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"How Do I Learn More About this?": Utilization and Trust of Psychedelic Information Sources Among People Naturalistically Using Psychedelics

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ABSTRACT

There is a surge of interest in psychedelics, including new stakeholders and greater media attention. There is a need to examine the information-seeking behavior of people using psychedelics naturalistically, given the importance of preparation and harm-reduction. We examined sources of information for people using psychedelics naturalistically, and the degree to which they are trusted in a large, anonymous, online survey ($N = 1221$). The most common source of participants' information on psychedelics was their own experimentation and experiences (79.52%). Most also sought information from Internet websites (61.67%), friends (61.02%), Internet discussion forums (57.08%), books (57%), and articles in peer-reviewed scientific journals (54.55%). Few sought information from their primary health care provider (4.83%). Articles published in scientific journals, psychedelic nonprofits, and researchers based in colleges or universities were the most trusted sources of psychedelic information. Government agencies and pharmaceutical companies were the least trusted. Few participants thought that the popular media accurately stated the benefits and risks of psychedelics and most thought that the popular media failed to distinguish between different types of psychedelics. Our results indicate a high level of information seeking among psychedelic users, with a diverse array of information sources typically outside of mainstream health and medical care systems.

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Introduction

North American and European countries are experiencing a surge of new interest and activity surrounding psychedelics (e.g., psilocybin and LSD). This is evident in the burgeoning body of clinical research in the psychedelic treatment of mental disorders (Hadar et al. 2022), legislative changes in several countries and states liberalizing psychedelic access for both institutional health care (Psychedelic Alpha 2022) and personal use (Aday, Bloesch, and Davoli 2020), rising prevalence of naturalistic (non-institutional) consumption, especially among young adults (Yockey, Vidourek, and Keith 2020), the emergence and growth of psychedelic NGOs (Andrews and Wright 2022) and ballot initiatives (Peipert 2022), a developing psychedelic pharmaceutical industry (Tvorun-Dunn 2022), and a significant increase in media attention to psychedelics in both new and traditional media (Andrews and Wright 2022). This "psychedelic renaissance" (Sessa 2012) is unfolding against the backdrop of over 50 years of prohibitive psychedelic legislation in these same countries, dating back to the late 1960s when LSD was effectively banned for all purposes (including human research, therapy, and personal use) by the United States (U.S.) federal government (Giffort 2020). Despite this, many people in these countries have continued to use psychedelics illicitly (Krebs and Johansen 2013), which has given rise to an extensive underground psychedelic "scene" (or multiple scenes, both local and global) characterized by unique norms and practices related to the use of psychedelics for recreational, therapeutic, and other purposes (Dollar and Cindy 2022).

The "psychedelic renaissance" brings a range of new stakeholders into a domain which has been primarily occupied by people using psychedelics naturalistically (and illicitly). This confluence has created an emerging dialogue between naturalistic and institutional actors, with psychedelic advocacy groups trying to influence policy (Andrews and Wright 2022), private individuals engaging in non-institutional therapeutical practices

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inspired by clinical trials (Noorani 2020; Petersen et al. 2022), and clinical researchers drawing on naturalistic psychedelic knowledge to facilitate the optimal conditions for a therapeutic session (Carhart-Harris et al. 2018; Hartogsohn 2017). In this context, it becomes increasingly important for both new and existing stakeholders in the psychedelic domain to understand the context of psychedelic use and the experiences they can elicit. Adding to this is the imminent need to develop new educational and harm-reduction programs to address both rising illicit use and new licit use in a rapidly changing legislative context.

In this study, we contribute toward such an understanding by examining the information-seeking behavior of people using psychedelics naturalistically. Previous studies show that people using psychedelics naturalistically are generally knowledgeable about psychedelics (Kruger et al. 2022), and commonly engage in considerable information gathering, creation and sharing (Lindsay et al. 2022; Madelene and Maynard 2022), including in online discussions (Walsh 2011), faced with the knowledge gap often associated with illicit substances for which little or no official medical advice is available (Enghoff and Aldridge 2019). The information-seeking behavior of people using psychedelics may be conceptualized as part of broader patterns of information-seeking in relation to illicit and/or psychoactive substances in general (e.g., European Commission 2014), which in turn overlaps more general patterns of information-seeking on health, especially stigmatized conditions or treatments (Duxbury 2018; Tighe et al. 2017). However, the field of psychedelic information is characterized by the unique legal, moral, and medical dynamics of the "psychedelic renaissance" which sets it apart from these more general information-seeking behaviors and places it in a unique territory of knowledge shaped. Thus, extant knowledge on information-seeking in relation to health issues and substances such as cannabis and MDMA (e.g., Anderson 2016; Falck et al. 2004; Kruger, Kruger, and Lorraine Collins 2021) is not necessarily transferable to the domain of classic psychedelics, which highlights the need for specific research on this emerging phenomenon.

However, no study has so far systematically examined which specific sources of knowledge or information are employed by people using psychedelics naturalistically, or the degree to which they are trusted. There is growing emphasis on the importance of preparation for and integration of psychedelic experiences (Carhart-Harris et al. 2018), including both mind-set and accuracy of expectations. The psychedelic landscape is changing rapidly with the increased availability of psychedelics due to decriminalization and the upcoming availability of novel psychedelics and psychedelic derivatives from the surge in pharmaceutical research. Having trusted sources of information is important for increasing the likelihood of safe and responsible naturalistic psychedelic use, especially given the vulnerability that results from the mind-altering nature of the psychedelic experience (Madelene and Maynard 2022). Thus, our goal in the current study was to characterize and describe information sources utilized by psychedelic users and to better understand the perceptions of those sources by surveying participants in a psychedelic advocacy event, psychedelic advocacy groups, and/or online psychedelic discussion forums. We included a wide range of information sources following from literature on the medicinal use of cannabis. Given federal prohibition and the criminalization of psychedelic substances, we hypothesized that most individuals would seek information from their own experiences, friends, and alternative information sources, such as internet websites and forums. We also hypothesized that government agencies would be far less trusted than academic institutions and scientific literature on psychedelics. Finally, we explored how participant age affected patterns in and trust of psychedelic information sources given the rapidly changing cultural landscape surrounding psychedelics.

Methods

Participant recruitment and eligibility

We recruited respondents for an anonymous, confidential online Qualtrics survey from September 18 to November 5, 2022 in person and via posted advertisements at Entheofest, a psychedelic advocacy event in Ann Arbor, MI, as well as via e-mail listservs and social media platforms (e.g., Reddit, Facebook). The "Prevent Ballot Box Stuffing" setting in Qualtrics was used to prevent duplicate responses. Individuals needed to be 18 or more years of age to participate. All surveys and procedures were IRB approved prior to data collection.

Survey development

This assessment was one component of a larger survey investigating the naturalistic use of psychedelics. Items were collaboratively designed with input from organizers of psychedelic advocacy groups, psychedelic therapists, and academics experienced in survey design and psychedelic research. We collected information on respondents' age, gender, race, annual household income, education, and location (e.g., Country, U.S.

State). We assessed past psychedelic use with a checklist of psychedelics, frequency of psychedelic use in the past five years, and strength of dosages used. For this survey, we included non-serotonergic psychedelics including ketamine, *Salvia divinorum*, and ibogaine, as well as MDMA, which are commonly categorized as psychedelics even though their mechanisms of action differ from classic serotonergic psychedelics (e.g., psilocybin and LSD).

We assessed sources of psychedelic information based in part on reported sources of information on medical cannabis (J. S. Kruger, Kruger, and Collins 2021). We asked participants "Where do you seek out information related to psychedelics?," participants could select all applicable information sources or indicate that they did not seek out psychedelic information. We included "My own experimentation and experiences" as an option, as many cannabis users reported distrusting "official" sources of information and relying on their own experiences because of the misinformation campaigns associated with the "War on Drugs." For participants who indicated that they sought information from social media posts, we asked "Which social media platforms do you use to find information on psychedelics?." We assessed trust in 11 psychedelic information sources by asking "How much do you trust the following sources regarding information on psychedelics?," with response options ranging from (1) Not at all to (5) Completely. Finally, we asked about perceptions of how psychedelics are portrayed in the popular media, with the question: "Does the popular media . . . ," with seven statements such as "Understates the risks of psychedelics." Participants were given options of overstating, understating, and accurately stating the benefits and risks, and could select all options that applied.

Statistical analysis

Proportions of participants endorsing items in checklist questions were sorted by frequency and tested for differences with Chi-square tests. Significant differences in proportions were indicated by group membership. Independent-samples t-tests examined differences by participant age. Trust in psychedelic information source items were sorted by mean scores and differences were examined with paired-sample t-tests. Effect sizes were calculated for differences between adjacent items and items were labeled with the nearest response option to the mean score. Pearson correlations examined differences in trust across information sources and perceptions of accuracy in the popular media by participant age.

All study procedures were approved by the University of Michigan Health and Behavioral Sciences Institutional Review Board. Participants were not compensated and could withdraw at any time. Light snacks were available at the Entheofest recruitment table to attract interest.

Results

Survey completion

Overall, 2151 surveys were started and 1287 were completed (59.83% completion rate). Analyses excluded participants who reported never taking psychedelics (n = 66), leaving N = 1,221 for the final sample. Participants reported hearing about the survey through social media (57.17%), e-mail (26.54%), at the Entheofest event (7.94%), and some other mechanism (7.78%); 17.12% of participants reported attending Entheofest. The median time to complete the survey was 25 minutes.

Participant characteristics

The sample population was predominantly White (84.60%), with other respondents identifying (inclusively) as Hispanic or Latino/a/x (6.14%), Native American (4.26%), African American or Black (3.19%), Asian (2.78%), Native Hawaiian or Pacific Islander (0.41%), and Other (4.75%). Respondents were 48.16% women, 46.52% men, 2.05% non-binary, 0.49% transgender, 0.33% gender fluid, and 1.88% other gender identity. The mean age was 38.62 ± 12.08 years and mean education level was 15.49 ± 2.36 years. Most participants (95.99%) lived in the U.S., with 62.08% in Michigan and 30.90% in 42 other states.

Participant psychedelic use is reported in Table 1. Most participants had used Psilocybin mushrooms, Lysergic acid diethylamide, and MDMA/MDA; 91.72% had used psychedelics in the past 5 years. Most (85.7%) had reported used psychedelics at moderate and/or high doses, with 14.33% reporting only microdosing.

Psychedelic information sources

The most common source of participants' information on psychedelics was their own experimentation and experiences (See Table 2). Four-fifths of participants endorsed this item, significantly more so than for any other information source. Most participants reported seeking information from Internet websites, friends, Internet discussion forums, books, and articles in peer-reviewed scientific journals. Only 4.83% of participants reported seeking information from their primary health

Table 1. Reported psychedelic use by type, frequency, and dosage.

Substances used	%	n
Psilocybin mushrooms (magic mushrooms)	93.4	1140
Lysergic acid diethylamide (LSD, acid)	66.6	813
MDMA/MDA (Ecstasy, mMolly)	57.0	696
Ketamine	32.0	391
DMT (N,N-Dimethyltryptamine)	30.5	372
Salvia divinorum or salvinorin A	25.3	309
Mescaline (Peyote, San Pedro cacti)	19.5	238
Synthetic phenethylamines (2C-B, 2C-I, DOM, DOI, 25B-NBOMe, etc.)	14.1	172
Ayahuasca	13.7	167
Lysergic acid amide (LSA, Ergine)	10.6	130
Psilocybin (synthetic)	9.3	113
5-MeO-DMT (5-Methoxy-N,N-Dimethyltryptamine)	9.3	114
Synthetic tryptamines (AL-LAD, ETH-LAD, 4-HO-MET, 5-MeO-MiPT, etc.)	5.6	68
Iboga/Ibogaine	1.3	16
Unknown substance	6.1	74
Other	6.0	73
Frequency of psychedelic use in the past five years		
Not in the past 5 years	7.9	97
Once	10.3	126
One per year	14.1	172
Once every 6 months	16.6	203
Once every 2–5 months	26.9	328
Once every month	12.4	152
Once every week	4.3	53
More than once per week	7.0	86
(missing)	0.3	4
Strengths of doses taken in past five years (inclusive)		
Microdose (effects are sub-perceptual)	55.1	673
Moderate dose (effects are clearly felt)	67.8	828
High dose (effects are strongly felt)	59.0	720

or medical care provider. Reddit was the most common social media platform providing information on psychedelics, followed by Erowid and Instagram, and then Facebook. In open-ended comments, 61 participants (5.00%) mentioned maps.org, 57 participants (4.67%) mentioned results of Google searches, 35 participants (2.87%) mentioned YouTube, 33 participants (2.7%) mentioned shroomery.org, and 12 participants mentioned documentaries as sources of psychedelic information. Only 1.56% of participants reported not seeking out information on psychedelics. There was a direct relationship between the number of Internet-based information sources (e.g., Internet websites, Internet discussion forums, Social media posts) and the number of in-person information sources (e.g., primary health/medical care provider, psychedelic therapists, friends) used, $r(1221) = .304$, $p < .001$, rather than a division between individuals primarily relying on Internet sources and those primarily relying on in-person sources.

Younger participants were more likely to seek psychedelic information from their own experimentation and experiences, Internet discussion forums, social media posts, podcasts, and friends than older participants (See Table 2). Older participants were more likely to seek psychedelic information from psychedelic therapists and to report that they did not seek out psychedelic information than younger participants. Among those who reported seeking psychedelic information on social media, younger participants were more likely to use Reddit and older participants were more likely to use Facebook and Slack.

Psychedelic representation in the popular media

Few participants thought that the popular media accurately stated the benefits and risks of psychedelics (Table 2). More participants thought that the popular media understated the benefits and overstated the risks of psychedelics, compared to overstating the benefits and understating the risks of psychedelics. Most participants thought that the popular media failed to distinguish different types of psychedelics in its reporting. Younger participants were more likely to believe that the popular media understated the risks of psychedelics and failed to distinguish between different types of psychedelics. Post-hoc analyses determined that participants who reportedly used a greater number of different psychedelics were more likely to think that the popular media overstated the benefits of psychedelics, $t(1219) = 7.21$, $p = .001$, $d = 0.52$, understated the risks of psychedelics, $t(1219) = 4.56$, $p < .001$, $d = 0.36$, overstated the risks of psychedelics, $t(1219) = 4.56$, $p < .001$, $d = 0.36$, and failed to distinguish different types of psychedelics, $t(1219) = 3.40$, $p < .001$, $d = 0.20$.

Table 2. Information sources utilized and perceptions of the popular media.

	%	n	Group	Age (*d*)
Sources of participants' information				
My own experimentation and experiences	79.52	971	a	−0.38***
Internet websites	61.67	753	b	−0.11
Friends	61.02	745	b	−0.13*
Internet discussion forums	57.08	697	c	−0.32***
Books	57.00	696	c	0.01
Articles in peer-reviewed scientific journals	54.55	666	c	−0.09
Social media posts (Erowid, Facebook, Instagram, Reddit, etc.)	45.45	555	d	−0.28***
Podcasts	44.14	539	d	−0.18**
Local psychedelic communities	40.13	490	e	−0.03
Nonprofit organizations (MAPS, etc.)	40.05	489	e	−0.01
Providers of psychedelics	26.45	323	f	−0.07
Companies involved in psychedelic research and development	25.47	311	f	−0.12
Conferences/events	20.88	255	g	−0.01
Psychedelic therapists	20.07	245	g	0.24***
Family members	14.33	175	h	−0.02
My primary health/medical care provider	4.83	59	i	−0.12
Other	3.77	46	i	0.25
I do not seek out psychedelic information	1.56	19	j	0.46*
Social media platforms providing information on psychedelics				
Reddit	30.96	378	a	−0.58***
Erowid	21.46	262	b	−0.10
Instagram	18.84	230	b	−0.08
Facebook	14.99	183	c	0.61***
Discord	7.94	97	d	−0.16
Other social media platform	5.32	65	e	0.21
Tik Tok	4.83	59	e	−0.02
Slack	0.98	12	f	0.87**
Perceptions of the popular media's coverage of psychedelics				
Understates the benefits of psychedelics	66.83	816	a	−0.19***
Fails to discriminate between different types of psychedelics	64.21	784	a	−0.17**
Overstates the risks of psychedelics	57.08	697	b	−0.22
Overstates the benefits of psychedelics	19.49	238	c	0.01
Understates the risks of psychedelics	15.48	189	d	−0.17
Accurately states the benefits of psychedelics	13.27	162	d	0.00
Accurately states the risks of psychedelics	10.32	126	e	−0.11

Note: Items within each set with shared Group letters do not significantly differ from each other in proportions of respondents, items not sharing Group letters are significantly different in proportions of respondents. Age (*d*) indicates effect size for age comparisons (.20 = small, .50 = medium, .80 = large), positive values indicate greater likelihood of endorsing with older age, negative values indicate greater likelihood of endorsing with younger age. * indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$.

Table 3. Trust in psychedelic information sources.

	M	*d*	Group	Scale value	Age (*r*)
Articles published in peer-reviewed scientific journals	3.74		a	Very much	−.06
Psychedelic nonprofits	3.63	0.12	b	Very much	.00
Researchers based in colleges/universities	3.62	0.01	b	Very much	−.02
Psychedelic therapists in medical clinics	3.44	0.21	c	Moderately	−.07*
Psychedelic therapists operating independently	3.22	0.24	d	Moderately	−.04
Researchers based in industry	3.15	0.06	e	Moderately	−.10***
Psychedelic start-up companies	2.52	0.63	f	Moderately	−.06*
People posting in on-line forums	2.48	0.03	f	Somewhat	−.20***
Articles in the popular media	2.35	0.13	g	Somewhat	.09***
Government agencies	1.72	0.64	h	Somewhat	.06*
Pharmaceutical companies	1.67	0.06	h	Somewhat	.02

Note: d indicates effect size of the difference (.2 = small, .5 = medium, .8 = large) with the preceding item in the table. Items with shared Group letters do not significantly differ from each other, items not sharing Group letters are significantly different. Scale value indicates the nearest response option to the mean score. Age (r) indicates correlations of trust with age, positive values indicate greater trust with older age, negative values indicate greater trust with younger age. * indicates $p < .05$, ** indicates $p < .01$, *** indicates $p < .001$.

Trust in information sources

The most trusted source of participants' information on psychedelics was articles published in peer-reviewed scientific journals, followed by psychedelic nonprofits and researchers based in colleges or universities (See Table 3). These information sources were trusted very much by participants on average, no information source was trusted completely. Participants had a moderate

level of trust on average for psychedelic therapists, researchers based in industry, and psychedelic start-up companies. Participants somewhat trusted people posting in on-line forums, articles in the popular media, government agencies, and pharmaceutical companies. The lowest level of trust was for government agencies and pharmaceutical companies, though the average level of trust for these sources was closer to "somewhat" than to "not at all." Significant differences between adjacent media sources ranged from small to medium in effect.

Younger participants had higher levels of trust in people posting in on-line forums, researchers based in industry, psychedelic therapists in medical clinics, and psychedelic start-up companies than older participants. Older participants had higher levels of trust in articles in the popular media and government agencies than younger participants.

Discussion

Our study population had considerable experience with the use of psychedelics, most participants (80.75%) used at least two different psychedelics and the majority (67.32%) used psychedelics at least once every six months in the past five years. People experienced with the use of psychedelics commonly seek and share relevant information and knowledge (Lindsay et al. 2022; Madelene and Maynard 2022). Our participants reported using a median of five reported external information sources on psychedelics ($M = 5.73$, SD = 3.22) and less than 2% reported not seeking information about psychedelics at all. This indicates a high degree of information-seeking, especially in comparison to information-seeking for other psychoactive substances. In a survey of frequent cannabis users, 31.78% did not use any information sources other than their own experiences, compared to 4.1% in the current study. The most frequently reported source for cannabis information was "the Internet," reported by 38.77% of participants (Kruger et al. 2022), compared to 61.67% of participants in this study.

The most common information source was personal experience and experimentation, followed by Internet websites and forums, friends, books, peer-reviewed articles, podcasts, local psychedelic communities, and nonprofit organizations, all of which were reported by at least 40% of participants. The least commonly reported information source was health/medical care providers. These findings indicate a high degree of independence in information-seeking behavior, reliance on first- and second hand information, as well as a diverse array of other information sources outside of health/medical care institutions. This pattern is likely related to U.S. legislation and government interventions since the 1970s, which have classified psychedelics as Schedule I illegal drugs and thus made them the object of prohibition (Richert, Dyck, and Turner 2021). This has contributed to driving people toward underground environments for the exchange of information about psychoactive substances, such as use guidance and harm reduction advice (Enghoff and Aldridge 2019).

Among the information sources listed in the survey, the participants on average assigned the lowest degree of trust to government agencies ($M = 1.72$) and pharmaceutical companies ($M = 1.67$). Mistrust in the government is another likely consequence of the government's historical stance on these substances, due to what is perceived as misleading representations of the risks and benefits of psychedelics. Mistrust in pharmaceutical companies could also be related to the contemporary U.S. "opioid crisis," with recent major lawsuits and settlements assigning blame to well-known pharmaceutical companies (Mann and Bebinger 2022), as well as recent criticism of the business ethics of new psychedelic pharmaceutical companies (Tvorun-Dunn 2022).

Although critical journalism likely contributes to skepticism toward pharmaceutical companies, popular media portrayals of illicit substances generally echo the problematizing perspectives of government agencies, such as law enforcement and public health institutions (Blood, Williams, and McCallum 2003; Månsson 2016). Popular media had the third-lowest average level of trust ($M = 2.35$) assigned by survey participants. A similar average degree of trust was found for people posting in online forums ($M = 2.48$), even though 57.08% of participants reported using Internet discussion forums and 45.45% reported using social media posts as sources of information. Although participants seeking information in discussion forums report higher levels of trust in the people who post there, these findings, especially in combination with the overall variance in trust assigned to different sources, may indicate a discerning approach to information on psychedelics, where the obtained information is critically evaluated and varyingly trusted. Such an approach is likely to develop in circumstances where people who use psychedelics have no other option than using information which is often of unclear origin and may not be subject to any expert validation. People seeking information about illicit substances online tend to prefer anonymous platforms (Barratt 2011), and the most reported social media platform by the participants was the fully anonymous Reddit (30.96%).

Peer-reviewed scientific journals were the most trusted source of information (and were used by 54.54% of participants), followed closely by psychedelic

nonprofits and researchers based in colleges/universities. Thus, despite the tendency to use first- and second-hand information sources, participants were attuned to peer-reviewed science on psychedelics. This may indicate a positive relationship with the "third wave" (Carhart-Harris et al. 2018) of psychedelic research, with researchers and research centers emerging as part of the ongoing psychedelic renaissance. These findings may have been different if the survey was conducted prior to the recent growth in psychedelic science, which draws in more naturalistic psychedelic perspectives than earlier scientific publications in the field, which have historically been dominated by a pathology paradigm (Moore 2008).

Popular media coverage of psychedelics was widely perceived as inaccurate, with low to moderate average trust ($M = 2.35$). Most participants thought that media coverage understated benefits (66.83%), overstated risks (57.08%), and inadequately discriminated between different types of psychedelics (64.20%). Participants who had experienced a greater array of psychedelics were more likely to report perceived inaccuracies in popular media coverage of psychedelics. Popular media has played a central role in the propagation of positive messages about psychedelics emerging from the ongoing resurgence (Andrews and Wright 2022) but may still follow the tendency of mainstream media coverage of illicit substances to focus on negative outcomes (Bright et al. 2008) and sensational framing (Alexandrescu 2013; Blackman et al. 2018). Younger participants were more likely to think that popular media understates the risks of psychedelics, which may be consistent with the more enthusiastic depictions of psychedelics in the current wave of interest than in previous decades.

The mean participant age was 36 years, which is somewhat higher than the 26–34-year age group with the peak prevalence of psychedelic experience in the U.S. (Yockey and King 2021; Yockey, Vidourek, and Keith 2020). We noted some examples of information seeking and trust varying by age group. This is an important theme, because a new generation is currently growing up in the context of the psychedelic renaissance, without lived experience of more widespread stigmatization and prohibition. Furthermore, we know that younger generations have a different approach to media from their older counterparts, typically preferring websites and social media to more traditional media as sources of information on both general topics such as news (Shearer 2022) and more individual topics such as personal health (Park and Kwon 2018). This is known to impact young people's information-seeking behavior in relation to illicit substances (European Commission 2014). Younger participants indicated more use of and trust in information from online sources, more trust in industry and therapists, less trust in popular media, and more use of the social media platform reddit more and less use of Facebook.

We found evidence of a high degree of information-seeking, characterized using a wide array of diverse sources and a discerning approach to these, i.e., varying levels of trust assigned to different sources, with somewhat divergent patterns exhibited by younger participants. These findings indicate both a high degree of independence from official sources of information, as well as a strong connection to current psychedelic science. Thus, we find evidence of the divide between naturalistic psychedelic use and official institutions, created and reinforced by legislation and stigma, as well as signs of a potential bridging of naturalistic and institutional psychedelic worlds. These results point to the need for further efforts in education, policy, research, and community building to align these two worlds, especially in relation to younger generations growing up in a rapidly developing psychedelic climate. This study contributes toward establishing a foundation for addressing the trust gap in psychedelic science, medicine, naturalistic use, and public discourse by providing insight into the values and practices of people using psychedelics naturalistically, which may be directly drawn upon by policy makers, public health officials, and clinicians working with this population.

Given the convenience sample recruitment strategy, our findings may diverge from those with a population-representative sample. Results of this survey may not generalize to people who are less likely to complete an on-line survey (such as those with little Internet access). Because our sample population was largely White and from the U.S., our findings may not generalize to other ethnicities or nationalities. Finally, the mean age of the participants was high compared to national statistics on the use of psychedelics in the United States. At the same time, the study was well-powered and had a completion rate of>50%. The sample included proportions of women and men more representative of percentage among the general population, in contrast to other studies of psychedelic users which heavily oversample men, as well as including a higher proportion of gender non-binary/transgender/other gender individuals.

In our study, people using psychedelics naturalistically report a high level of information seeking, with a diverse array of information sources typically outside of mainstream health and medical care systems. Their most common source of psychedelic information was their own experimentation and experiences,

though most also seek information from the Internet, friends, books, and articles in peer-reviewed scientific journals. Peer-reviewed articles and academic researchers were the most trusted source of information, whereas government agencies and pharmaceutical companies were the least trusted sources. Participants generally thought that the popular media did not accurately depict the benefits and risks of psychedelics. Educational efforts utilizing the most trusted information sources may have the most impact at disseminating accurate information about psychedelics and promoting safe and responsible use moving forward.

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Data availability statement

The data that support these findings are available from the corresponding author (DJK) upon request. http://www-personal.umich.edu/~kruger/

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