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Perspectives on Trauma Treatment, Self-Management Strategies, and Attitudes Toward Psychedelic Therapies in Individuals with Psychological Trauma Symptoms

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ABSTRACT

Background: Current trauma treatment options often fail to meet patients' needs. Despite the availability of established interventions, many trauma treatments fail to adequately meet patients' needs. In parallel, there has been renewed scientific and public interest in the therapeutic potential of psychedelics and related compounds, accompanied by increasing unsupervised use. This underscores the need to examine patients' willingness to engage with these therapies should they receive regulatory approval and to better characterize patterns of self-administration in order to inform patient-centered care and harm reduction strategies.

Methods: An online survey recruited individuals with self-reported trauma symptoms or a formal diagnosis of post-traumatic stress disorder (PTSD)/complex post-traumatic stress disorder (CPTSD). Participants were asked about their treatment history, satisfaction with current treatments, and use of illicit substances for symptom management. Further, after receiving psychoeducation on 3,4-methylenedioxymethamphetamine (MDMA) and psilocybin therapies, participants' perceptions and willingness to participate in these treatments were assessed.

Results: Of the 873 respondents, 94.8% reported experiencing psychological trauma, with 73.4% diagnosed with PTSD or CPTSD. Many had attempted multiple treatments, predominantly medications and various psychotherapies, but reported high dissatisfaction. Significant rates of marijuana, psychedelics, and MDMA use for self-management of trauma symptoms were reported, with minimal physical and psychological complications. Willingness to try MDMA and psilocybin therapies was high (0.81 and 0.83, respectively). Notably, women and heterosexual individuals showed lower willingness, while younger respondents and those with higher education levels showed greater willingness to try these treatments.

Conclusion: High willingness to try MDMA and psilocybin therapies among trauma-exposed individuals highlights the need for further research and clinical trials. Understanding demographic variations in willingness can guide the development of accessible and effective treatment options for PTSD and CPTSD. Public education about potential risks and harm reduction strategies is crucial to promote safe and informed use of these emerging therapies.

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INTRODUCTION

Lifetime trauma exposure is widespread[1,2] and may lead to serious adverse health outcomes and psychosocial dysfunction[3] including complex post-traumatic stress disorder or post-traumatic stress disorder (CPTSD/PTSD), personality and affective disorders, and suicidal ideation.[4] Recommended first-line psychotherapies in traumatic-stress are exposure-based, cognitive behavioral therapies (CBTs) such as prolonged exposure, trauma-focused CBT and Eye Movement Desensitization and Reprocessing (EMDR).[5] Despite their effectiveness, many patients do not improve, and dropout rates are high.[6] Despite small effect sizes and unfavorable side effects, selective serotonin reuptake

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inhibitors sertraline and paroxetine, are recommended in PTSD[7] with the treatment aimed primarily at symptomatic management. Taken together, there is an urgent need to develop new treatment paradigms for this common and highly disabling disorder.[8] Correspondingly, there has been a resurgence in scientific inquiry exploring the therapeutic application of classical psychedelics and 3,4-methylenedioxy-methamphetamine (MDMA) for PTSD treatment.[9,10,11] Within these medically supervised clinical trials, participants are medically screened, and psychedelics are delivered alongside psychological support or psychotherapy, including the provision of preparation and integration sessions.[12]

Due to the dearth of efficacious treatments, individuals afflicted with trauma-related conditions may pursue alternative therapeutic modalities and self-management approaches. Within illegal psychoactive substances, despite the lack of robust evidence demonstrating the causal positive effects of cannabis preparations in PTSD cannabis is widely perceived to hold some therapeutic value.[13] Further, recent evidence suggests increasing use of psychedelics to help manage adverse mental and physical health conditions,[14] and for self and spiritual development purposes.[15] In online surveys and qualitative studies investigating self-medication strategies and symptoms management for refractory cluster headaches,[16] chronic pain,[17] and functional neurological disorder,[18] respondents disclosed the utilization of illicit substances (including cannabinoids, cocaine, heroin, lysergic acid diethylamide, and psilocybin) for the alleviation of acute symptoms and as a prophylactic measure. The majority of respondents reported moderate effectiveness and minimal physical and psychological side effects.

MAIN POINTS

- Dissatisfaction with standard treatments: Participants engaged in a median of 4 treatment modalities (Q1–Q3 = 3–5), most often medications (72.7%) and psychotherapy (44.4%). Nearly 60% were dissatisfied, and over half (50.6%) said treatments met only "a few" of their needs.
- High self-management using illicit substances: 41.7% reported using illicit substances, most commonly marijuana (38.5%), psychedelics (26.0%), and MDMA (23.5%). Psychedelics and MDMA were rated highly effective (median = 0.91 and 0.76) with most users reporting no or minimal complications.
- Strong willingness for psychedelic therapies: Median willingness scores (≥0.75, n ≈ 520–537) to join MDMA- and psilocybin-assisted therapy trials or access treatment if approved were high. Younger age, higher education, bisexual identity, and male gender predicted greater willingness; women and heterosexual participants were less willing.
- Need for harm reduction and equity: Trauma-informed harm reduction, public education, stigma reduction, and targeted outreach to less willing groups are essential, given current self-use trends.
- Policy and implementation priorities: Healthcare systems should prepare for possible future implementation of psychedelic-assisted therapies—if approved—through clinician training, trauma-informed protocols, accessible delivery models, and safety monitoring.

Despite the increasing use of psychedelics,[19,20] there is a lack of research investigating the use of psychedelics to self-manage trauma-related mental health conditions. Notably, the Global Drugs Survey found increasing rates of psychedelic use, and that a significant amount report using psilocybin for "well being" or "medication."[21] Around 40% reported doing so without psychological support. Another recent study found that 64% of psilocybin users reported doing so for "general mental health and well-being."[22] Given the growing use of psychedelics illicitly for mental health purposes, research is needed to understand this practice and promote harm reduction strategies for traumatized individuals utilizing illegal substances to manage symptoms.

The MDMA-assisted therapy and psilocybin treatment may receive regulatory approval in the coming years.[23] Therefore, research investigating perceptions of these treatments specifically in those who could potentially benefit from them is needed. Perceptions of psychedelic treatment in more general groups has been investigated. About 35% of US college students reported that psychedelics can be a therapeutic tool for depression, and 84% reported support for future research.[24] In a survey of mental health users broadly, 72% supported further research, 59% reported support for psilocybin as a medical treatment, and 27% reported recreational use of psilocybin.[25] There has also been research in demographic populations of those with disproportionate risk of trauma exposure, including in veterans, which found that overall positive views of MDMA and psilocybin therapy with many reporting concerns of long-term effects,[26] and in Black Americans, who reported overall positive views of these treatments, with higher levels of baseline depression and PTSD being associated with greater baseline interest.[27]

The present study involved an anonymous, online survey recruiting an international sample of individuals who self-reported as suffering from trauma symptoms and/or having received a formal diagnosis of PTSD or CPTSD to investigate 1) treatment history, including history and satisfaction of engagement in clinical treatments as well as prevalence of use of illicit substances for self-management of trauma symptoms, perceived effectiveness, and adverse effects 2) after providing brief psychoeducation on MDMA-assisted therapy and psilocybin therapy, to assess perceptions of the interventions, including willingness to participate, and views on potential risks and benefits within mental health treatment.

MATERIAL AND METHODS

Ethics and Informed Consent

The study conformed with the ethical principles of the World Medical Association Declaration of Helsinki. The study was approved by King's College London Research Ethics Committee (HR-19/20-20712). To ensure informed consent and voluntary participation, participants were provided with detailed information about the study's

purpose, procedures, potential risks and discomforts, confidentiality measures, and the investigator's contact information before beginning the survey. They were then asked to acknowledge that they had read and understood this information and to consent to participate in the survey.

Participants

The survey was open to individuals with self-reported past and current symptoms of psychological trauma or a current or past diagnosis by a mental health professional of PTSD or CPTSD. Respondents were recruited through relevant groups on social media (i.e., Twitter, Reddit, and Facebook) and patient support groups (e.g., PTSD UK). Participation in the survey was voluntary, and respondents could quit the survey at any time.

Materials

The questionnaire link access lasted for a period of approximately 12 months. Survey questions were written in English, avoiding medical jargon where possible. Questions consisted of multiple choice, visual analogue scales, and some free-test fields. For the purpose of this research, only responses from multiple choice questions were used, which could be coded numerically for later analysis. Prior to responding to questions evaluating willingness to participate in MDMA-assisted or psilocybin therapy, participants were provided with a brief psychoeducation document highlighting the interventions' procedures, safety, and efficacy data reported in clinical trials. (Supplementary Material).

Demographics

In total, 873 respondents took part in the study (Table 1). Some respondents did not complete the survey fully, but 605 (69.3%) completed every section. The greatest proportion of respondents were aged 35-44 years old (30.1%). Of the respondents, 608 (69.8%) were female. A total of 672 respondents (77%) resided in the UK, with responses received from 38 different countries. The majority of the respondents were white (88%). Most respondents (93.4%) reported completing high school, 34.3% were in full-time employment, and approximately half (51%) had a household income ranging from less than £10,000-£29,999. Over a third of the respondents were single (39.2%), 27% were married and 48.9% had children.

Data Analysis

Data were analyzed with IBM SPSS Statistics, version 29.0.1.0 (IBM SPSS Corp.; Armonk, NY, USA). Where respondents were given the option to select more than 1 answer, mutually incompatible answers were removed from the analysis. Descriptive statistics—including frequencies and proportions/percentages—were used to summarize the data. For continuous variables, normality was assessed by applying the Kolmogorov–Smirnov test and by visually inspecting Q-Q plots. For variables that were found to be normally distributed,

Table 1. Demographic Characteristics of Participants

	n	%
Gender		
Female	608	69.8
Male	242	27.8
Other	15	1.7
Prefer not to say	6	0.7
Country of residence*		
Australia	11	1.3
Canada	16	1.8
New Zealand	2	0.2
United Kingdom	672	77
USA	96	11
Asia (2)	3	0.3
Europe (17)	54	6.2
South America (3)	6	0.7
Africa (4)	5	0.7
Caribbean (3)	4	0.4
Middle East (3)	4	0.4
Age		
18-24	118	13.6
25-34	228	26.2
35-44	262	30.1
45-54	176	20.3
55-64	70	8.1
65-74	12	1.4
Ethnicity		
Any other	13	1.5
Arab	5	0.6
Asian/Pacific Islander	17	1.9
Black/African	6	0.7
Hispanic/Latino	10	1.1
Mixed	37	4.2
Native American	2	0.2
Prefer not to say	15	1.7
Caucasian	768	88.0
Religion		
Agnostic	116	13.4
Atheist	291	33.7
Buddhist	20	2.3
Christian	185	21.4
Hindu	6	0.7
Jewish	8	0.9
Muslim	6	0.7
Other	104	12
Prefer not to say	66	7.6
Traditional/folk religion/spiritist	62	7.2

(*Continued*)

Table 1. Demographic Characteristics of Participants (*Continued*)

	n	%
Sexual orientation		
Bisexual	134	15.3
Gay/lesbian	44	5
Heterosexual/straight	613	70.2
Not sure	31	3.6
Other	30	3.4
Prefer not to say	21	2.4
Educational level		
Associate degree in college	77	8.8
Bachelor's degree in college	245	28.2
Doctoral degree	23	2.6
High school graduate	82	9.4
Less than high school	57	6.6
Master's degree	141	16.2
Professional degree	17	2
Some college but no degree	226	26
Relationship status		
Civil partnership	19	2.2
Cohabiting	144	16.5
Divorced	61	7
Married	236	27.1
Other	59	6.8
Prefer-not-to-say	11	1.3
Single	341	39.2
Living situation		
Alone	231	26.7
Friends	45	5.2
Other	117	13.5
Parents	85	9.8
Partner	190	21.9
Partner-and-children	192	22.2
Supported housing	4	0.5
Without-partner-but-with-children	2	0.2
Children?		
Yes	425	48.9
No	444	51.1
Employment-status		
Full-time	294	34.3
Other	85	9.9
Part-time	98	11.4
Prefer-not-to-say	11	1.3
Retired	44	5.1
Self-employed	77	9
Student	108	12.6
Unemployed	141	16.4

(*Continued*)

Table 1. Demographic Characteristics of Participants (*Continued*)

	n	%
Annual-household-income ($/€/£)		
Less-than-10 000	131	15.3
10 000-19 999	178	20.8
20 000-29,999	127	14.9
30 000-39 999	97	11.4
40 000-49 999	71	8.3
50 000-59 999	44	5.2
60 000-69 999	31	3.6
70 000-79 999	23	2.7
80 000-89 999	20	2.3
90 000-99 999	20	2.3
100 000-149 999	34	4
150 000+	25	2.9
Prefer-not-to-say	53	6.2
Political views		
Conservative/Republican	87	10.2
Democrat/labour	179	21
Green	80	9.4
Liberal-Democrat	68	8
Moderate	60	7
Other	131	15.4
Prefer-not-to-say	135	15.8
Socialist	112	13.1
Veteran status		
Yes	119	14
No	734	86
Which veteran category?		
Armed forces	82	68.9
Medical services	14	11.8
Police	15	12.6
Other emergency service	8	6.7
Trauma-diagnosis		
PTSD	327	38.6
CPTSD	295	34.8
No-trauma-diagnosis**	226	26.7

CPTSD, complex post-traumatic stress disorder; PTSD, post-traumatic stress disorder.*For country of residence, if n < 10, the country was grouped as appropriate:
(Asia: Hong Kong (1) and India (2); rest of Europe: Spain (6), Andorra (1), Austria (1), Bulgaria (2), Finland (1), France (4), Germany (8), Hungary (1), Ireland (7), Luxembourg (1), Malta (1), Netherlands (9), Norway (6), Poland (1), Portugal (2) Sweden (1), and Switzerland (2); South America: Columbia (2), Costa Rica (2), and Mexico (2); Africa: Algeria (1), Egypt (1), Niger (1), and South Africa (2); Caribbean: Bahamas (1), Barbados (2), and Dominican Republic (1); Middle East: Jordan (1), Qatar (2) and United Arab Emirates (1)).
**226 participants (26.7%) who reported that they felt they were suffering from psychological trauma had not received a PTSD or CPTSD diagnosis.

data are presented as mean ± standard deviation; for non-normally distributed data, medians with Q1-Q3 are provided. Between-group comparisons of continuous variables were conducted using Mann–Whitney *U* and Kruskal–Wallis H with Dunn-Bonferroni post-hoc tests. Only significant post-hoc test results are included in the table, full post-hoc test results are shown in Supplementary Table 1. Associations between ordinal and continuous variables were assessed using Spearman's rank order correlation. Additionally, chi-square tests were employed to compare between-group frequencies, and odds ratios were calculated to explore the strength of associations between variables.

RESULTS

Trauma Exposure

A total of 858 respondents answered the question "Have you experienced psychological trauma?" Of these, 94.8% answered yes. Additionally, 848 respondents answered the question "Have you been formally diagnosed with PTSD?" Among them, 622 (73.4%) had a formal diagnosis of either PTSD (n = 327, 38.6%) or CPTSD (n = 295, 34.8%). Of 803 respondents, 236 (29.4%) first experienced their symptoms over 20 years ago, while 208 (25.9%) reported symptoms lasting 10 to 20 years. Respondents were asked to select out of 21 experiences (see supplementary material). Of these, the most common, self-reported traumatic experiences were bullying (n = 520, 59.6%), childhood emotional abuse (n = 490, 56.1%), break up (n = 463, 53.0%), and sexual assault (n = 446, 51.1%) (Table 2), and on average, respondents self-reported having experienced 7 of the 21 traumatic events.

Management

Treatments Reported: A total of 694 respondents answered questions about the treatments they had received for psychological trauma. The average number of treatments attempted was 4 (Median (Q1-Q3) =4 (3-5)). These included medication, various psychotherapies and online self-help methods. The 3 most received/sought treatments were "medications" (n = 445, 72.7%), "online self-help" (n = 336, 60%), and "other psychotherapies" (n = 293, 51%) (Table 3).

Pharmacotherapies

Respondents reported using a range of medications to manage symptoms. The most common medications used currently or in the past were antidepressants (n = 283, 63.6%), analgesics (n = 176, 39.6%), and benzodiazepines (n = 160, 35.9%) (Table 4). Most respondents found these medications unhelpful in managing their symptoms (71%, 69.3%, and 51.3% respectively). Of interest, 152 (22.5%) of 675 respondents reported having used prescription medications without a prescription from a medical prescriber, with the proportion of those answering yes increasing as the number of therapies attempted increased.

Table 2. Self-Reported Use of Legal and Illicit Substances in the Management of Psychological Trauma Symptoms Among Respondents

	n	%	% of Total
Legal Substances (n = 190 of 873)			
Caffeine	107	56.3	12.3
Alcohol	151	79.5	17.3
Tobacco	113	59.5	12.9
E-cigarettes/nicotine	61	32.1	7.0
Melatonin	63	33.2	7.2
Liquorice	22	11.6	2.5
Kudzu	2	1.1	0.2
CBD	99	52.1	11.3
Poppers	31	16.3	3.6
Glue	11	5.8	1.3
Eleuthero	1	0.5	0.1
Wild yam	3	1.6	0.3
Schisandra	1	0.5	0.1
Oat tops	4	2.1	0.5
Valerian root	50	26.3	5.7
Holy basil	12	6.3	1.4
Rhodiola	11	5.8	1.3
Other	28	14.7	3.2
Illicit substances (n = 364 of 873)			
Marijuana	336	92.3	38.5
Ketamine	111	30.5	12.7
MDMA	205	56.3	23.5
Speed	145	39.8	16.6
Psychedelics	227	62.4	26.0
Cocaine	163	44.8	18.7
Nitrous	79	21.7	9.0
Mephedrone	0	0.0	0.0
SynCannab	0	0.0	0.0
Meth	0	0.0	0.0
Khat	0	0.0	0.0

MDMA, 3,4-methylenedioxymethamphetamine; CBD, Cannabidiol.

Psychological Therapies

A total of 527 respondents reported having attempted one or more of form of psychological therapy. The median (Q1-Q3) number of psychotherapies tried was 2 (1-3). The most used psychotherapy was cognitive therapy for PTSD with 275 (44.4%) out of 620 respondents, followed by group therapy at 213 (35.5%) out of 600 respondents.

Satisfaction with Treatments Received

A total of 651 respondents answered the question, "Have the treatments you received helped you to deal more effectively with your trauma-related problems/difficulties?" Of these, 303 (46.5%) respondents felt the treatments helped somewhat, 119 (18.3%) responded with "yes, a great deal," 179 (27.5%) responded "no, not really," while 50 (7.7%) felt treatments made their difficulties worse.

Table 3. Self-Reported Subjective Psychological and Physical Complications from Alternative Substance Use in the Management of Psychological Trauma Symptoms Among Respondents

	Psychological Complications								Physical Complications							
	None	%	Minimal	%	Some	%	Severe	%	None	%	Minimal	%	Some	%	Severe	%
Marijuana	205	62.7	72	22	39	11.9	11	3.4	237	72.5	67	20.5	20	6.1	3	0.9
Synthetic cannabinoid	23	76.7	2	6.7	2	6.6	3	10	19	63.3	6	20	2	6.7	3	10
Ketamine	98	79	17	13.7	4	3.23	5	4	99	59.3	10	6	54	32.5	3	1.8
MDMA	144	67.9	38	17.9	23	10.9	7	3.3	166	78.3	32	15.1	13	6.1	1	0.5
Amphetamine	94	61.4	28	18.3	20	13.1	11	7.2	107	69.9	25	16.3	16	10.5	5	3.3
Psychedelics	185	71.7	45	17.4	11	4.3	17	6.6	222	85.7	32	12.4	5	1.9	0	0
Cocaine	83	53.54	26	16.8	28	18.1	18	11.6	98	63.3	31	20	16	10.3	10	6.4
Meth	22	68.8	3	9.4	6	18.8	1	11.6	25	78.1	3	9.4	4	12.5	0	0
Khat	11	100	0	0	0	0	0	0	11	100	0	0	0	0	0	0
Nitrous oxide	89	91.7	5	5.2	3	3.1	0	0	84	88.4	5	5.3	6	5.3	1	1
Mephedrone	27	64.3	6	14.3	6	14.3	3	7.1	30	71.5	3	7.1	5	14.3	3	7.1
PCP	17	94.4	1	5.6	0	0	0	0	17	94.4	1	5.6	0	0	0	0
Other	18	62.01	6	20.7	5	17.2	0	0	23	79.3	0	0	6	20.7	0	0

MDMA, 3,4-methylenedioxymethamphetamine; PCP, Phencyclidine.

Table 4. Prescription Medication Use

Medication	n	%
Antidepressants	283	32.4
Benzodiazapines	160	18.3
Antipsychotics	102	11.7
Mood stabilizers	56	6.4
Hypnotics	140	16.0
Opioids	132	15.1
Analgesics	176	20.2
Cardiac medications	95	10.9
Legal cannabis	65	7.4
Other	51	5.8

Out of 656 respondents who answered the question, "To what extent have the treatments you have been offered met your needs?", 332 (50.6%) respondents felt treatments met "a few" of their needs, 155 (23.6%) reported that most of their needs were met, while 124 (18.9%) felt none of their needs were met (Figure 1).

A total of 651 respondents answered the question, "How satisfied are you with the treatments you have received?" Of these, 387 (59.4%) respondents felt "Indifferent" to "Very dissatisfied", while 66 (10%) felt "Very satisfied." Among 648 respondents, 311 (48%) were unsure if they would recommend received treatments to a friend with a similar trauma-related difficulty. In contrast, 191 (29.5%) stated they would "definitely" recommend the treatments, while 146 (22.5%) said they would "definitely not" (Table 5).

Self-Management

Legal Substances: Up to 190 respondents indicated they had used a range of 17 legal substances to manage symptoms (Table 6). The average effectiveness for these substances ranged from 0.21 (poppers, n=31, (Q1-Q3)=(0.04-0.37)) to 0.64 (other, n=28, SD=0.27). Among the most used substances, the highest rated were Cannabidiol (CBD) (n=93, median (Q1-Q3)=0.51 (0.25-0.75)), tobacco (n=91, mean=0.52, SD=0.29), alcohol (n=123, median (Q1-Q3)=0.38 (0.20-0.62)) and caffeine (n=81, mean=0.35, SD=0.22).

Illicit Substances

Prevalence and Effectiveness: A total of 364 respondents completed questions addressing the use and perceived effectiveness for 13 illicit substances to manage trauma-related symptoms. The most commonly used illicit substances were marijuana (n=336, 92.3%), psychedelics (n=227, 62.4%), and MDMA (n=205, 56.3%) (Table 6).

Reported average effectiveness was highest for psychedelics (Median (Q1-Q3)=0.91 (0.72-1.00)), followed by MDMA (Median (Q1-Q3)=0.76 (0.59-0.95)), marijuana (Median (Q1-Q3)=0.75 (0.45-0.89)), and ketamine (Median (Q1-Q3)=0.60 (0.25-0.82)) (Table 6).

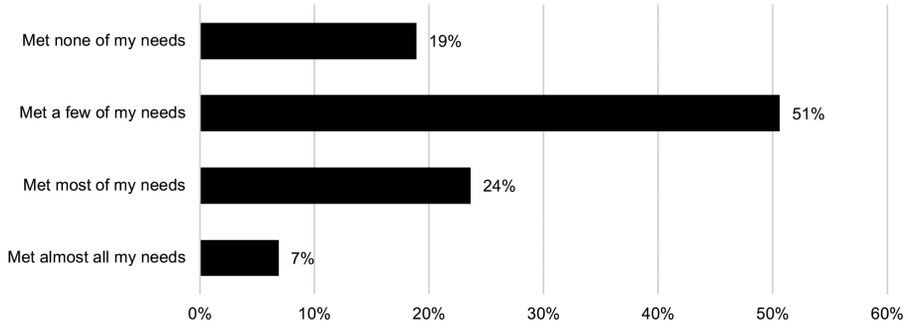

Figure 1. Demonstrating that the majority of respondents had either none (19%) or a few of their needs met (51%) by standard treatments offered to them.

The most common context in which respondents reported using illicit substances was at home at 180 (74.1%), followed by parties/festivals at 107 (44.0%). Additionally, 46 (19%) respondents reported using substances in nature, while only 9 (3.7%) and 8 (3.3%) reported using substances in retreats and trials respectively (n = 243 for the number of people reporting illicit substance use in any context). This pattern was consistent for marijuana use. However, ketamine and MDMA use were proportionally higher in party or festival settings—reported by 50 respondents (67.6%) for ketamine and 80 (58.8%) for MDMA. While most psychedelic users also reported use primarily at home (n = 122, 73.5%), a higher proportion used them in natural settings (n = 41, 24.7% of 166), compared to 19% across all substances (Table 7).

When analyzing the association between prescription medication use and illicit substance use, marijuana, speed, psychedelics, cocaine, and nitrous were significantly associated with prescription medication usage. Respondents who reported using prescription medications had an over 3 times greater likelihood of using marijuana (OR = 3.18, 95% CI (2.38, 4.23)), over 2 times greater likelihood of using psychedelics (OR = 2.05, 95% CI (1.50, 2.81)), and MDMA (OR = 2.19, 95% CI (1.58, 3.03)), but no association found for ketamine (OR = 1.34, 95% CI (0.90, 2.00)). Furthermore, 155 (37.7%) out of 305 respondents had considered using illicit substances to treat PTSD symptoms but had not done so due to illegality or safety concerns.

Complications

Most respondents who had used illicit substances reported no or minimal psychological and medical complications from use. The highest rates of no or minimal psychological complications (PCs) were for ketamine (92.7%, n = 124), nitrous (96.9%, n = 97), and psychedelics (88.8%, n = 259). The highest rates of no or minimal medical complications were khat (100%, n = 11), PCP (100%, n = 18), psychedelics (98.1%, n = 259), nitrous (93.7%, n = 95), and MDMA (93.4%, n = 212), closely followed by marijuana (93%, n = 327) (Table 8).

Rates of severe PCs on average across the 13 substances was 4.3%. Substances with the highest rates of severe PCs were cocaine (11.6%, n = 155) and synthetic cannabinoids (10%, n = 30). Average rates of severe medical complications across substances were 2.4%, with highest rates for synthetic cannabinoids (10%, n = 3), mephedrone (7.1%, n = 3), and cocaine (6.5%, n = 10).

Table 5. Self-Reported Satisfaction with Treatments Received

Q1. Have the treatments you received helped you to deal more effectively with your trauma-related problems/difficulties?							
Yes, a great deal		Yes, somewhat		No, not really		No, made it worse	
n	%	n	%	n	%	n	%
119	18.3	303	46.5	179	27.5	50	7.7
Q2. To what extent have the treatments you have been offered met your needs?							
Met almost all my needs		Met most of my needs		Met a few of my needs		Met none of my needs	
n	%	n	%	n	%	n	%
45	6.9	155	23.6	332	50.6	124	18.9
Q3. How satisfied are you with the treatments you have received?							
Very satisfied		Mostly satisfied		Indifferent/Mildly dissatisfied		Very dissatisfied	
n	%	n	%	n	%	n	%
66	10.1	198	30.4	252	38.7	135	20.7
Q4. Would you recommend these treatments to someone else?							
Yes, definitely		Maybe		No, definitely not			
n	%	n	%	n	%		
191	29.5	311	48.0	146	22.5		

Table 6. Self-Reported Use and Effectiveness of Legal and Illicit Substances

	n	%	% of Total	Effectiveness Mean ± SD/Median (Q1, Q3)*
Legal Substances (n = 190 of 873)				
Caffeine	107	56.3	12.3	0.35 ± 0.22
Alcohol	151	79.5	17.3	0.38 (0.20, 0.62)*
Tobacco	113	59.5	12.9	0.52 ± 0.29
E-cigarettes/nicotine	61	32.1	7.0	0.45 ± 0.24
Melatonin	63	33.2	7.2	0.33 (0.12, 0.55)*
Liquorice	22	11.6	2.5	0.26 ± 0.20
Kudzu	2	1.1	0.2	-
CBD	99	52.1	11.3	0.51 (0.25, 0.75)*
Poppers	31	16.3	3.6	0.21 (0.04, 0.37)*
Glue	11	5.8	1.3	0.31 ± 0.26
Eleuthero	1	0.5	0.1	-
Wild yam	3	1.6	0.3	-
Schisandra	1	0.5	0.1	-
Oat tops	4	2.1	0.5	-
Valerian root	50	26.3	5.7	0.41 ± 0.24
Holy basil	12	6.3	1.4	0.39 ± 0.22
Rhodiola	11	5.8	1.3	0.34 ± 0.27
Other	28	14.7	3.2	0.64 ± 0.27
Illicit substances (n = 364 of 873)				
Marijuana	336	92.3	38.5	0.75 (0.45, 0.89)*
Ketamine	111	30.5	12.7	0.60 (0.25, 0.82)*
MDMA	205	56.3	23.5	0.76 (0.59, 0.95)*
Speed	145	39.8	16.6	0.26 (0.19, 0.60)*
Psychedelics	227	62.4	26.0	0.91 (0.72, 1.00)*
Cocaine	163	44.8	18.7	0.28 (0.21, 0.55)*
Nitrous	79	21.7	9.0	0.38 ± 0.27
Mephedrone	0	0.0	0.0	-
Synthetic cannabinoids	0	0.0	0.0	-
Meth	0	0.0	0.0	-
Khat	0	0.0	0.0	-

MDMA, 3,4-methylenedioxymethamphetamine.
*Values with asterisks next to them represent Median and Q1, Q3 statistics as these variables were non-normally distributed.
- Represents variables where average effectiveness cannot be calculated due to low sample size.

More specifically, for respondents reporting use of MDMA, ketamine, psychedelics, and marijuana, rates of no or minimal psychological and medical complications were all higher than the average except for ketamine which reported 109 (65.7%) no or minimal medical complications. Similarly, rates of severe PCs for ketamine, MDMA, and marijuana were lower than the average of PC rate for all substances combined (4.3%), except for psychedelics, which had a self-reported severe PC rate of 6.6% (n = 17). Conversely, rates for severe medical complications psychedelics were

Table 7. Prevalence of Illicit Substances by Context

Substance (n)	Home n = 180		Parties/Festivals n = 107		Nature n = 46		Retreats n = 9		Trials/Clinics n = 8	
	n	%	n	%	n	%	n	%	n	%
Marijuana (224)	168	75.0	98	43.8	46	20.5	7	3.1	8	3.6
Ketamine (74)	54	73.0	50	67.6	17	23.0	3	4.1	2	2.7
MDMA (136)	92	67.6	80	58.8	33	24.3	3	2.2	4	2.9
Speed (100)	68	68.0	60	60.0	21	21.0	3	3.0	1	1.0
Psychedelics (166)	122	73.5	80	48.2	41	24.7	9	5.4	7	4.2
Cocaine (102)	64	62.7	66	64.7	20	19.6	4	3.9	1	1.0
Nitrous (60)	41	68.3	35	58.3	15	25.0	3	5.0	3	5.0

MDMA, 3,4-methylenedioxymethamphetamine.

Table 8. Self-reported Subjective Psychological and Physical Complications from Illicit Substance Use in the Management of Psychological Trauma Symptoms Among Respondents

Drug	Psychological Complications						Medical Complications					
	None (n)	Minimal (n)	Subtotal (n)	% of Total	Severe (n)	%	Total (n)	None (n)	Minimal (n)	Subtotal (n)	% of Total	Severe (n)	%	Total (n)
Marijuana	205	72	277	84.7	11	3.4	327	237	67	304	93.0	3	0.9	327
Synthetic cannabinoids	23	2	25	83.3	3	10.0	30	19	6	25	83.3	3	10.0	30
Ketamine	98	17	115	92.7	5	4.0	124	99	10	109	65.7	3	1.8	166
MDMA	144	38	182	85.8	7	3.3	212	166	32	198	93.4	1	0.5	212
Amphetamine	94	28	122	79.7	11	7.2	153	107	25	132	86.3	5	3.3	153
Psychedelics	185	45	230	88.8	17	6.6	259	222	32	254	98.1	0	0.0	259
Cocaine	83	26	109	70.3	18	11.6	155	98	31	129	83.2	10	6.5	155
Meth	22	3	25	78.1	1	3.1	32	25	3	28	87.5	0	0.0	32
Khat	11	0	11	100.0	0	0.0	11	11	0	11	100.0	0	0.0	11
Nitrous	89	5	94	96.9	0	0.0	97	84	5	89	93.7	1	1.1	95
Mephedrone	27	6	33	78.6	3	7.1	42	30	3	33	78.6	3	7.1	42
PCP	17	1	18	100.0	0	0.0	18	17	1	18	100.0	0	0.0	18

MDMA, 3,4-methylenedioxymethamphetamine; PCP, Phencyclidine.

0, reaching 0.5% (n = 1), 0.9% (n = 3), and 1.8% (n = 3) for MDMA, marijuana, and ketamine respectively.

When analyzing complications by context, rates of none or minimal PCs were unchanged by context for marijuana and ketamine. For MDMA, rate of none/minimal PCs was highest in nature (n = 31, 94%) compared to parties and festivals (n = 65, 81%). For psychedelics, none/minimal PC rate was highest for home (n = 113, 93%) and lowest for parties/festivals (n = 66, 83%). This was further supported by the rate of severe PCs which was highest for parties/festivals (n = 8, 10%) compared to home (n = 6, 5%) (Table 9).

No differences were noted for medical complications across contexts except for ketamine, where rate of medical complications was 4% (n = 2) for parties and festivals compared to 0% for remaining contexts. Trials/clinics and retreats were excluded from this comparison due to count of less than 10.

Willingness

Over 500 study respondents responded to a series of questions evaluating respondents' willingness to volunteer for clinical trials investigating the safety and efficacy of MDMA-assisted therapy (n = 526) and psilocybin therapy (n = 537) to treat PTSD. Similarly, over 500 responded to a series of questions evaluating respondents' willingness to seek treatment with MDMA-assisted therapy (n = 517) and psilocybin therapy for PTSD (n = 523), if licensed (Figure 2).

Average willingness to partake in trials was high for bother psilocybin (median = 1.00 (0.75-1.00)) and MDMA (median = 1.00 (0.75-1.00)). Average willingness to access the treatment if approved was median = 1.00 (0.75-1.00) for psilocybin therapy and median = 1.00 (0.69-1.00) for MDMA-assisted therapy.

More specifically, findings are presented across demographic subsets.

Gender

Kruskal–Wallis H test showed significant differences between gender for willingness to partake in psilocybin trials ($P = <.001$), MDMA trials ($P = <.001$), psilocybin-assisted-therapy when approved ($P = .002$) and MDMA-assisted-therapy when approved ($P = .001$) (Table 10a). Dunn's post-hoc test with Bonferroni correction for multiple comparisons further demonstrated that the difference consistently was between male and female respondents, where females reported lower levels of willingness for psilocybin ($P = .002$) and MDMA ($P = .002$) when approved. All post-hoc test results are reported in Supplementary Table 1.

Age

Spearman's rank correlation showed a significant negative association between age and willingness for psilocybin treatment ($P = .020$), indicating older participants were less willing to try psilocybin once approved. No significant correlation was observed between age and the other willingness variables (Table 10b).

Table 9. Rate of Complications by Context of Substance Use

		Home		Parties/Festivals		Nature		Retreat		Trials/Clinics		Any Context
Psychological complications												
Marijuana	None	11	76%	60	41%	25	17%	2	1%	7	5%	146
	Minimal	33	72%	20	43%	14	30%	4	9%	1	2%	46
	Subtotal	144	86%	80	82%	39	85%	6	86%	8	100%	
	Severe	6	4%	3	3%	2	4%	0	0%	0	0%	7
	Total	168	75%	98	44%	46	21%	7	3%	8	4%	224
Ketamine	None	43	74%	39	67%	15	26%	1	2%	2	3%	58
	Minimal	8	80%	6	60%	1	10%	2	20%	0	0%	10
	Subtotal	51	94%	45	90%	16	94%	3	100%	2	100%	
	Severe	2	4%	2	4%	1	6%	0	0%	0	0%	2
	Total	54	73%	50	68%	17	23%	3	4%	2	3%	74
MDMA	None	64	70%	54	59%	23	25%	0	0%	3	3%	91
	Minimal	18	72%	11	44%	8	32%	1	4%	0	0%	25
	Subtotal	82	89%	65	81%	31	94%	1	33%	3	75%	
	Severe	2	2%	3	4%	1	3%	0	0%	1	25%	5
	Total	92	68%	80	59%	33	24%	3	2%	4	3%	136
Psychedelics	None	91	73%	55	44%	29	23%	4	3%	6	5%	124
	Minimal	22	85%	11	42%	8	31%	3	12%	1	4%	26
	Subtotal	113	93%	66	83%	37	90%	7	78%	7	100%	
	Severe	6	5%	8	10%	3	7%	0	0%	0	0%	8
	Total	121	73%	80	48%	41	25%	9	5%	7	4%	165
Medical complications												
Marijuana	None	122	74%	69	42%	33	20%	6	4%	7	4%	164
	Minimal	33	75%	22	50%	10	23%	1	2%	1	2%	44
	Subtotal	155	92%	91	93%	43	93%	7	100%	8	100%	
	Severe	2	1%	1	1%	0	0%	0	0%	0	0%	2
	Total	168	75%	98	44%	46	21%	7	3%	8	4%	224
Ketamine	None	44	75%	38	64%	14	24%	2	3%	1	2%	59
	Minimal	4	80%	4	80%	1	20%	1	20%	0	0%	5
	Subtotal	48	89%	42	84%	15	88%	3	100%	1	50%	
	Severe	0	0%	2	4%	0	0%	0	0%	1	50%	3
	Total	54	73%	50	68%	17	23%	3	4%	2	3%	74
MDMA	None	71	66%	63	59%	26	24%	2	2%	4	4%	107
	Minimal	14	74%	11	58%	6	32%	1	5%	0	0%	19
	Subtotal	85	92%	74	93%	32	97%	3	100%	4	100%	
	Severe	0	0%	1	1%	0	0%	0	0%	0	0%	1
	Total	92	68%	80	59%	33	24%	3	2%	4	3%	136
Psychedelics	None	106	75%	66	47%	38	27%	7	5%	5	4%	141
	Minimal	15	71%	11	52%	3	14%	1	5%	2	10%	21
	Subtotal	121	99%	77	96%	41	100%	8	89%	7	100%	
	Severe	0	0%	0	0%	0	0%	0	0%	0	0%	0
	Total	122	73%	80	48%	41	25%	9	5%	7	4%	166

MDMA, 3,4-methylenedioxymethamphetamine.

Education

Education level showed weak positive correlation with willingness to participate in psilocybin trials ($P = .001$), MDMA trials ($P = .050$), psilocybin therapy once approved ($P = .002$), and MDMA therapy once approved ($P = .017$) using Spearman's rank correlation (Table 10b).

Sexual Orientation

Significant differences in willingness were noted in Kruskal-Wallis H test for trial participation of both psilocybin ($P = .002$) and MDMA ($P = .007$) (Table 10c). Post-hoc tests revealed differences specifically between bisexual and heterosexual respondents for both substances ($P = .008$ and $P = .003$ respectively), with heterosexual respondents being less willing on average to engage in either treatment. All post-hoc test results are reported in Supplementary Table 1.

Trauma Types

Willingness to try various substances varied across different trauma types. Notably, those reporting physical assault and witnessed violence were significantly more willing to

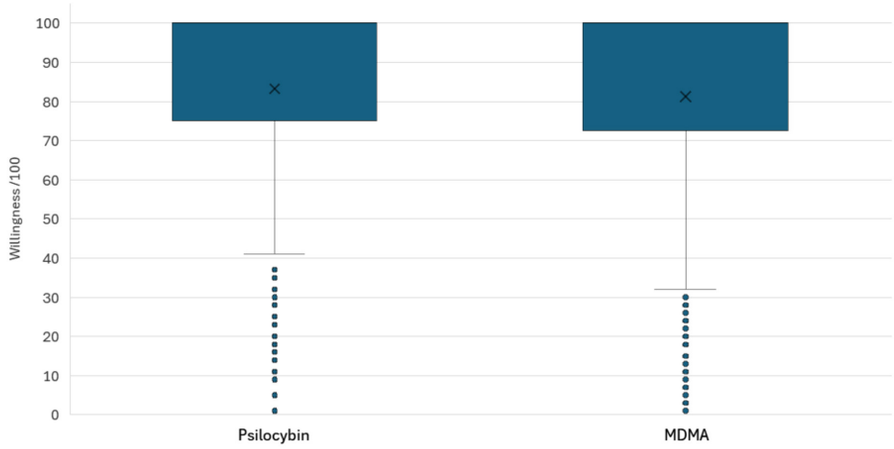

Figure 2. Respondent's mean willingness to partake in treatments using MDMA and Psilocybin once approved as therapies.

attempt both psilocybin and MDMA trials and treatments (Table 11).

Previous Experience of Psychological Therapy

Willingness and attitude to psychedelics was also influenced by whether or not respondents had attempted any psychological therapies (n = 527). When asked whether respondents would be willing to volunteer for psilocybin and MDMA trials, those who had reported attempting any form of psychotherapy were less likely to volunteer for psilocybin trials ($P = .036$), but no difference was noted for MDMA trials. Similarly, respondents with previous psychotherapy exposure rated themselves more likely to try psilocybin treatments once approved ($P = .005$) but not MDMA-assisted therapy once approved (Table 12a).

Furthermore, those reporting use of psychological therapies were less likely to disagree with the statement "psilocybin and MDMA are generally harmful and addictive" ($P = .033$). The psychological therapy group was also less positive regarding statements that psilocybin and MDMA show promise ($P = .029$) and should be researched ($P = .032$) (Table 12b).

DISCUSSION

To the best of knowledge, this is the first large-scale survey in individuals reporting illicit substance use to self-manage PTSD symptoms. This study investigated perceptions of standard trauma treatments, the use of illicit substances for self-management, and attitudes toward MDMA-assisted and psilocybin therapies after a brief psychoeducation on these novel treatment options.

Clinical Treatment History and Satisfaction

Notably, this sample exhibited high levels of trauma, with respondents reporting an average of 7 lifetime trauma events and 73.4% receiving a formal PTSD diagnosis. Regarding clinical treatment history, most respondents had tried various standard treatments, with medication

Table 10. a-c. Willingness to Participate in Psilocybin and MDMA Trials and Therapy once Approved by Demographics (Gender, Age, Sexual Orientation, Education). (a) Kruskal–Wallis H test for Gender

	Gender	n	Median	Q1, Q3	Mean Rank	*df*	H		Post-hoc results (Dunn-Bonferroni)		
									Sample 1-Sample 2	z	*P*
Willingness Psilocybin trial	Female	373	1.00	0.69, 1.00	251.48	2	17.389	.000	Female-Male	−4.094	<.000
	Male	149	1.00	0.90, 1.00	306.72						
	Other	13	1.00	0.87, 1.00	298.19						
Willingness MDMA trial	Female	364	0.95	0.64, 1.00	246.04	2	17.229	<.000	Female-Male	−1.189	<.000
	Male	148	1.00	0.80, 1.00	297.44						
	Other	12	1.00	0.94, 1.00	330.83						
Willingness Psilocybin once approved	Female	362	1.00	0.68, 1.00	247.55	2	12.295	.002	Female-Male	−3.360	.002
	Male	147	1.00	0.80, 1.00	292.52						
	Other	13	1.00	0.85, 1.00	299.12						
Willingness MDMA once approved	Female	355	0.98	0.63, 1.00	243.69	2	13.672	.001	Female-Male	−3.414	.002
	Male	149	1.00	0.80, 1.00	289.33						
	Other	12	1.00	0.91, 1.00	313.96				Male-Other	−0.599	<.000

*Note: Only significant post-hoc test results are shown. Full post-hoc results found in supplementary table 1.

Table 10. (b) Spearman's Rank for Age and Education

	Age			Education		
	R	*P*	n	*R*	*P*	n
Willingness Psilocybin trial	−0.052	.233	535	0.152	<.001	537
Willingness MDMA trial	−0.060	.172	523	0.086	.050	526
Willingness Psilocybin once approved	−0.102	.020	521	0.137	.002	523
Willingness MDMA once approved	−0.071	.108	516	0.105	.017	517

MDMA, 3,4-methylenedioxymethamphetamine.

being the most common (73%). Consistent with empirical literature,[8,28] the majority found medication treatment for trauma symptoms to be unhelpful. For instance, previous research found that trauma-focused psychological therapies resulted in greater and longer-lasting improvements than medications, which showed insignificant to small/moderate effects.[29] This suggests that while medications for PTSD are the most accessible treatment, many patients do not experience significant improvement, highlighting substantial dissatisfaction with current PTSD treatments. Echoing empirical data on high dropout rates associated with standard PTSD interventions,[30] these findings underscore the urgent need for qualitative studies investigating the experiences of non-responders to standard treatments.

Illicit Substance Use for Trauma Symptom (Self-Management)

Potentially associated with high rates of reported dissatisfaction with standard treatments, the findings indicate that individuals with trauma symptoms demonstrate high rates of using illicit substances of self-management of symptoms, with the most commonly used substances for this purpose being marijuana (41%), psychedelics (28%), and MDMA (25%). This is even higher than a previous study by Corrigan and colleagues who found a rate of 27% of use of illicit substances for self-management in a sample of general mental health users, suggesting that use of illicit substances for symptom management may be even higher in those with trauma symptoms. Notably, respondents found psychedelics to be most effective for managing symptoms, and overall reported all 3 drug categories as having above average effectiveness. It is important to note that generally rates of psychedelic use are increasing,[21,31] and rates of psychedelic use for mental health management is increasing.[22] These findings echo how prevalent this practice is, highlining the importance of additional epidemiological and qualitative studies exploring the risk/benefit profile associated with illicit substance use for self-management.

Table 10. (c) Kruskal–Wallis H Test for Sexual Orientation

									Post-hoc Results (Dunn-Bonferroni)		
	Sexual Orientation	n	Median	Q1, Q3	Mean Rank	*df*	H	*P*	Sample1-Sample2	z	*P**
Willingness Psilocybin trial	Bisexual	96	1.00	0.85, 1.00	298.49	4	17.017	.002			
	Gay or lesbian	22	1.00	1.00, 1.00	320.43						
	Heterosexual	359	1.00	0.65, 1.00	246.04				Heterosexual—bisexual	3.358	.008
	Unsure	24	1.00	0.78, 1.00	286.71						
	Other	22	1.00	0.80, 1.00	277.77						
Willingness MDMA trial	Bisexual	96	1.00	0.84, 1.00	299.90	4	14.009	.007			
	Gay or lesbian	24	1.00	0.71, 1.00	284.27						
	Heterosexual	350	0.98	0.66, 1.00	243.65				Heterosexual—bisexual	3.578	.003
	Unsure	23	0.92	0.65, 1.00	245.96						
	Other	20	0.95	0.80, 1.00	264.73						
Willingness Psilocybin once approved	Bisexual	94	1.00	0.89, 1.00	294.53	4	18.575	.001			
	Gay or lesbian	20	1.00	0.92, 1.00	309.78						
	Heterosexual	353	1.00	0.65, 1.00	239.59				Heterosexual—bisexual	3.533	.004
	Unsure	24	1.00	0.89, 1.00	289.48						
	Other	21	1.00	0.83, 1.00	282.02						
Willingness MDMA once approved	Bisexual	96	1.00	0.81, 1.00	295.72	4	17.124	.002			
	Gay or lesbian	20	1.00	0.98, 1.00	309.05						
	Heterosexual	350	0.99	0.60, 1.00	238.93				Heterosexual—bisexual	3.663	.002
	Unsure	22	0.96	0.71, 1.00	251.36						
	Other	19	1.00	0.75, 1.00	266.00						

*Note: Only significant post-hoc test results are shown. Full post-hoc results found in supplementary table 1.
MDMA, 3,4-methylenedioxymethamphetamine.

Table 11. Willingness by Trauma Experiences using Mann–Whitney *U* test

Trauma Experience	Significant Willingness Variable		n	Median	Q1, Q3	Mean Rank	z	P
Workplace accidents	Willingness Psilocybin trial	No	396	1.00	0.71, 1.00	261.83	−1.994	.046
		Yes	141	1.00	0.80, 1.00	289.13		
	Willingness Psilocybin once approved	No	384	1.00	0.72, 1.00	254.33	−2.127	.033
		Yes	139	1.00	0.77, 1.00	283.18		
	Willingness MDMA once approved	No	378	1.00	0.62, 1.00	250.38	−2.355	.019
		Yes	139	1.00	0.76, 1.00	282.45		
Vehicle Accidents	Willingness Psilocybin trial	No	320	1.00	0.73, 1.00	259.19	−1.977	.048
		Yes	217	1.00	0.78, 1.00	283.46		
	Willingness MDMA trial	No	309	0.95	0.71, 1.00	252.71	−2.109	.035
		Yes	217	1.00	0.76, 1.00	278.87		
	Willingness Psilocybin once approved	No	310	1.00	0.73, 1.00	250.17	−2.383	.017
		Yes	213	1.00	0.76, 1.00	279.22		
	Willingness MDMA once approved	No	303	0.97	0.63, 1.00	246.90	−2.384	.017
		Yes	214	1.00	0.75, 1.00	276.13		
Natural Disasters	Willingness Psilocybin once approved	No	467	1.00	0.75, 1.00	257.54	−2.148	.032
		Yes	56	1.00	0.89, 1.00	299.17		
Military Combat	Willingness Psilocybin trial	No	489	1.00	0.73, 1.00	265.08	−2.077	.038
		Yes	48	1.00	0.90, 1.00	308.94		
Physical Assault	Willingness Psilocybin trial	No	251	1.00	0.61, 1.00	247.09	−3.408	.001
		Yes	286	1.00	0.79, 1.00	288.23		
	Willingness MDMA trial	No	239	0.95	0.61, 1.00	248.48	−2.244	.025
		Yes	287	1.00	0.75, 1.00	276.01		
	Willingness Psilocybin once approved	No	237	0.98	0.65, 1.00	242.76	−2.923	.003
		Yes	286	1.00	0.77, 1.00	277.94		
	Willingness MDMA once approved	No	237	0.90	0.59, 1.00	238.91	−3.061	.002
		Yes	280	1.00	0.75, 1.00	276.01		
Domestic Violence	Willingness Psilocybin once approved	No	267	1.00	0.65, 1.00	246.22	−2.690	.007
		Yes	256	1.00	0.78, 1.00	278.46		
	Willingness MDMA once approved	No	264	0.98	0.63, 1.00	244.71	−2.418	.016
		Yes	253	1.00	0.75, 1.00	273.91		
Witnessed Violence	Willingness Psilocybin trial	No	264	1.00	0.69, 1.00	255.26	−2.244	.025
		Yes	273	1.00	0.78, 1.00	282.29		
	Willingness MDMA trial	No	260	0.93	0.64, 1.00	247.24	−2.632	.008
		Yes	266	1.00	0.76, 1.00	279.39		
	Willingness Psilocybin once approved	No	255	0.98	0.65, 1.00	242.22	−3.220	.001
		Yes	268	1.00	0.78, 1.00	280.82		
	Willingness MDMA once approved	No	254	0.92	0.60, 1.00	239.35	−3.198	.001
		Yes	263	1.00	0.76, 1.00	277.97		
Break-up	Willingness Psilocybin trial	No	226	1.00	0.67, 1.00	249.42	−2.771	.006
		Yes	311	1.00	0.79, 1.00	283.23		
	Willingness MDMA trial	No	225	0.90	0.64, 1.00	245.83	−2.502	.012
		Yes	301	1.00	0.75, 1.00	276.71		
	Willingness Psilocybin once approved	No	219	0.98	0.65, 1.00	238.74	−3.294	<.001
		Yes	304	1.00	0.80, 1.00	278.75		
Migration	Willingness Psilocybin once approved	No	487	1.00	0.75, 1.00	258.58	−2.099	.036
		Yes	36	1.00	0.94, 1.00	308.25		
Sports Injuries	Willingness Psilocybin once approved	No	421	1.00	0.74, 1.00	256.14	−1.986	.047
		Yes	102	1.00	0.84, 1.00	286.18		
CH Physical Abuse	Willingness MDMA trial	No	313	0.97	0.64, 1.00	250.64	−2.553	.011
		Yes	213	1.00	0.78, 1.00	282.4		

(*Continued*)

Table 11. Willingness by Trauma Experiences using Mann–Whitney *U* test (*Continued*)

Trauma Experience	Significant Willingness Variable		n	Median	Q1, Q3	Mean Rank	z	P
CH Emotional Abuse	Willingness Psilocybin trial	No	194	0.98	0.61, 1.00	243.09	−3.235	.001
		Yes	343	1.00	0.78, 1.00	283.66		
	Willingness MDMA trial	No	193	0.85	0.60, 1.00	229.68	−4.216	<.001
		Yes	333	1.00	0.77, 1.00	283.1		
	Willingness Psilocybin once approved	No	183	0.90	0.60, 1.00	230.12	−3.903	<.001
		Yes	340	1.00	0.78, 1.00	279.16		
	Willingness MDMA once approved	No	183	0.85	0.56, 1.00	228.92	−3.688	<.001
		Yes	334	1.00	0.75, 1.00	275.48		
CH Neglect	Willingness MDMA trial	No	297	0.95	0.70, 1.00	252.56	−2.041	.041
		Yes	229	1.00	0.75, 1.00	277.69		
	Willingness Psilocybin once approved	No	291	1.00	0.72, 1.00	249.25	−2.384	.017
		Yes	232	1.00	0.77, 1.00	278		
	Willingness MDMA once approved	No	288	0.97	0.63, 1.00	246.91	−2.246	.025
		Yes	229	1.00	0.74, 1.00	274.21		

Note: Only significant results demonstrated in table.

"Set and setting" are critical factors in the context of drug use.[32] The environmental conditions and individuals' internal states significantly influence the effects of the substance and the overall experience. As such, the contexts for use were also queried. The most common context for use was parties/festivals (74%), with 19% being nature, 4% retreats, and 3% clinical trials. This suggests that the majority of illicit substance use occurs in non-clinical settings such as retreats, parties, and festivals, underscoring the need for specialist, trauma-informed psychoeducation and support systems to help manage potential emergent adverse events. Correspondingly, most respondents reported none or minimal complications from illicit substance abuse, with psychedelics showing less complications than other illicit substances (e.g., cocaine). Notably, context was associated with adverse effects, with lower adverse events reported when substances were used in a nature setting compared to parties or festivals. These findings are consistent with research suggesting that, broadly, use of psychedelics in non-clinical contexts is associated with improved mental health functioning[33,34]and reduced levels of daily opioid use[35] especially when harm reduction approaches are available.[36] However, psychedelics are also associated with a range of behavioral and psychological risks, including paranoia, panic, and confusion.[37] Correspondingly, traumatized individuals, already burdened by symptoms such as dissociation, depersonalization, and hyperarousal, may be at heightened risk for drug-related psychiatric destabilization.[38] Therefore, harm reduction approaches and services would benefit from specialist education and training to better support traumatized individuals experiencing adverse effects related to psychedelic use. Further, these findings also demonstrate the need for additional research and transparent public education on psychedelics to inform individuals about potential risks and mitigating factors, ensuring safer use, and promoting informed decision-making to protect public health.

Perceptions of Psychedelic Forms of Therapy

Respondents overall reported strong willingness to consider MDMA (median (Q1-Q3) = 1 (0.75-1.00)) and psilocybin therapy (median (Q1-Q3) = 1 (0.75-1.00)). This finding aligns with previous research indicating favorable views and high levels of interest in MDMA-assisted and psilocybin therapy among Black Americans,[27] veterans, and service members.[26] The strong willingness is also consistent with previous research in a broader sample of mental health users, finding that 55% would accept these treatments whereas 20% would not, and 72% supported future research.[25] The study expands on these findings by demonstrating strong interest among individuals with trauma symptoms. Notably, respondents received brief psychoeducation concerning MDMA and psilocybin, highlighting current research findings suggesting preliminary safety and efficacy. These results are consistent with research studies[26,27] in showing that brief psychoeducation on psychedelic therapies is associated with positive views of these approaches. These findings highlight the potential of psychoeducation campaigns and community engagement to inform various patient populations about novel treatments. However, trauma exposure may also include elements of secrecy and betrayal.[39] Therefore, to promote enhanced informed consent, psychoeducation efforts should highlight the potential risks associated with psychedelic forms of therapy, and more research is needed assessing the more expanded adverse effects that may occur within psychedelic therapy.[40]

Females reported significantly lower willingness for both psilocybin and MDMA therapies. Future research could explore underlying reasons, such as safety concerns or stigma, and develop interventions to address these barriers. Additionally, exploring the role of gender-specific therapeutic benefits could enhance acceptance among women. Similarly, higher education was associated with greater openness to novel therapies. Future research should investigate the role of educational interventions in

Table 12. a-b. Willingness and Attitudes to Psychedelic-Assisted-Therapy and Trials by Previous Exposure to Psychological Therapies. (a) Willingness by Previous Psychotherapy Tried using Mann–Whitney *U* Test

Any Psychotherapy Tried?		n	Median	Q1, Q3	Mean Rank	z	*P*
Willingness Psilocybin trial	No	110	1.00	0.81, 1.00	285.09	−2.096	.036
	Yes	411	1.00	0.73, 1.00	254.55		
Willingness MDMA trial	No	109	1.00	0.78, 1.00	273.16	−1.528	.127
	Yes	401	1.00	0.70, 1.00	250.70		
Willingness Psilocybin once approved	No	107	1.00	0.85, 1.00	286.34	−2.783	.005
	Yes	401	1.00	0.74, 1.00	246.00		
Willingness MDMA once approved	No	108	1.00	0.78, 1.00	273.31	−1.866	.062
	Yes	395	1.00	0.64, 1.00	246.17		

MDMA, 3,4-methylenedioxymethamphetamine.

increasing acceptance and participation rates among less-educated populations.

Limitations, Conclusions, and Future Directions

The present study has several limitations. Firstly, limiting the generalizability of the findings, respondents were required to have a strong command of English and self-selected for participation, potentially introducing bias favoring psychedelics. Second, the majority of the respondents were white (88%), further limiting the generalizability. This may result from biased survey accessibility, socioeconomic factors, or topic relevance. To address this, outreach efforts, using multilingual surveys, and incentivizing participation may have improved accessibility. Additionally, the respondents self-identified as having trauma symptoms or unverifiable PTSD/CPTSD diagnoses, and the results reflect their perceptions.

Conversely, clinical assessments might have suggested higher rates of complications and reduced rates of effectiveness than those reported by respondents. However, it is crucial to amplify patient voices and views, particularly in the context of novel interventions for those with trauma histories. This study also highlights that individuals with trauma symptoms are engaging in significant amounts of treatment, predominantly medication, and are largely dissatisfied with these treatments. There is a clear need for novel, effective, and trauma-informed interventions that take into account patients' perceptions of trauma-focused standard treatments to guide the development of psychedelic forms of therapy.

Respondents generally reported positive experiences with minimal or no complications when using psychedelics for symptom management. These findings are consistent with other research indicating increasing use of psychedelics.[21] However, these findings, especially those concerning reported safety and effectiveness of psychedelics should be approached with caution due to the strong likelihood of selection bias and the known heterogeneity associated with trauma-stress psychopathology,[41] impacting the generalizability of the findings. Moreover, this study suggests that a proportion of individuals with trauma symptoms may be using illicit substances, for self-management. This

Table 12. (b) Attitudes to Psychedelics Using Chi-squared test

		Any Psychotherapy Tried?					
		Yes (n)	%	No (n)	%	χ^2	*P*
Psychedelics are generally harmful and addictive	Strongly agree	28	5.8	9	7	10.518	.033
	Agree	67	13.9	12	9.3		
	Neutral	164	34	38	29.5		
	Disagree	98	20.3	19	14.7		
	Strongly disagree	126	26.1	51	39.5		
Psychedelics show promise	Strongly agree	160	33.1	62	48.1	10.785	.029
	Agree	128	26.5	28	21.7		
	Neutral	171	35.4	32	24.8		
	Disagree	12	2.5	3	2.3		
	Strongly disagree	12	2.5	4	3.1		
Psychedelics should be researched	Strongly agree	201	41.7	73	56.6	10.590	.032
	Agree	130	27	21	16.3		
	Neutral	119	24.7	29	22.5		
	Disagree	11	2.3	2	1.6		
	Strongly disagree	21	4.4	4	3.1		

underscores the importance of harm reduction approaches and the need for the field to support more beneficial self-management and non-clinical psychedelic use, incorporating patient autonomy and preferences.[42] The results also suggest the importance of educating mental health providers about psychedelic substances, interventions, and harm reduction approaches. Providers caring for traumatized individuals using psychedelics or other substances outside of clinical settings would benefit from specialist training and education. Enhanced provider education can help bridge the gap between patient practices and clinical support, promoting safer and more effective care for individuals managing trauma symptoms through unconventional means.

Data Availability Statement: The data that support the findings of this study are available on request from the corresponding author.

Ethics Committee Approval: The study conformed with the ethical principles of the World Medical Association Declaration of Helsinki. The study was approved by King's College London Research Ethics Committee (HR-19/20-20712).

Informed Consent: Informed consent was obtained from the participants who agreed to take part in the study. To ensure informed consent and voluntary participation, participants were provided with detailed information about the study's purpose, procedures, potential risks and discomforts, confidentiality measures, and the investigator's contact information before beginning the survey. They were then asked to acknowledge that they had read and understood this information and to consent to participate in the survey.

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SUPPLEMENTARY MATERIAL

INFORMATION PSYCHEDELICS AS POTENTIAL NOVEL TREATMENTS

Psychedelics comprise a broad category of compounds including psilocybin ('magic mushrooms'), LSD, dimethyltryptamine (DMT), Ayahuasca, MDMA, Ketamine and Cannabinoids. These are powerful psychoactive substances that alter perception, mood and thought processes. Since the 2000s, there has been renewed research interest in the use of psychedelics for treating some mental health conditions; **psilocybin*** and **MDMA**[#] in particular. These studies often involve a single dose of the substance, typically administered in a medically supervised and comfortable environment, under the guidance of experienced therapists and within an authorised clinical trial. Psychiatrists, psychological therapists and mental health nurses are at hand to offer psychological support, most commonly verbal reassurance and active listening.

Studies show that psychedelics, when used in medically supervised settings, are physiologically and psychologically safe, and do not lead to dependence or addiction (Rucker, Iliff, Nutt, 2017; Studerus et al. 2011; Nutt D., 2019). Recently, due to promising results in patients with treatment-resistant disorders, the American Food and Drug Administration has classed MDMA-assisted psychotherapy for PTSD, and psilocybin treatment for depression as "breakthrough therapy". Large-scale clinical trials are currently underway in the United States, Canada, Europe and Israel.

***Psilocybin** is the active ingredient in over 100 species of psilocybe mushroom (Nichols, 2016). Psilocybe mushrooms are commonly known as 'magic' mushrooms due to the hallucinogenic experience they produce (Nichols, 2016. Psilocybin has been studied for the treatment of depression (Carhart-Harris et al., 2016, 2017), addiction (Johnson et al., 2014, 2017; Bogenschutz et al., 2015, 2018), obsessive-compulsive disorder (Moreno et al., 2006), depression and anxiety in patients with life-threatening diagnoses (Grob et al., 2011; Griffiths et al., 2016; Ross et al., 2016). These studies suggest that when administered under medical supervision, psilocybin is safe and may be effective in the treatment of various chronic and complex mental health conditions.

[#]**MDMA** is a known psychoactive illicit drug that is most often used recreationally ('ecstasy'/'molly'). It is also thought to help communication and connection between therapists and patients during psychotherapy for mental health disorders (Nichols, 1986). MDMA has recently been investigated for the treatment of PTSD (e.g., Mithoefer et al., 2010, 2018), alcohol use disorder (Sessa et al., 2019), and social anxiety in autistic adults (Danforth et al., 2018). These studies suggest that when administered under medical supervision, MDMA is safe and may be effective in the treatment of chronic PTSD, AUD and social anxiety in autistic adults.

Supplementary Table 1. Dunn-Bonferroni post-hoc test results for Gender and Sexual Orientation by Willingness

Post-hoc results (Dunn-Bonferroni)	Sample 1-Sample 2	z	*P*
Gender			
Willingness Psilocybin trial	Female-Other	-1.189	.703
	Female-Male	-4.094	<.000
	Other-Male	0.212	1.000
Willingness MDMA trial	Female-Male	-1.189	<.000
	Female-Other	-4.094	.115
	Male-Other	0.212	1.000
Willingness Psilocybin once approved	Female-Male	-3.36	.002
	Female-Other	-1.335	.546
	Male-Other	-0.167	1.000
Willingness MDMA once approved	Female-Male	-3.414	.002
	Female-Other	-1.748	.241
	Male-Other	-0.599	<.000
Post-hoc results (Dunn-Bonferroni)	Sample 1-Sample 2	z	*P*
Sexual Orientation			
Willingness Psilocybin trial	Heterosexual-Other	-1.063	1.000
	Heterosexual-Unsure	-1.419	1.000
	Heterosexual-Bisexual	3.358	.008
	Heterosexual-Gay or Lesbian	2.491	.127
	Other-Unsure	0.223	1.000
	Other-Bisexual	0.645	1.000
	Other-Gay or Lesbian	1.041	1.000

(*Continued*)

Supplementary Table 1. Dunn-Bonferroni post-hoc test results for Gender and Sexual Orientation by Willingness (*Continued*)

Post-hoc results (Dunn-Bonferroni)	Sample 1-Sample 2	z	*P*
	Unsure-Bisexual	0.380	1.000
	Unsure-Gay or Lesbian	0.840	1.000
	Bisexual-Gay or Lesbian	-0.683	1.000
Willingness MDMA trial	Heterosexual-Unsure	-0.079	1.000
	Heterosexual-Other	-0.672	1.000
	Heterosexual-Gay or Lesbian	1.411	1.000
	Heterosexual-Bisexual	3.578	.003
	Unsure-Other	-0.450	1.000
	Unsure-Gay or Lesbian	0.962	1.000
	Unsure-Bisexual	1.703	.886
	Other-Gay or Lesbian	0.473	1.000
	Other-Bisexual	1.049	1.000
	Gay or Lesbian-Bisexual	0.502	1.000
Willingness Psilocybin once approved	Heterosexual-Other	-1.410	1.000
	Heterosexual-Unsure	-1.765	.775
	Heterosexual-Bisexual	3.533	.004
	Heterosexual-Gay or Lesbian	2.279	.227
	Other-Unsure	0.186	1.000
	Other-Bisexual	0.387	1.000
	Other-Gay or Lesbian	0.663	1.000
	Unsure-Bisexual	0.165	1.000
	Unsure-Gay or Lesbian	0.500	1.000
	Bisexual-Gay or Lesbian	-0.462	1.000
Willingness MDMA once approved	Heterosexual-Unsure	-0.420	1.000
	Heterosexual-Other	-0.854	1.000
	Heterosexual-Bisexual	3.663	.002
	Heterosexual-Gay or Lesbian	2.266	.234
	Unsure-Other	-0.347	1.000
	Unsure-Bisexual	1.394	1.000
	Unsure-Gay or Lesbian	1.387	1.000
	Other-Bisexual	0.879	1.000
	Other-Gay or Lesbian	0.999	1.000
	Bisexual-Gay or Lesbian	-0.403	1.000