International Journal of Drug Policy 154 (2026) 105348

Contents lists available at ScienceDirect

International Journal of Drug Policy

journal homepage: www.elsevier.com/locate/drugpo

Research Paper

A cross-national comparison of nonmedical and medical use of psychedelic drugs in the international cannabis policy study

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ARTICLE INFO

Keywords:
Psychedelics
Medical use
Drug policy
Adverse events
Nonmedical use

ABSTRACT

Background: We know little about the extent psychedelic substances are consumed therapeutically and/or discussed with medical professionals despite renewed global interest in these substances.
Methods: We examined self-reported responses from the 2023 International Cannabis Policy Study (ICPS) in repeated cross-sectional surveys in Canada, the United States, Australia, and New Zealand. The survey included questions on lifetime, past year, and past month use of psilocybin, LSD, MDMA, and ketamine. It inquired about respondents' discussions with medical professionals, their self-reported medical use, and related adverse events. We estimate the mean proportion rate for each of these using logistic regression methods that adjust for demographics, country, and sampling weights.
Findings: Estimated results suggest nineteen per cent of all ICPS respondents reported lifetime use of one of the four substances. Psilocybin was the most commonly estimated to be used in one's lifetime and in the past year, followed by LSD and MDMA. Estimated prevalences of ever using psilocybin were higher among respondents from Canada (16.3%, CI: 15.6–16.9%) than the USA (13.0%, CI: 12.3–13.6%) and New Zealand (12.1%, CI: 10.4–13.8%). Estimated rates of psilocybin ever use in Australia were significantly lower (7.8%, CI: 6.8–8.8%). An estimated 10–20% of respondents who report ever-use of a psychedelic asked their medical provider about medical use, and over a third who had used in the past year reported experiencing an adverse health effect. Estimated rates of past month use were low for all countries.
Interpretation: Consumer interest in therapeutic use of psilocybin, MDMA, LSD, and ketamine has surpassed the pace of clinical trials and therapeutic use provisions. These provisions do not necessarily equate to patient access and dual use motivations are not uncommon. Access via nonregulated pathways and self-initiated use in the absence of medical supervision may influence the proportion of individuals who experience adverse events.

Introduction

Over the past decade or so, there has been renewed public interest and media attention in the medical use of psychedelics, particularly psilocybin, LSD, MDMA, and ketamine. Recent national and international surveys indicate an increase in their use in multiple countries, suggesting this is not a single country phenomenon. Increased psilocybin use prevalence has been reported in the United States (USA), Australia, and New Zealand. Between 2019 and 2022/2023, past year use prevalence of psilocybin (0.9% to 1.8%), LSD (1.1% to 1.5%), and ketamine (0.9% to 1.4%) all rose in Australia, with only MDMA use prevalence decreasing (3.0% to 2.1%) in individuals aged 14 years and older (Australian Institute of Health & Welfare, 2024; Australian Institute of Health & Welfare, 2025). In New Zealand, between 2018/19 and

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https://doi.org/10.1016/j.drugpo.2026.105348

Available online 5 June 2026

2023/24, there was an increase in past year use of MDMA (3.6% to 4.8%) among the adult population. The use of hallucinogens (e.g. LSD, psilocybin, and ketamine) was also reported to have increased from 2.0% to 3.1% over the same time period (Ministry of Health, 2024a). In Canada, past year use of any psychedelic in the general population in 2023 was as high as 6%, while past year prevalence of MDMA use (2.0% in Canada) was comparable to Australia (2.1%) (Government of Canada, 2024). Increases in hallucinogen use were also reported in the United States between 2021 and 2024 (from 2.7% to 3.6%) in individuals 12 years or older (Substance Abuse & Mental Health Services Administration, 2025a).

Some of this rise has been attributed to the therapeutic use of these substances, but it is unclear how many consumers are using these drugs under medical supervision. Canada, USA, Australia and New Zealand have very different approaches toward medical use of specific psychedelics, but all provide at least limited access (Kilmer et al., 2024). While provisions for prescription access exist in Australia, to date, there has been limited use of this legal channel. Between 1 July 2023 and 30 June 2025, there were only 20 MDMA and 17 psilocybin Authorised Prescriber application approvals in the entire country (Therapeutic Goods Administration, 2025) (Fig. 1).

Given the growing global enthusiasm for these substances and differences across countries in medical access, this study seeks to understand if we see different rates of lifetime and past year use of psilocybin, LSD, MDMA, and ketamine across jurisdictions. We start by examining data in 2023, the first year for which we have data prior to regulatory shifts in medical access for many of these countries. The study also considers the extent to which people enquire about the use of these psychedelics with medical professionals and experience any adverse health events associated with their use.

Methods

The study used all responses from the 2023 International Cannabis Policy Study (ICPS), a single wave of a repeated cross-sectional international study of nationally representative populations in Canada (N = 19,964), the USA (N = 39,653), Australia (N = 3042), and New Zealand (N = 2676) (Iraniparast et al., 2023). The data were collected through self-administered, web-based surveys from 16 September to 7 November 2023. The target population for the survey was household members aged 16 to 65 years.

Participants in the ICPS were drawn from the Nielsen Consumer Insights Global Panel and their partner panels. The Nielsen panels use a combination of probability and non-probability sampling methods to generate their own panels, which are proprietary and unknown to us. For the ICPS surveys, stratified random samples were drawn from the existing Nielsen online panels to ensure representation based on age, gender, and state/province/territory of residence. Hence, we do not have missing data on any of our core demographic variables in the ICPS. Respondents completed the surveys online in English in the USA, Australia, and New Zealand, and in either English or French in Canada (Iraniparast et al., 2023). Median survey time was 22.2 minutes.

The ICPS study team applies post-stratification weights. Estimates were weighted to population targets based on age-by-sex-by-state, education-by-state, and region-by-race. Additionally, in the USA and Canada, age-by-cigarette smoking status groups were incorporated into the post-stratification weighting scheme, while Australia and New Zealand adjusted for age-by-cannabis use status, given their small national samples. State/territory was combined for all jurisdictions with samples of less than 800 respondents. A raking algorithm was applied to compute weights calibrated to these groupings (Iraniparast et al., 2023). All analyses used weights rescaled to the study sample size. Weighted descriptive statistics of the sample surveyed in 2023 overall and by country are provided in Appendix Tables A1 and A2, respectively. All findings are reported following STROBE guidelines for observational studies (von Elm et al., 2008).

Measures

Information on lifetime, past year, and past month use of various substances was included in the 2023 ICPS survey in all four countries (see Fig. A1) (Iraniparast et al., 2023). The specific substances investigated in this analysis were the four most commonly reported psychedelics in our study sample: (1) magic mushrooms, "shrooms", or psilocybin (henceforth psilocybin); (2) Lysergic acid diethylamide (LSD) or acid (henceforth LSD); (3) 3,4-methylenedioxymethamphetamine (MDMA); and (4) ketamine or esketamine (henceforth ketamine).

Participants were asked whether they had ever tried each substance, and for those who responded yes, they were then asked when the last time was that they consumed the substance. Anyone responding that they had ever tried any of the four substances was coded as an *ever user* of that substance, 0 otherwise. People who skipped or refused to answer this question (N = 797 checked "refuse to answer", N = 3028 checked "don't know", and N = 47,106 checked "I haven't used any of the above") were coded zero. Anyone reporting use within the past 12 months was coded as a *past year user* of that specific psychedelic, 0 otherwise. Anyone reporting use within the last week or the last month was coded as a *past month user* of that specific psychedelic, 0 otherwise.

Additionally, the whole group of survey participants were asked if they had ever talked to a doctor or psychiatrist about using any of a list of psychedelics. Individuals who responded that they had asked about the use of any of the four groups of substances for medical reasons were coded as being *medically curious* about them. Respondents who said no, skipped the question or refused to answer (N = 57,629 checked "haven't asked a medical practitioner about any of these", N = 3144 checked "don't know", N = 733 checked "refuse to answer") were coded as a zero.

Information about self-reported use for medical purposes was only obtained from individuals who reported any use in the past month, a subset of survey respondents in each country. Respondents who reported any use of a psychedelic were asked for each of the substances used if their use was for medical reasons (physical or mental health conditions), nonmedical reasons, or both. Those who specified medical use (either exclusively or also nonmedically) were coded as a *medical use*. Finally, anyone who reported any use of one of the four substances in the past year was asked if they experienced any negative adverse health events in the past 12 months associated with their use. If an adverse or negative health event was reported, participants were asked if and where they sought help. Responses included a poison information centre or an emergency department.

We estimated the adjusted mean proportion rate for each use category using logistic regression methods, adjusting for gender at birth, age, ethnicity (majority, mixed, minority), highest level of education, country, and sampling weights. Estimated rates were obtained using country-weighted mean values of the demographic variables (gender, age, ethnicity, and education level). Similar logistic models were estimated to get country-specific estimates of being medically curious, asking a medical professional about use, and experiencing adverse events. We did not estimate country-specific self-reported medical use rates because only a few respondents indicated past month use. Sensitivity analyses were performed to determine whether state-based policy changes in the USA (e.g. Colorado, Oregon, and the District of Columbia) impacted findings (see Supplementary file 1). A detailed description of the construction of sample weights is available online in the ICPS 2023 (W6) Technical Report (see Supplementary file 2). All analyses were

[1] This figure provides a high level summary of access mechanisms and the progression towards licensed medicines for mental health indications, noting that this field is rapidly evolving. *Breakthrough therapy designation. **Licensed medicines are also referred to as registered or approved medicines. Off-label use of ketamine for TRD is not included here.

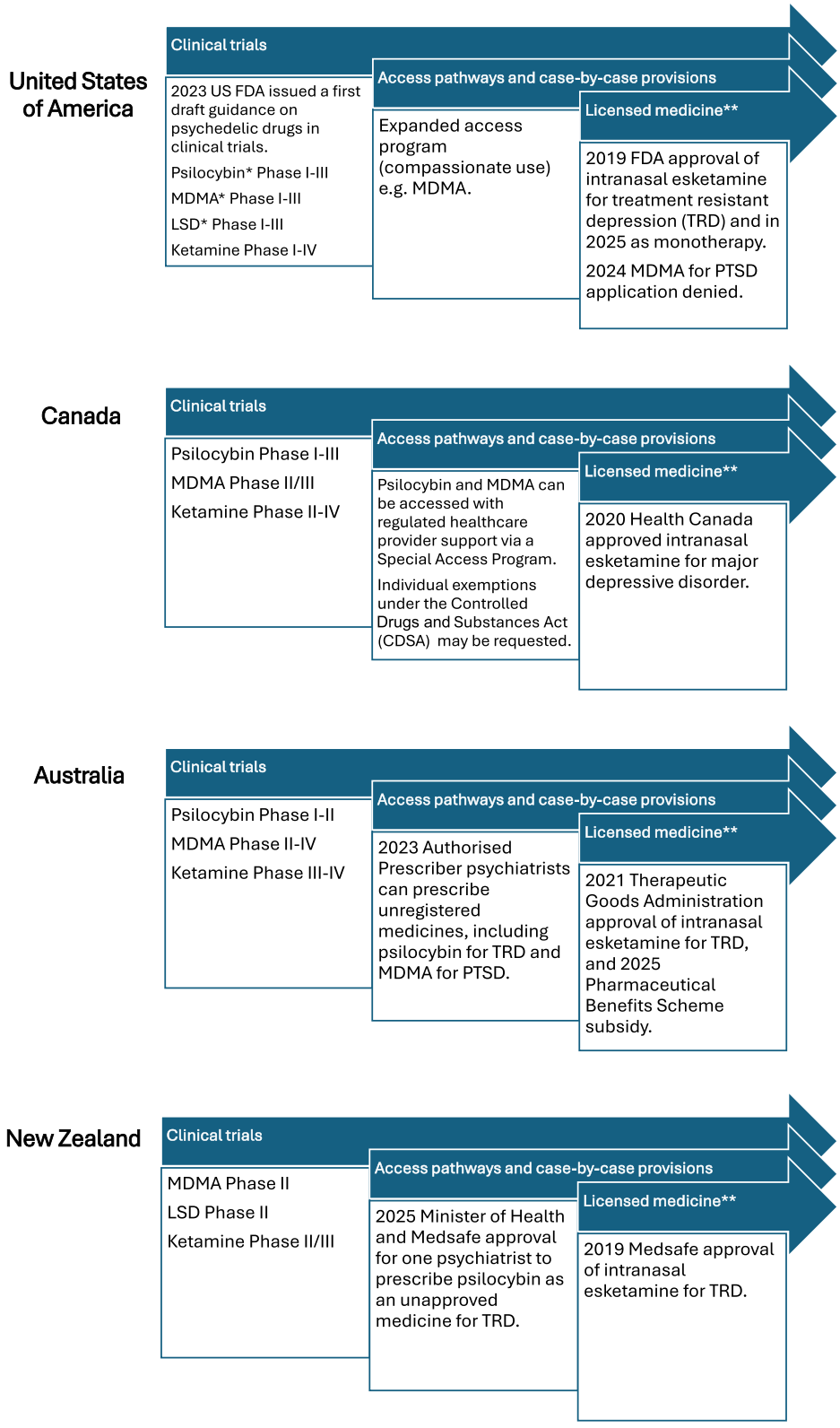

Fig. 1. Progression from clinical trials to licensed medicines up until December 2025.[1]

performed using Stata SE 16.0. Overall weighted demographics of the sample by past year use status are provided in Appendix Table A1. Country-specific weighted demographics of past year consumers versus non-consumers are shown in Appendix Table A2. Again, because we did not have missing data on any of our core demographics, and we coded skipped/refused to answer responses to psychedelic questions as zero (meaning no use), we do not have any missing observations from the original survey counts for 2023. However, there is a potential for bias toward zero for all of our prevalence estimates due to the coding of skipped/refusals to answer as zeros.

Table 1
Lifetime and Annual prevalence of psilocybin, LSD, MDMA, or ketamine reported in ICPS, overall and by country.

	Pooled Sample (*N* = 65,335)	Canada (*N* = 19,964)	USA (*N* = 39,653)	Australia (*N* = 3042)	New Zealand (*N* = 2676)
Ever use					
Any of the four substances (psilocybin, LSD, MDMA, ketamine)	19.3% (18.8%, 19.8%)	21.4%$^{+}$ (20.7%, 22.1%)	18.2%* (17.5%, 18.9%)	17.3%* (15.9%, 18.8%)	23.0%$^{+}$ (20.9%, 25.2%)
Psilocybin	13.7% (13.2%, 14.1%)	16.3%$^{+}$ (15.6%, 16.9%)	13.0%* (12.3%, 13.6%)	7.8%*$^{+}$ (6.8%, 8.8%)	12.1%* (10.4%, 13.8%)
LSD	10.3% (9.9%, 10.7%)	9.7%$^{+}$ (9.2%, 10.2%)	10.6%* (10.0%, 11.1%)	8.9%$^{+}$ (7.8%, 10.0%)	12.8%*$^{+}$ (11.0%, 14.6%)
MDMA	7.7% (7.3%, 8.0%)	8.7%$^{+}$ (8.2%, 9.1%)	6.7%* (6.2%, 7.2%)	10.3%*$^{+}$ (9.2%, 11.4%)	12.9%*$^{+}$ (11.2%, 14.6%)
Ketamine	3.1% (2.9%, 3.3%)	3.3% (3.0%, 3.6%)	2.9% (2.5%, 3.2%)	4.1%*$^{+}$ (3.4%, 4.8%)	3.6% (2.7%, 4.6%)
Past 12-month use					
Any of the four	6.5% (6.2%, 6.8%)	7.3%$^{+}$ (6.8%, 7.7%)	6.0%* (5.6%, 6.5%)	5.8%* (4.9%, 6.7%)	8.7%*$^{+}$ (7.3%, 10.1%)
Psilocybin	4.1% (3.8%, 4.3%)	4.9%$^{+}$ (4.5%, 5.3%)	3.8%* (3.4%, 4.2%)	2.6%*$^{+}$ (2.0%, 3.2%)	3.8% (2.8%, 4.7%)
LSD	1.9% (1.7%, 2.1%)	1.8% (1.6%, 2.1%)	1.9% (1.6%, 2.2%)	2.2% (1.6%, 2.8%)	2.9%*$^{+}$ (1.9%, 3.9%)
MDMA	1.8% (1.7%, 2.0%)	1.9% (1.7%, 2.2%)	1.7% (1.4%, 1.9%)	2.3%$^{+}$ (1.7%, 2.9%)	3.6%*$^{+}$ (2.8%, 4.5%)
Ketamine	1.1% (1.0%, 1.3%)	1.0% (0.9%, 1.2%)	1.2% (1.0%, 1.4%)	1.3% (0.8%, 1.7%)	1.4% (0.8%, 1.9%)
Past month use					
Any of the four	1.7% (1.6%, 1.9%)	1.8% (1.6%, 2.1%)	1.7% (1.4%, 2.0%)	1.9% (1.3%, 2.4%)	1.4% (0.9%, 1.9%)

Notes: 95% Confidence Intervals are presented in parentheses. * indicates *p*-value <0.05 statistical difference with Canada; $^{+}$ indicates *p*-value <0.05 statistical difference with USA.

Results

An estimated nineteen per cent of all ICPS respondents were predicted as lifetime users of one of the four substances (i.e. psilocybin, LSD, MDMA, ketamine) (see Table 1). Overall, psilocybin use was the most common substance predicted in one's lifetime and in the past year for the pooled sample, and in Canada, the USA, Australia, and New Zealand, followed by LSD and MDMA. This pattern among participants who were predicted to ever use was similar across countries, with the notable exceptions of Australia and New Zealand, where respondents estimated lifetime use of MDMA was higher than psilocybin. Sensitivity analyses were performed excluding Colorado, Oregon, and the District of Columbia, and the results did not change substantively.

Among those reporting past year use, the models predicted greater psilocybin use than other substances in Canada and the USA, but both Australia and New Zealand had similar past year use patterns of psilocybin and MDMA. Estimated rates of past year use of any psychedelic in each country are nearly twice those for specific psychedelics, suggesting that consumers may be trying more than one of these substances. Only 1.7% of all ICPS respondents were predicted to use one of the four substances in the past month. Given that these pooled estimated past month use rates were so low, we do not examine past month use by substance.

The share of respondents estimated as lifetime users of one of these four substances was higher in Canada and New Zealand than in the USA and Australia (Table 1). Estimated rates of ever using psilocybin were higher in Canada (16.3%, CI: 15.6–16.9%) than the USA (13.0%, CI: 12.3–13.6%) and New Zealand (12.1%, CI: 10.4–13.8%). Estimated rates of psilocybin ever use in Australia were significantly lower (7.8%, CI: 6.8–8.8%). Lifetime and past year estimated rates of MDMA use were higher in New Zealand than in Canada and the USA. However, the samples of estimated past year users in New Zealand and Australia were very small for individual substances.

The top part of Table 2 shows the weighted percentages of survey respondents (overall and by country) who are estimated to have ever asked a medical professional about the medical use of each of these four substances, which we dub "medically curious". We estimate relatively small samples were medically curious about any of these substances in each of these countries (fewer than 3% in all countries for all drugs, except for psilocybin and LSD in New Zealand. However, when we restrict the sample to those who reported ever using any of these substances, the predicted share of medically curious rises above 10% for each substance in New Zealand, all the substances but ketamine in Australia, and only MDMA and ketamine in the USA and Canada.

Medical use was only asked of survey respondents who reported any past month use, which was below 2.0% of survey respondents in each country. We accordingly only modelled self-reported medical use of the psychedelics pooled together in each country (see Fig. 2). In the pooled ICPS model, we predict that just over half (51.6%, CI: 46.6–56.7%) of the sample's use was for medical purposes. That varied somewhat, with Americans having higher predicted medical use (57.7%: CI: 50.1–65.2%) than Canadians (40.1%, CI: 34.0–46.2%). Small sample sizes in Australia and New Zealand meant that we had very large confidence intervals around our estimates, so none of these was statistically different from either Canada or the USA.

We estimate that over a third of the sample who reported LSD, MDMA, and ketamine use in the past year reported experiencing an adverse or negative health effect (see Table 3). Slightly over half of Americans were estimated to report an adverse reaction with ketamine, while Canadian, Australian, and New Zealand respondents were more often estimated to have adverse events from using LSD and MDMA. Among those who report an adverse event from these substances, a relatively low proportion are estimated to result in an emergency department presentation or call to a poison centre (see Fig. 3).

Discussion

This study explored self-reported lifetime and annual nonmedical and medical use of psilocybin, LSD, ketamine, and MDMA in a large international study involving four countries with regulatory pathways to access these substances for medical use. Based on the ICPS survey, we estimate that 19% of the population reported lifetime use of one of the four substances; far fewer were estimated to use in the past month. Psilocybin was estimated to be the most common drug used in one's lifetime and in the past year. Predicted rates of ever use were highest among respondents in Canada and lowest among respondents in Australia. Among respondents who report ever use of a psychedelic, 10–20% were predicted to discuss their use with a medical provider. Over one-third of past year psychedelic users were predicted as experiencing an adverse health event.

Some of our findings are consistent with those of other national surveys. For example, we found that psilocybin was the most commonly used psychedelic in the USA in the past year, consistent with the 2023 RAND psychedelics survey (RPS) that was administered to a probability-based household AmeriSpeaks panel (3.8% (CI: 3.4–4.2%) and 3.1% (CI: 2.4–3.9%), respectively). Our findings for lifetime use prevalence for psilocybin were also similar (13.0% (CI: 12.3–13.6%) and 12.1% (CI: 10.8–13.5%), respectively) (Kilmer et al., 2024). Differences in results

Table 2
Asked a medical professional about use of each of the top four substances (psilocybin, LSD, MDMA, or ketamine), overall and by country.

	Pooled sample	Canada	USA	Australia	New Zealand
All respondents	*N* = 65,335	*N* = 19,964	*N* = 39,653	*N* = 3042	*N* = 2676
Psilocybin	2.4% (2.2%, 2.6%)	2.2% (1.9%, 2.5%)	2.5% (2.1%, 2.8%)	2.0% (1.5%, 2.5%)	3.7%*+ (2.8%, 4.6%)
LSD	1.9% (1.7%, 2.0%)	1.9% (1.7%, 2.2%)	1.7% (1.5%, 2.0%)	1.7% (1.2%, 2.3%)	3.5%*+ (2.5%, 4.5%)
MDMA	2.1% (1.9%, 2.3%)	2.0% (1.8%, 2.3%)	2.1% (1.8%, 2.4%)	2.1% (1.5%, 2.7%)	2.4% (1.6%, 3.2%)
Ketamine	1.3% (1.1%, 1.4%)	1.0%+ (0.8%, 1.2%)	1.5%* (1.2%, 1.7%)	0.7%+ (0.4%, 1.0%)	1.3% (0.7%, 1.9%)
Ever use	Sample N below is the number of respondents who reported ever use of each of the following substances.				
Psilocybin	9.3% (8.2%, 10.4%) Sample *N* = 9982	7.7%+ (6.5%, 8.9%) Sample *N* = 3443	9.9%* (8.1%, 11.6%) Sample *N* = 5947	10.0% (6.3%, 13.6%) Sample *N* = 286	16.5%*+ (10.9%, 22.0%) Sample *N* = 306
LSD	8.0% (6.9%, 9.0%) Sample *N* = 7087	8.6% (6.9%, 10.2%) Sample *N* = 1972	7.1% (5.7%, 8.5%) Sample *N* = 4499	10.4% (6.7%, 14.1%) Sample *N* = 316	13.4%+ (8.1%, 18.7%) Sample *N* = 300
MDMA	14.2% (12.6%, 15.9%) Sample *N* = 5349	12.2%+ (10.2%, 14.3%) Sample *N* = 1729	16.3%* (13.5%, 19.1%) Sample *N* = 2920	11.4% (7.6%, 15.1%) Sample *N* = 356	11.3% (6.8%, 15.7%) Sample *N* = 344
Ketamine	16.1% (13.5%, 18.7%) Sample *N* = 2036	13.3% (9.8%, 16.8%) Sample *N* = 630	18.2% (14.4%, 22.0%) Sample *N* = 1161	6.6%*+ (2.4%, 10.9%) Sample *N* = 152	17.5% (8.3%, 26.6%) Sample *N* = 93

Notes: 95% Confidence Intervals are presented in parentheses. * indicates *p*-value <0.05 statistical difference with Canada; + indicates *p*-value <0.05 statistical difference with USA.

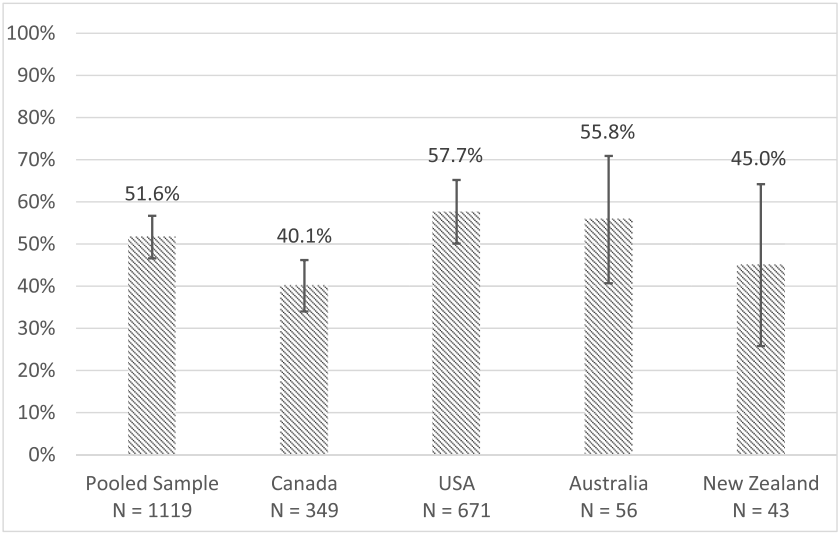

Fig. 2. Self-Reported medical use of psilocybin, LSD, MDMA, or ketamine among respondents reporting past month use in the ICPS.

across surveys might also exist due to differences in participant demographics (Australian Institute of Health & Welfare, 2024; Government of Canada, 2024; Kilmer et al., 2024; Ministry of Health, 2024b; Rocky Mountain Poison & Drug Safety, 2025; Substance Abuse & Mental Health Services Administration, 2025b), how different substances are grouped in the analysis, and the terminology used in the survey questions (Australian Institute of Health & Welfare, 2024; Ministry of Health, 2024b; Rockhill et al., 2025; Rocky Mountain Poison & Drug Safety, 2025; Substance Abuse and Mental Health Services Administration, 2025a). Variance in the terminology integrated into different surveys may yield different prevalence rates, including broad terms (e.g. "hallucinogenics" or "psychedelics"), substance-specific terms (e.g. "psilocybin"), and colloquial terms (e.g. "shrooms"). Our previous medical cannabis-based analysis of ICPS data found that how survey questions are asked about medical or therapeutic use influences medical, nonmedical, and dual use prevalence rates across different countries (Graham et al., 2025). Umbrella terms, including "hallucinogenics", do not differentiate between a range of substances with differential pharmacology and potential therapeutic and adverse effects.

We found higher medically curious individuals among those already reporting ever use than in the overall population, despite very low rates of use in general. Adverse events, however, were common, with a third of the sample reporting past year use of LSD, MDMA, and ketamine estimated to have experienced an adverse or negative health event, with differences evident by country and substance. This is broadly consistent with substance and population differences reported in published literature (Hinkle, et al., 2024; Evans et al., 2023).

Despite only a small proportion of adverse health events being captured by emergency department and poison centre data in the ICPS, our findings and those of other studies highlight differences in reported cases and severity outside of controlled clinical trial settings (Barrios et al., 2025; Breeksema et al., 2022; Myran et al., 2025; Rockhill et al., 2025; Wilkes et al., 2024). Country-specific differences in healthcare

Table 3
Adverse or negative health effect among respondents reporting past year use of any type of the top four substances (Psilocybin, LSD, MDMA, or Ketamine), overall and by country.

	Pooled Sample	Canada	USA	Australia	New Zealand
Psilocybin	21.6% (18.9%, 24.3%) *N* = 2866	17.9%$^{+}$ (14.9%, 20.9%) *N* = 995	24.2%* (20.0%, 28.4%) *N* = 1664	31.9%* (20.1%, 43.7%) *N* = 88	10.3%$^{+}$ (3.8%, 16.8%) *N* = 119
LSD	37.5% (32.9%, 42.2%) *N* = 1137	32.8% (26.1%, 39.6%) *N* = 320	37.9% (31.1%, 44.8%) *N* = 677	54.0%*$^{+}$ (42.2%, 65.8%) *N* = 70	41.0% (24.9%, 57.2%) *N* = 70
MDMA	34.1% (29.8%, 38.4%) *N* = 1123	33.3% (27.1%, 39.4%) *N* = 362	33.6% (27.1%, 40.1%) *N* = 574	41.4% (28.2%, 54.5%) *N* = 80	35.9% (23.9%, 48.0%) *N* = 107
Ketamine	44.7% (38.6%, 50.8%) *N* = 698	29.2%$^{+}$ (20.9%, 37.5%) *N* = 194	53.1%* (44.3%, 62.0%) *N* = 422	29.8%$^{+}$ (13.7%, 45.8%) *N* = 45	24.9%$^{+}$ (7.5%, 42.3%) *N* = 37

Notes: * indicates *p*-value <0.05 statistical difference with Canada; $^{+}$ indicates *p*-value <0.05 statistical difference with USA.

systems and legal access pathways may underpin how individuals engage with medical providers and seek help for potential adverse events. Participant perceptions of negative experiences may also differ with these substances and may be viewed as integral to the therapeutic process (Kilmer et al., 2024; Lake & Lucas, 2023).

Potential applications of these substances for treatment-resistant medical conditions have driven revised viewpoints and policy shifts. However, nonmedical or dual medical and nonmedical use are the most common reasons for psychedelic use reported in several national and international surveys (Lake & Lucas, 2024; Mills et al., 2025; Rocky Mountain Poison & Drug Safety, 2025; Winstock et al., 2021). This is also reflected in ICPS data, where self-reported medical use was fairly common. However, only 10–20% of individuals (depending on country and specific drug) who report ever use of a psychedelic were estimated to have asked their medical provider about this use. Public health initiatives, health professional guidance, and patient education will need to be tailored to the diversity of uses, along with traditional cultural use.

The presence or absence of medical professional supervision of psychedelic use has important safety implications given the potential for comorbid disease- and drug-interactions and adverse effects from psilocybin, LSD, MDMA, and ketamine. In the 2023 RAND report, no participants reported clinical supervision by a licensed medical professional (Kilmer et al., 2024). Our findings support this, with fewer than 3% of North American participants predicted to have asked medical providers about medical use. This rose to just below 20% for some substances among respondents who reported lifetime use. Participants in New Zealand were nearly 50% more likely than respondents in North America to have been predicted as enquiring about these drugs with a medical provider, with greater enquiries for psilocybin and LSD among ever users. Australians, living in the only country with prescription access via psychiatrists, were no more likely than North Americans to enquire about the substances. This highlights the need for medical providers to explicitly ask about psychedelic use as part of standard health assessments.

As the rescheduling of psilocybin and MDMA in Australia came into effect on 1 July 2023 and the survey was fielded shortly thereafter, between September and November 2023, rates of regulated prescription access at that time were low. Conversely, public awareness and enquiries to health professionals about medical use were heightened by media attention. The full impact of this policy change is not likely to be seen for some time and annual data collection in the ICPS survey provides the opportunity to describe these trends as they emerge.

Limitations

Study recruitment involved non-probability sampling, and findings are reliant on self-report, which has an inherent limitation of recall bias. Given heightened media attention, expectancy bias cannot be ruled out. The composition and purity of psychedelic substances accessed via nonregulated pathways cannot be verified. The smaller Australian and New Zealand sample sizes limit conclusive statements. The psychedelic component of the ICPS study did not include data collection on dosing (e.g. therapeutic versus micro-dosing), dosage form, route of administration, or use setting. We did not differentiate between ketamine and esketamine or psilocybin containing mushrooms and fly agaric (Amanita muscaria) (Dart, 2024; Kilmer et al., 2024).

Even with these limitations, these data provide valuable first international insights about interest in therapeutic use, engagement with health professionals, and the extent of side effects. Participant exclusion criteria for psychedelic clinical trials are comprehensive and are unlikely to yield an accurate representation of potential adverse events that are likely to occur with use in populations who have been excluded from clinical trials. Comprehensive pharmacovigilance and surveillance mechanisms are needed to capture adverse events experienced by individuals administering these substances with therapeutic intent outside of regulated pathways or those who engage in dual medical and

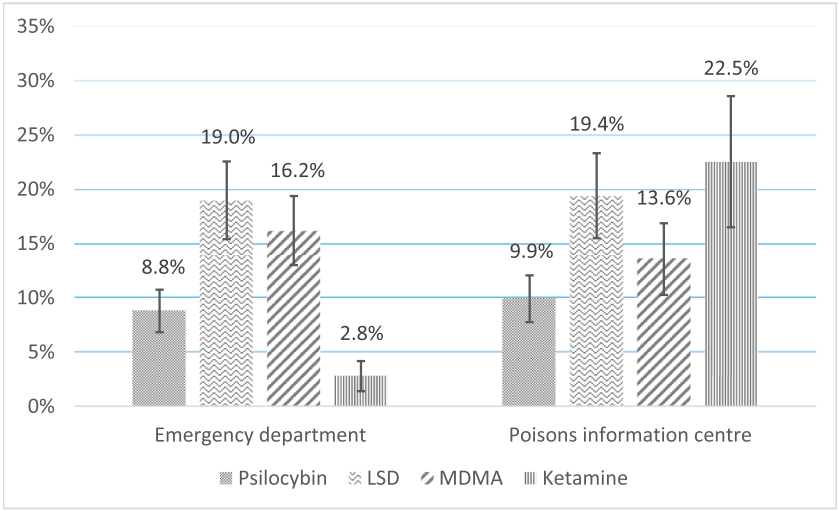

Fig. 3. Medical help among respondents reporting past year use of psilocybin, LSD, MDMA, or ketamine.

nonmedical use (Hinkle et al., 2024). When these substances are sourced outside of regulated pathways, adulterants or high concentration products may influence adverse event findings (De Luca et al., 2026). Only a small proportion of adverse events are captured in health administration data, such as emergency department presentations and poison information centre calls.

Conclusion

The study provides baseline data on the growing interest in medical use of psychedelics through medical and nonmedical pathways in high income countries. Given changing international policies, it will be important to continue monitoring how psychedelics are consumed and whether individuals using psychedelics experience adverse health events and access health services. Consumers are reaching out to medical professionals for advice and/or self-initiating outside regulated contexts. The emerging use of psychedelics for both medical and nonmedical purposes highlights the importance of ensuring that medical professionals are adequately trained and informed about the potential therapeutic benefits and harms of using psychedelics so that they might be empowered to discuss these substances with their patients. Future research may also explore whether changing country-specific policies impact psychedelic use over time and the extent to which individuals and the public experience benefits or harms.

Funding

MG was supported by an NHMRC Postgraduate Scholarship and Monash Research Excellence Scholarship (GNT2030765). Funding for ICPS data collection was provided by a CIHR Project Bridge Grant (PJT-153342) and a CIHR Project Grant. Additional support was provided by a Public Health Agency of Canada-CIHR Chair in Applied Public Health (DH).

Ethics approval

The study received ethics clearance from the University of Waterloo Research Ethics Committee (ORE#31,330).

Data sharing

The data that support the findings of this study are available from the corresponding author upon reasonable request.

CRediT authorship contribution statement

Myfanwy Graham: Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Formal analysis, Data curation, Conceptualization. **Yimin Ge:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Formal analysis. **Rosalie Liccardo Pacula:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Funding acquisition, Formal analysis, Conceptualization. **Seema Choksy Pessar:** Writing – review & editing, Writing – original draft. **Chris Wilkins:** Writing – review & editing, Writing – original draft, Funding acquisition. **Wayne Hall:** Writing – review & editing, Writing – original draft. **David Hammond:** Writing – review & editing, Writing – original draft, Validation, Resources, Project administration, Methodology, Funding acquisition, Data curation, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial or personal relationships that could have appeared to influence the work reported in this paper.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.drugpo.2026.105348.

Appendix

Table A1
Weighted descriptive statistics of ICPS 2023 survey respondents for our analysis sample.

	ICPS Sample (Non Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 61,003$	Study Sample (Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 4332$	*P*-Value (Difference)
Sex			
Female	35.5% (33.2%, 37.7%)	50.7% (50.0%, 51.3%)	<0.001
Male	64.5% (62.3%, 66.8%)	49.3% (48.7%, 50.0%)	<0.001
Age			
16–25 years	19.2% (18.7%, 19.8%)	23.4% (20.9%, 25.8%)	0.001
26–35 years	20.8% (20.2%, 21.3%)	35.7% (33.1%, 38.3%)	<0.001
36–45 years	19.8% (19.3%, 20.3%)	25.9% (23.7%, 28.1%)	<0.001
46–55 years	19.4% (18.8%, 19.9%)	11.1% (9.5%, 12.7%)	<0.001
56–65 years	20.8% (20.4%, 21.3%)	3.9% (3.2%, 4.6%)	<0.001
Race/Ethnicity			
Majority	71.9% (71.3%, 72.5%)	67.3% (64.9%, 69.7%)	0.905

(*continued on next page*)

Table A1 (*continued*)

	ICPS Sample (Non Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 61,003$	Study Sample (Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 4332$	*P*-Value (Difference)
Other/Mixed/Unstated	28.1% (27.5%, 28.7%)	32.7% (30.3%, 35.1%)	0.905
Education			
Less than high school	10.7% (10.3%, 11.1%)	10.8% (9.1%, 12.4%)	0.100
High school diploma	25.0% (24.3%, 25.6%)	23.2% (20.8%, 25.6%)	0.234
Some college or technical/vocational training	32.4% (31.8%, 33.0%)	30.1% (27.7%, 32.5%)	0.582
Bachelor's degree or higher	30.8% (30.2%, 31.3%)	35.8% (33.3%, 38.4%)	0.003

Table A2
Weighted descriptive statistics of ICPS 2023 survey respondents for our analysis sample, by country.

	Canada (Non Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 18,560$	Canada (Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 1404$	USA (Non Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 37,174$	USA (Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 2479$	Australia (Non Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 2844$	Australia (Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 198$	New Zealand (Non Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 2425$	New Zealand (Past Year Use of psilocybin, MDMA, ketamine, LSD) $N = 251$
Sex								
Female	50.6%* (49.7%, 51.5%)	37.4%* (34.5%, 40.4%)	50.6%* (49.7%, 51.6%)	34.1%* (30.8%, 37.5%)	51.1%* (49.1%, 53.1%)	35.0%* (27.4%, 42.6%)	51.3%* (48.8%, 53.7%)	37.8%* (30.8%, 44.7%)
Male	49.4%* (48.5%, 50.3%)	62.6%* (59.6%, 65.5%)	49.4%* (48.4%, 50.3%)	65.9%* (62.5%, 69.2%)	48.9%* (46.9%, 50.9%)	65.0%* (57.4%, 72.6%)	48.7%* (46.3%, 51.2%)	62.2%* (55.3%, 69.2%)
Age								
16–25 years	18.2% (17.5%, 18.9%)	23.2% (20.2%, 26.1%)	19.8%* (19.0%, 20.7%)	22.3%* (18.6%, 26.1%)	18.7%* (17.2%, 20.1%)	34.3%* (26.2%, 42.3%)	18.8%* (16.9%, 20.6%)	26.8%* (19.8%, 33.9%)
26–35 years	20.2%* (19.5%, 21.0%)	37.9%* (34.6%, 41.1%)	20.9%* (20.0%, 21.7%)	34.6%* (30.6%, 38.7%)	22.0%* (20.3%, 23.7%)	34.5%* (25.8%, 43.1%)	21.6%* (19.5%, 23.6%)	34.9%* (26.5%, 43.3%)
36–45 years	20.2%* (19.6%, 20.9%)	23.3%* (20.6%, 26.0%)	19.5%* (18.8%, 20.2%)	28.6%* (25.1%, 32.0%)	21.1% (19.4%, 22.7%)	22.9% (16.4%, 29.4%)	19.9% (18.2%, 21.7%)	16.1% (10.5%, 21.7%)
46–55 years	19.4%* (18.7%, 20.1%)	11.0%* (9.1%, 12.8%)	19.2%* (18.5%, 20.0%)	11.3%* (8.8%, 13.9%)	19.8%* (18.2%, 21.4%)	6.5%* (3.2%, 9.9%)	20.2%* (18.0%, 22.5%)	13.0%* (4.9%, 21.1%)
56–65 years	21.9%* (21.2%, 22.6%)	4.7%* (3.6%, 5.9%)	20.6%* (19.9%, 21.3%)	3.1%* (2.2%, 4.0%)	18.5%* (17.0%, 19.9%)	1.9%* (0.2%, 3.5%)	19.5%* (17.5%, 21.5%)	9.2%* (5.4%, 13.1%)
Race/ Ethnicity								
Majority	66.7% (65.9%, 67.6%)	57.2% (53.9%, 60.6%)	75.1% (74.2%, 76.0%)	74.5% (71.0%, 78.0%)	74.9% (73.1%, 76.7%)	65.0% (56.2%, 73.7%)	58.9% (56.4%, 61.3%)	54.1% (45.2%, 62.9%)
Other/ Mixed/ Unstated	33.3% (32.4%, 34.1%)	42.8% (39.4%, 46.1%)	24.9% (24.0%, 25.8%)	25.5% (22.0%, 29.0%)	25.1% (23.3%, 26.9%)	35.0% (26.3%, 43.8%)	41.1% (38.7%, 43.6%)	45.9% (37.1%, 54.8%)
Education								
Less than high school	13.3% (12.6%, 14.1%)	17.5% (14.4%, 20.5%)	8.9%* (8.4%, 9.5%)	6.3%* (4.5%, 8.1%)	17.0% (15.5%, 18.5%)	13.7% (7.4%, 19.9%)	9.8% (8.1%, 11.5%)	14.8% (6.8%, 22.9%)
High school diploma	26.3%* (25.4%, 27.3%)	20.7%* (17.7%, 23.6%)	23.5% (22.6%, 24.3%)	23.2% (19.5%, 26.9%)	22.1% (20.4%, 23.8%)	30.5% (22.7%, 38.3%)	40.8% (38.2%, 43.3%)	33.2% (24.8%, 41.7%)
Some college or technical/ vocational training	30.6%* (29.8%, 31.3%)	31.3%* (28.6%, 34.1%)	34.6% (33.7%, 35.6%)	30.9% (27.1%, 34.7%)	27.4% (25.6%, 29.1%)	26.7% (19.9%, 33.5%)	18.0% (16.3%, 19.7%)	16.1% (11.2%, 21.0%)
Bachelor's degree or higher	28.3% (27.6%, 29.0%)	30.6% (27.7%, 33.4%)	32.2% (31.3%, 33.1%)	39.6% (35.6%, 43.7%)	32.8%* (31.1%, 34.5%)	28.1%* (20.8%, 35.5%)	25.0%* (23.3%, 26.8%)	33.9%* (27.0%, 40.9%)

Notes: * indicates *p*-value <0.05 statistical difference between the two sample groups within each country.

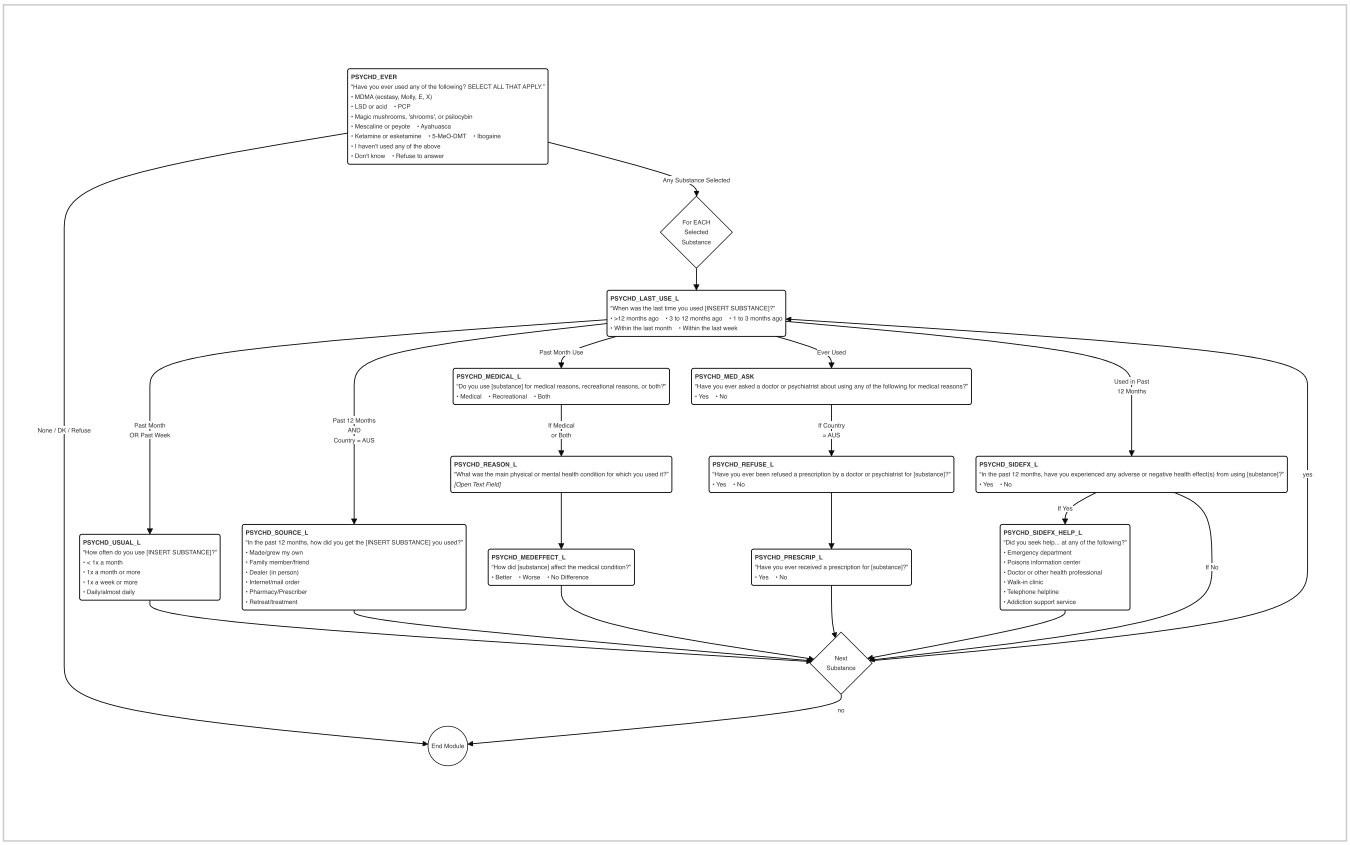

Fig. A1. ICPS 2023 survey questions on psychedelics.

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