Subjective Psychedelic Experience and Obsessive-Compulsive Symptom Severity

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Background

- Obsessive Compulsive Disorder (OCD) is a psychiatric disorder in which people have obsessive thoughts and fears that cause them to act compulsively.
- A small number of studies report sub-hallucinogenic to hallucinogenic amounts of a psychedelic substance (e.g. LSD, psilocybin) have the potential to reduce OCD symptoms.[1,2]

Objective

- This work assesses subjective psychedelic experience levels associated with last reported psychedelic use and current reports of OCD severity.

Methods

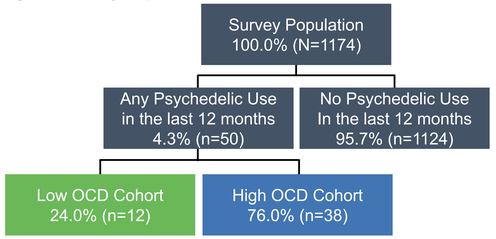
- Data were collected through an online, cross-sectional survey of US adults aged ≥18 years. Participants were recruited in November 2021.
- Participants completed demographic questions, a comorbid conditions checklist to calculate a Charlson Comorbidity Index (CCI)[3,4] score, the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS)[5,6] (10 items, 0-4 scale), and were asked to self-report psychedelic use in the last 12 months. Those reporting psychedelic use in the last 12 months were asked about their psychedelic experience with the Psychedelic Experience Scale (PES) (18 items, 0-10 scale) and responses were averaged creating a PES score.
- Y-BOCS and PES scores were divided into quartiles to compare the lowest quartile to the highest 3 quartiles.
- The Low OCD Cohort was defined as the lowest Y-BOCS quartile; the High OCD Cohort was defined as the highest three Y-BOCS quartiles.
- Categorical data were described by percentage, and continuous data were described by mean and standard deviation. Chi-squared analyses and analysis of variance tests were conducted for categorical and continuous data, respectively.
- A logistic regression controlling for PES score, sex, age, race and psychiatric comorbidities was used to model Low Y-BOCS scores.

Results

Study Population

- Of the 1174 participants, 4.3% (n=50) reported psychedelic use in the last 12 months. **(Figure 1)**
- Of those reporting psychedelic use in the last 12 months, 24.0% were in the Low OCD Cohort and 76.0% were in the High OCD Cohort. **(Figure 1)**

Figure 1. Study Population and Cohorts



Characteristics of Those Self-Reporting Psychedelic Use

- Those reporting any psychedelic use in the last 12 months were 50% (n=25) female, 24% (n=12) Black or African American and had a mean age of 33.4 (SD 11.08) years. **(Table 1)**
- Comorbid anxiety, depression and post-traumatic stress disorder (PTSD) were reported by 42% (n=21), 34% (n=17) and 20% (n=10) of those reporting any psychedelic use, respectively. **(Table 1)**

Table 1. Characteristics of No Psychedelic Use vs. Any Psychedelic Use in the Last 12 Months

	No Psychedelic Use n=1124	Any Psychedelic Use n=50	Sig.
Female, %	59.3	50.0	0.193
Age, mean (SD)	48.62 (17.22)	33.42 (11.08)	<0.001
Black or African American, %	19.7	24.0	
White, %	70.6	70.0	0.557
Other, %	9.8	6.0	
BMI (lbs./in^2), mean (SD)	28.28 (7.49)	26.97 (6.96)	0.227
CCI score, mean (SD)	0.51 (1.24)	0.34 (0.75)	0.333
Anxiety, %	35.7	42.0	0.362
Depression, %	30.7	34.0	0.620
PTSD, %	8.5	20.0	0.006

Characteristics of OCD Cohorts

- The High OCD Cohort had a significantly lower mean age (31.34 [SD 8.18] vs. 40.00 [SD 16.11] years; p=0.017) than the Low OCD Cohort. **(Table 2)**
- Unadjusted comparison of psychedelic users with Y-BOCS scores found significantly higher PES scores for those in the High OCD vs. the Low OCD Cohort (5.91 [SD 2.34] vs. 3.84 [SD 2.37]; p=0.011). **(Table 2)**

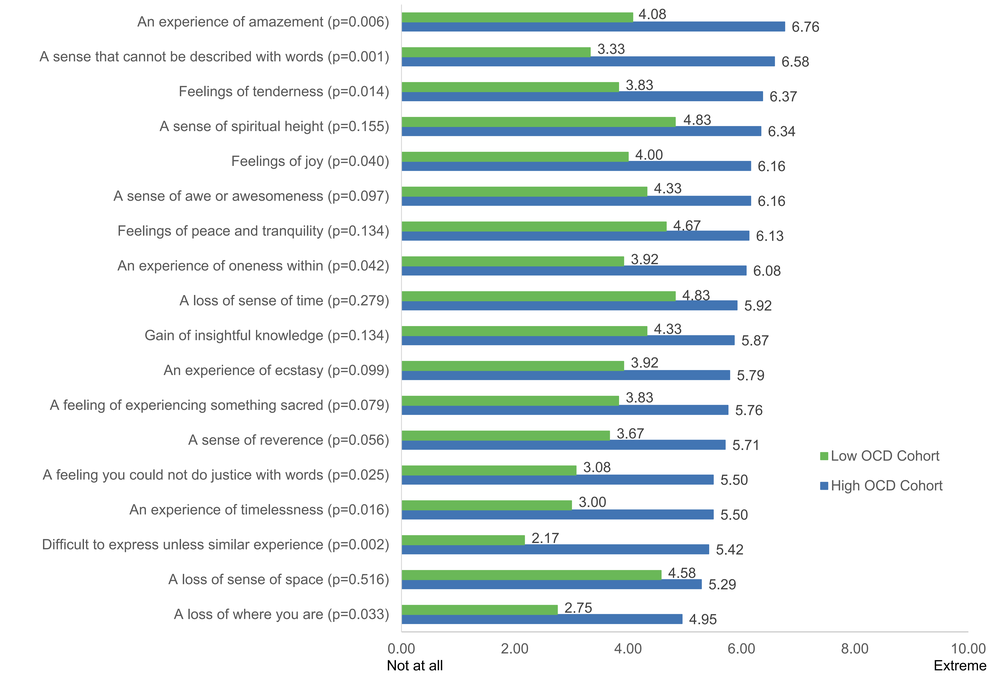
Table 2. Characteristics of Low OCD Cohort vs. High OCD Cohort

	Low OCD Cohort n=12	High OCD Cohort n=38	Sig.
Female, %	58.3	47.4	0.508
Age, mean (SD)	40.00 (16.11)	31.34 (8.18)	0.017
Black or African American, %	8.3	28.9	
White, %	91.7	63.2	0.164
Other, %	0.0	7.9	
BMI (lbs./in^2), mean (SD)	26.53 (4.15)	27.12 (7.68)	0.802
CCI score, mean (SD)	0.50 (0.80)	0.29 (0.73)	0.399
Y-BOCS score, mean (SD)	2.50 (2.20)	17.16 (5.84)	<0.001
Average PES score, mean (SD)	3.84 (2.37)	5.91 (2.34)	0.011

Psychedelic Experience Scale (PES) Scores

Figure 2. Average Psychedelic Experience Item Score by Cohort

Looking back on your most recent experience taking a psychedelic please rate the degree to which you experienced…



Predictors of OCD Symptoms in Those Self-Reporting Psychedelic Use

- Self-reporting a lower psychedelic experience (OR 7.755; p=0.049) was predictive of a lower Y-BOCS score. **(Table 3)**
- Black or African American race (OR 0.040; p=0.022) and comorbid PTSD (OR 0.022; p=0.015) were predictive of higher Y-BOCS OCD classification. **(Table 3)**

Table 3. Predictors of Lowest Y-BOCS (OCD) Score (n=50): Logistic Regression

	Odds Ratio (OR)	Confidence Interval		Sig.
		Lower	Upper	
Lowest PES quartile (most recent psychedelic experience)	7.755	1.007	59.695	0.049
Male	0.175	0.033	0.926	0.040
Age	0.977	0.939	1.017	0.265
Black or African American	0.040	0.003	0.623	0.022
Anxiety	3.001	0.357	25.238	0.312
Depression	6.006	0.803	44.939	0.081
PTSD	0.022	0.001	0.484	0.015

Conclusion and Discussion

- Psychedelic users with the lowest self-reported subjective psychedelic experience also reported the lowest level of OCD symptoms.
- Whether psychedelic treatments designed to induce low or no discernable psychedelic experience could reduce OCD symptoms requires further study.

Limitations

- Data were self-reported and subject to recall bias.
- Participants were limited to those with computer access.
- The study was undertaken during the COVID-19 pandemic, which may have impacted the results.
- The small sample size may limit generalizability of results.
- Despite a low psychedelic experience classification, a measurable psychedelic experience was reported in both the low and high psychedelic cohorts. Results do not address whether those that use psychedelics without a psychedelic experience have lower OCD symptoms.

References

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One or more of the authors report potential conflicts which are described in the program.

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