

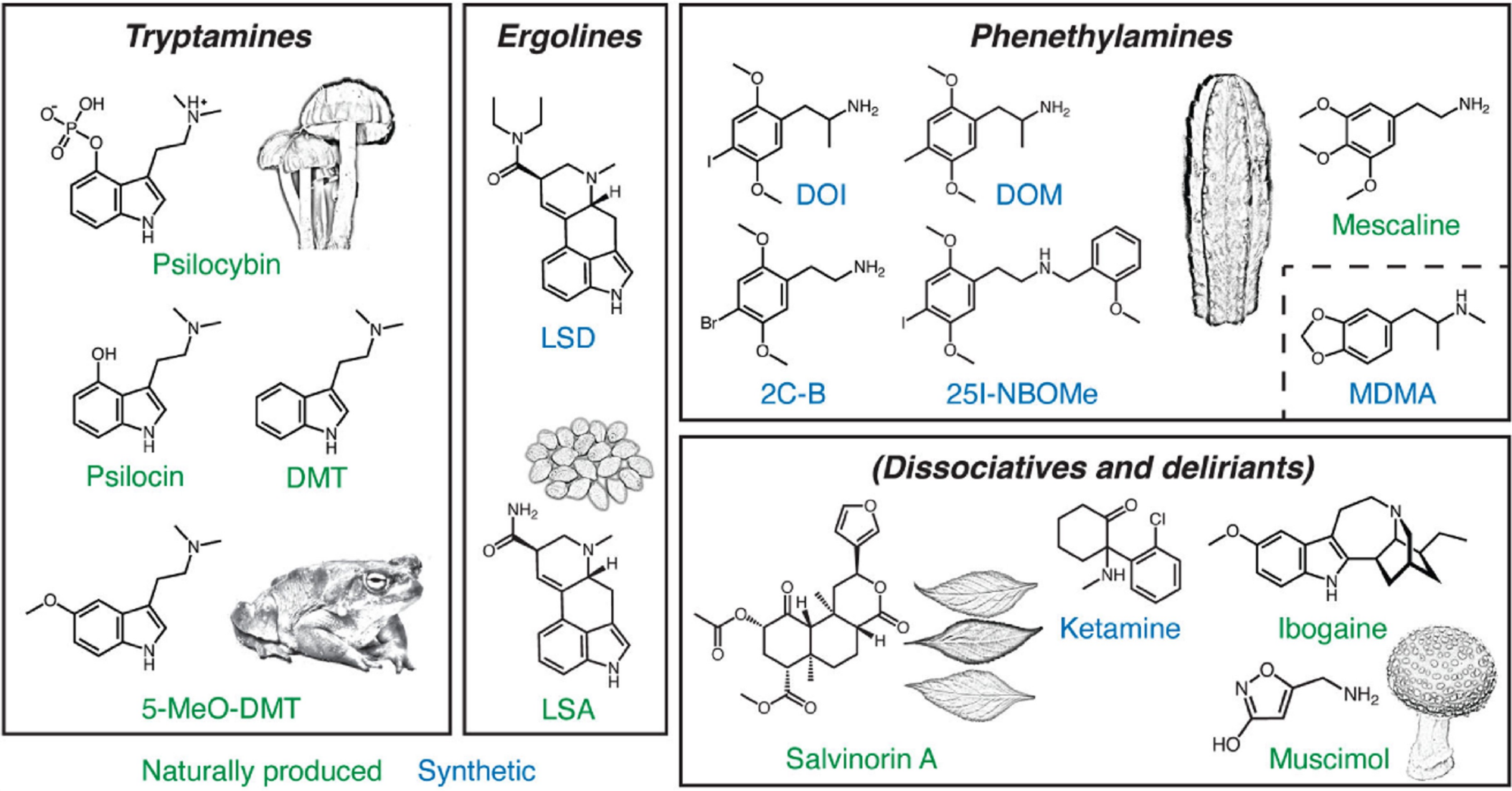
Psychedelics and Chronic Pain: Self-Reported Outcomes on Changed Substance Use Patterns and Health Following Naturalistic Psychedelic Use

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Introduction

Psychedelics

- Substances (e.g., psilocybin) that cause acute changes in perception, mood, and affect¹
- Demonstrated potential in treating depression, PTSD, substance use disorders, and more¹
- Growing interest in potential of psychedelic treatments for chronic pain conditions, with several clinical trials underway



Kelmendi, Benjamin, et al. "Psychedelics." *Current Biology* 32.2 (2022): R63-R67.

Chronic pain

- Includes nociceptive (tissue damage pain), neuropathic (nerve pain), and nociplastic (pain in absence of tissue damage, e.g., fibromyalgia)
- May affect up to 30% of population²
- Leading cause of seeking medical care²
- Co-occurring substance use disorders common among individuals with chronic pain³
- Biopsychosocial model postulates that biological, psychological, and social factors contribute multidimensionally to physical pain symptoms⁴

Objectives and Hypothesis

- Survey adult population of individuals who reported using psychedelics naturalistically to treat chronic pain
- Investigate perceived mental and physical health outcomes of psychedelic use, and changes in non-psychedelic substance use patterns
- We hypothesized that participants will report improved health and reductions in use of other substances following psychedelic use

Methods

- Anonymous online survey
- Descriptive statistics, t-test/chi-square, linear regression



Results

Descriptive	Ceased or decreased use (n=391)	No ceased or decreased use (n=62)	t or χ ²	P value
Gender			3.2	.53
Women	44.8% (175)	53.2% (33)		
Men	51.2% (200)	40.3% (25)		
Non-Binary	3.1% (12)	4.8% (3)		
Other	0.8% (3)	1.6% (1)		
Prefer not to say	0.3% (1)	0% (0)		
Region of residence			8.6	0.04
Asia Pacific	11.3% (44)	3.2% (2)		
Europe	4.3% (17)	1.6% (1)		
Latin America	1.3% (5)	4.8% (3)		
North America	83.1% (325)	90.3% (56)		
Age in years (M, SD, range)	41.7, 11.4, 21 - 76	47.0, 14.0, 25 - 80	3.3	<.001
21-24	1.5% (6)	0% (0)		
25-34	33.0% (129)	22.6% (14)		
35-44	30.2% (130)	27.4% (17)		
45-54	16.1% (63)	22.6% (14)		
55-64	11.3% (44)	11.3% (7)		
>65	4.9% (19)	16.1% (10)		
Number of psychedelics used (M, SD, range)	5.5, 2.4, 1 - 12	4.6, 2.5, 1 - 12	-2.8	<.01
Dosage used			273.616	<.001
Microdose only	1.8% (7)	6.5% (4)		
Macrodose only	9.0% (35)	12.9% (8)		
Both micro and macro doses	89.3% (349)	80.6% (50)		
Education			6.2	0.28
Less than high school	4.1% (16)	1.6% (1)		
High school or equivalent	16.1% (63)	11.3% (7)		
Technical degree	17.1% (67)	12.9% (8)		
Bachelors degree or equivalent	28.4% (111)	24.2% (15)		
Graduate degree	23.5% (92)	33.9% (21)		
Doctoral /professional degree	10.7% (42)	16.1% (10)		
Income			3.01	0.56
Very low	7.7% (30)	6.5% (4)		
Low	21.2% (83)	19.4% (12)		
Middle	34.5% (135)	45.2% (28)		
High	26.1% (102)	22.6% (14)		
Very high	10.5% (41)	6.5% (4)		

Health outcomes:

- 78.8% found psychedelics helpful for physical health, and 99.3% found psychedelics helpful for mental health
- Health benefits lasted > 1 year for 18.4% (physical health) and 28.1% (mental health)
- Psilocybin was reportedly the most effective psychedelic

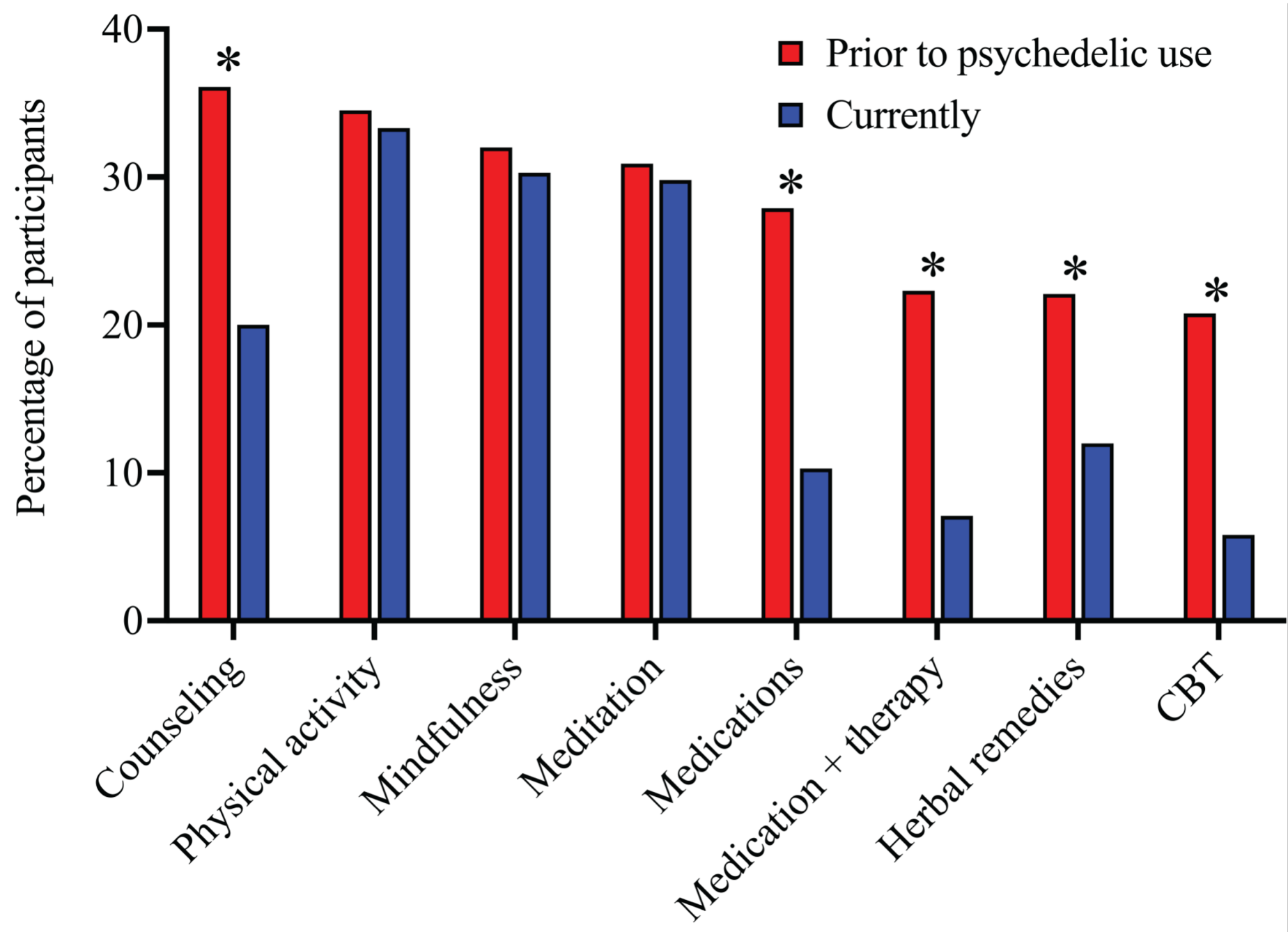


Figure 2. **Changes in conventional treatments before and after psychedelic use.** Participants were asked to retrospectively report which conventional treatment(s) they pursued prior to using psychedelics as a mental health treatment, and in a follow-up question, which conventional treatment(s) they currently (at the time of survey completion) pursue. N = 466 for all groups. CBT: cognitive-behavioral therapy. McNemar's test was used to compare proportions between "prior" and "currently" groups. *p < .001.

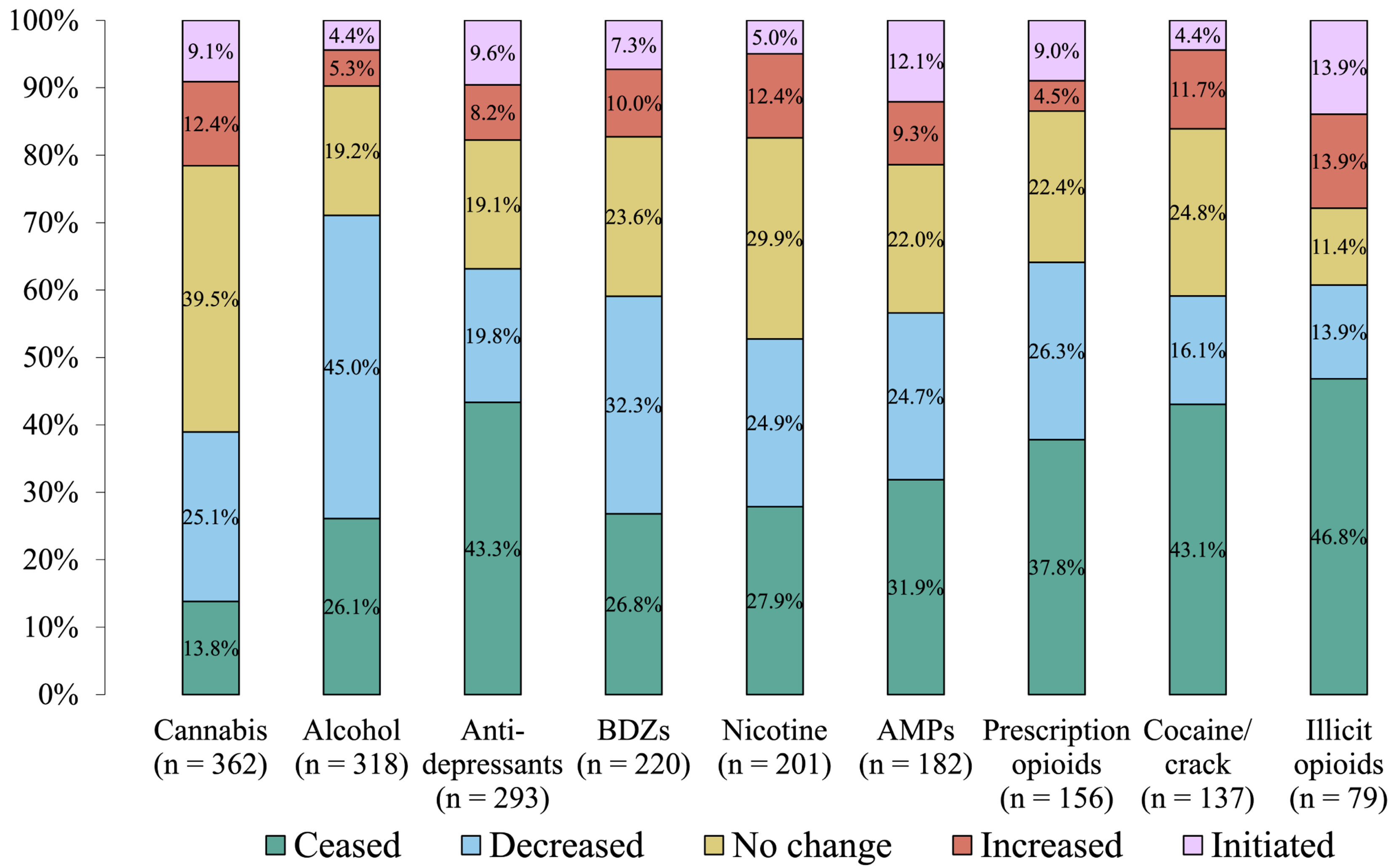


Figure 1. **Self reported changes in substance use following psychedelic use.** The number of participants who reported past or current use of a substance is listed below each substance. Proportions for each category are shown in their respective locations. BDZs = benzodiazepines, AMPs = amphetamines.

Changed substance use patterns:

- Most (86.3%) ceased or decreased substance use as a result of psychedelic use
- 21.2% indicated that the decreased use persisted for more than 26 weeks after psychedelic use
- Having a motivation to reduce one's substance use was positively associated with ceasing/decreasing use (p <.001)

Conclusions

- Naturalistic psychedelic use is associated with changed patterns of substance use and improved mental and physical health among individuals with chronic pain
- Future investigations should explore observational and clinical approaches to assessing the safety and efficacy of psychedelics for individuals with chronic pain conditions

Limitations:

- Cross-sectional study design, subject to recall and confirmation biases.
- Unable to confirm substance purity, or the extent to which psychedelics contributed to reported changes

References

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