels of psychological distress (indicated by higher K10 scores) were recorded for RPU who reported recent illicit use of stimulants, OTC codeine, opioids or benzodiazepines. High or very high distress was more likely among those who had recently used opioids. Small sample size precluded the assessment of possible links between intensity of illicit pharmaceutical use and mental health problems.

CONCLUSION/SUMMARY/IMPLICATIONS

Regular psychostimulant users were likely to have also illicitly used pharmaceutical substances. Those who used both classes were more likely to report recent mental health problems and experience higher levels of psychological distress. Service providers should be aware of potential mental health problems among this group of psychostimulant users, even those who do not

Table 2: Characteristics of RPU, by recent illicit use of pharmaceutical medications, 2015

	Mean age	Female	Single	Non-hetero	Un-employed	Tertiary qualified
Substance type	years	%	%	%	%	%
All RPU	22.7	37	63	13	27	47
Stimulants	22.1	33	67	17	31	40
OTC codeine	21.7	32	66	14	34	38
Other opioids	23.0	23	65	10	41	41
Benzodiazepines	22.5	29	64	13	30	47
Antidepressants	21.0	21	73	27	55	33
Antipsychotics	22.0	15	78	13	43	38

Unemployed = employed less than part-time; tertiary = completed a qualification after Year 12

Table 3: Mental health indicators in RPU reporting recent illicit use of pharmaceutical substances, 2015

Recent illicit use	Self-reported MH problem	Attended MH professional	Received prescription meds	K10 total score	K10 high distress
	%	%	%	mean (SD)	%
All RPU	36	20	11	19.3 (6.8)	32
Any pharmaceutical	40	24	13	19.9 (6.8)*	34
Stimulants	39	22	13*	20.1 (6.8) *	35
OTC codeine	44*	31*	22*	20.6 (7.7) *	36
Other opioids	48*	28*	20*	20.9 (7.6) *	43*
Benzodiazepines	41	25*	15	20.2 (6.7) *	34
Antidepressants	45	18	0	21.6 (6.6)	55
Antipsychotics	57*	43*	22	21.2 (6.3)	39

MH = mental health; K10=Kessler 10 scale of psychological distress: High distress= K10>21; * indicates p<0.05 for difference from total sample

acknowledge current mental health problems. Policy makers should be aware of the potential link between extra-medical use of non-prescription pharmaceutical medications and mental health problems. Further research should investigate links between intensity of illicit pharmaceutical use and mental health problems in regular psychostimulant users.

ACKNOWLEDGEMENTS

The EDRS project is supported by funding from the Australian Government under the Substance Misuse Prevention and Service Improvement Grants Fund and is coordinated by the National Drug and Alcohol research Centre (NDARC). The EDRS team would like to thank the Australian Government Department of Health (AGDH) for their continued assistance and support of the EDRS. The authors would also like to acknowledge researchers from the following institutions who contributed to the data collected for this study: National Drug and Alcohol Research Centre, Macfarlane Burnet Institute for Medical Research and Public Health, National Drug Research Institute and the University of Tasmania. We would like to extend our thanks to the agencies and individuals who assisted with recruitment and interviewing and finally the regular ecstasy users who were willing to be interviewed and share their experiences.

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SUGGESTED CITATION

Salom, C.L. & Alati, R. (2016). Misuse of pharmaceuticals by regular psychostimulant users: are there mental health problems? Ecstasy and Related Drug Trends Bulletin, April 2016. Sydney: National Drug and Alcohol Research Centre, University of New South Wales.