

Microdosing among people who regularly use ecstasy and/or other illicit stimulants in Australia, 2022

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Data were collected as part of the Ecstasy and Related Drugs Reporting System (EDRS). Annual interviews were conducted with people residing in Australian capital cities who used ecstasy and/or other illicit stimulants monthly or more frequently and were aged 18 or older.

Key Findings



Nationally in 2022, 21% reported microdosing; most commonly with mushrooms (61%); of those, 31% microdosed at least weekly (12% daily).



The most commonly-expected effect (52%) was enhanced mood or reduced depressive symptoms, followed by enhanced creativity or curiosity (32%).



62% reported experiencing no challenges; no links to mental health problems were found.



Some may be macro-rather than microdosing and at risk of harm

National 2022



Introduction



Microdosing refers to the practice of routinely ingesting a small quantity of psychedelics, between 5-10% of a standard dose, to obtain the positive effects of the drug, and minimise adverse effects¹. Initially used to treat substance use disorders or counter treatment-resistant depression², some reports suggest a rise in non-prescribed use in search of effects such as improved mental health, creativity, physical energy or cognitive performance^{3,4,5,6}.

This bulletin aims to report on the characteristics and experiences of people who microdose among a national sample of people who regularly use ecstasy and/or other illicit stimulants.

Methods



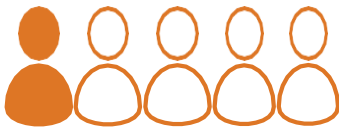
Data from the 2022 national EDRS sample comprised 700 interviews, collected in all states and territories (n~100 per jurisdiction). Interviews were conducted face-to-face (28%), or via telephone (62%)/videoconference (10%) where COVID-19 restrictions applied. Please refer to the [EDRS Background and Methods](#)⁷ document and the [National 2022 EDRS report](#)⁸

for further details.

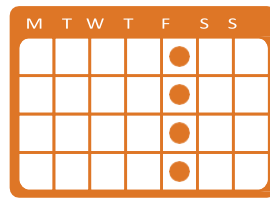
Descriptive statistics and χ^2 tests were used to analyse the data, focusing on microdosing practices and experiences, and characteristics of those who reported microdosing.



Results



1 in 5 participants (21%) reported microdosing in the last 6 months

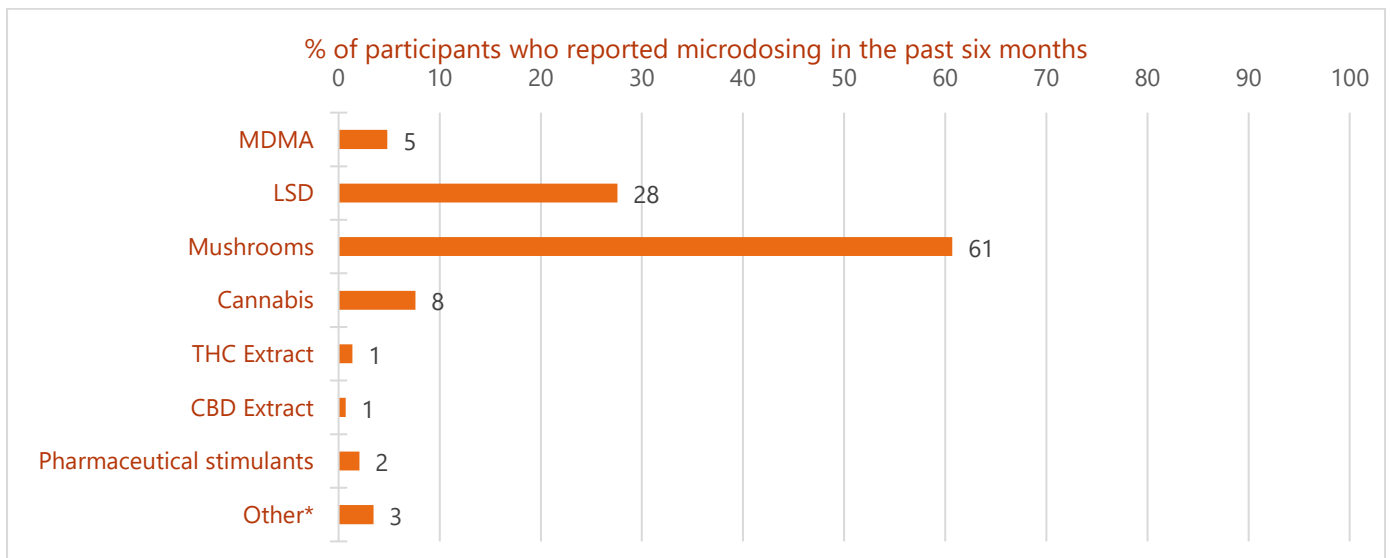


31% of those who had microdosed did so at least weekly



Participants who micro-dosed were more likely to nominate **hallucinogens** as their drug of choice or drug used most often, compared to those who had not microdosed

Figure 1. Substances used for microdosing, 2022



Note. *Other included cocaine, ketamine, mescaline and diazepam

Amounts used to microdose ranged considerably: the range of amounts reported for last episode of microdosing are given below but may reflect some uncertainty in measurement.



MDMA: 0.5 - 1.0 micrograms; 0.25 cap; 0.1g
LSD: 0.1 - 55 micrograms, 0.1 - 0.5 tabs
Mushrooms: 0.1 - 200mg; 0.1 - 0.3g
Cannabis: 50 micrograms; 0.03 - 1g

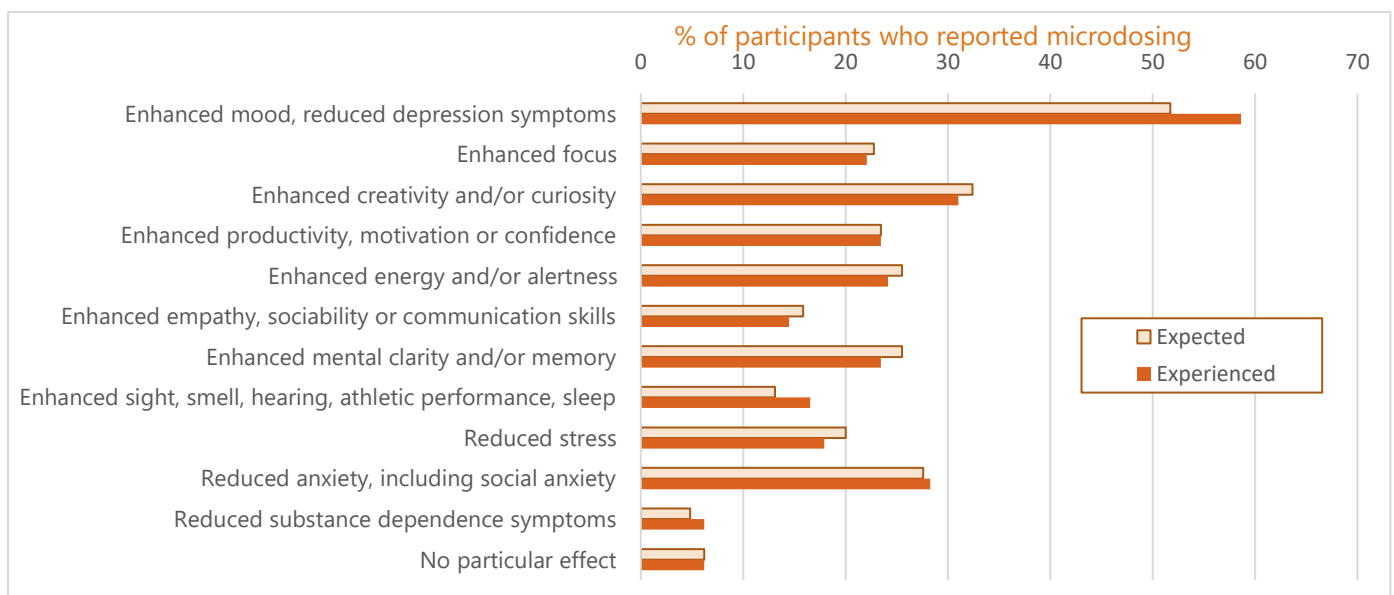
Participants who microdosed were more likely to be younger and currently studying, and less likely to identify as heterosexual. Hallucinogens were more likely to be their drug of choice.

Table 1. Characteristics of people who reported microdosing in 2022

	Microdosed % (n)	No microdosing % (n)	χ^2 P value
	21 (145)	79 (547)	
Median age years (IQR)	23 (20-28)	25 (21-31)	0.004#
Gender			0.070
- Male	55.9 (81)	55.7 (304)	
- Female	35.9 (52)	40.5 (221)	
- Non-binary/different	8.3 (12)	3.8 (21)	
Sexual identity			0.008
- Heterosexual	62.1 (88)	73.3 (391)	
- Non-heterosexual	37.9 (21)	26.7 (62)	
Employment			0.438
- Any paid employment	84.1 (122)	81.4 (445)	
- Not employed	15.9 (23)	18.7 (102)	
Studying			0.002
- Current student	52.4 (76)	37.8 (207)	
- Not currently studying	47.6 (69)	62.2 (340)	
Drug of choice			<0.001
- Stimulant	35.9 (52)	51.9 (284)	
- Depressant	43.5 (63)	42.6 (233)	
- Hallucinogen	20.7 (30)	5.5 (30)	
Drug used most often			0.017
- Stimulant	24.8 (36)	37.3 (204)	
- Depressant	67.6 (98)	58.3 (319)	
- Hallucinogen	6.2 (9)	2.9 (16)	

Note. Stimulant includes ecstasy, methamphetamine, cocaine, pharmaceutical stimulants; depressant includes alcohol, benzodiazepines, codeine, heroin; hallucinogen includes LSD, DMT, mushrooms, ketamine; # Mann-Whitney test used to compare median ages

Figure 1. Expected vs experienced effects of microdosing, 2022



Just over one-third (37%) of those who microdosed reported experiencing problems; the most common were dissociation/rumination (6%) and stomach pain/headache/sleep problems/loss of appetite (7%).

Discussion



Most participants' experiences of microdosing effects aligned with their expectations. The most commonly-sought effect of microdosing was enhanced mood or reduced depressive symptoms (52%). Although few participants reported negative effects, reported patterns of use (e.g., 0.1g of MDMA, 1g of cannabis) suggest that some participants are macro- rather than microdosing.

Frequent use of larger doses (weekly or more often) is likely to be associated with adverse events; this warrants both further monitoring and dissemination of harm reduction messages in the case of adverse experiences. It should be noted that the EDRS is not a sample representative of all people who regularly use drugs. This sample is also not representative of all people who microdose; as the primary criterion for EDRS eligibility is regular use of psychostimulants.

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