

Subjective Psychedelic Experience and Obsessive-Compulsive Symptom Severity

Robert Morlock, PhD¹ and Karin Blakolmer, MD²

¹YourCareChoice, Ann Arbor, MI USA. ²BYAS-PEB, Chicago, USA.

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

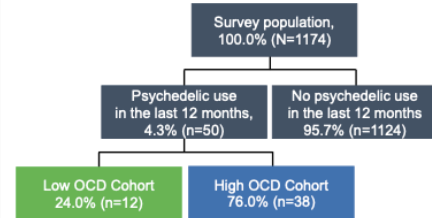
- Data was collected in November 2021 through an online, cross-sectional survey of US adults aged ≥18 years.
- Participants completed demographic questions, comorbid conditions to calculate a Charlson Comorbidity Index (CCI)^{3,4} score, the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS)^{5,6} (10 items, 0-4 scale), and were asked to self-report use of psychedelics in the last 12 months. Those taking a psychedelic in the last 12 months were asked about their psychedelic experience (18 items, 0-10 scale) and responses were averaged creating a Psychedelic Experience Score (PES).
- Y-BOCS and PES scores were divided into quartiles: the Low Cohort comprised the lowest quartile; the High Cohort comprised the highest three 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.
- Logistic regressions controlling for PES score, sex, age, race and psychiatric comorbidities were used to model Low Y-BOCS scores.

Results

Study Population

- Of the 1174 participants, 4.3% (n=50) reported using psychedelics in the last 12 months.
- 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 Psychedelic Users

- Those reporting psychedelic use in the last 12 months were 50% (n=25) female, 24% (n=12) Black 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 psychedelic users, respectively. (Table 1)

Table 1. Cohort Characteristics

| | 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 |
| African American or Black, % | 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) | 28.97 (6.96) | 0.227 |
| CCI, 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 Psychedelic Users by OCD Cohorts

- The High OCD Cohort had a significantly lower mean age (40.00 [SD 16.11] vs. 31.34 [SD 8.18]; p<0.017) compared to 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. Low OCD Cohort (5.91 [SD 2.34] vs. 3.84 [SD 2.37]; p=0.011). (Table 2)

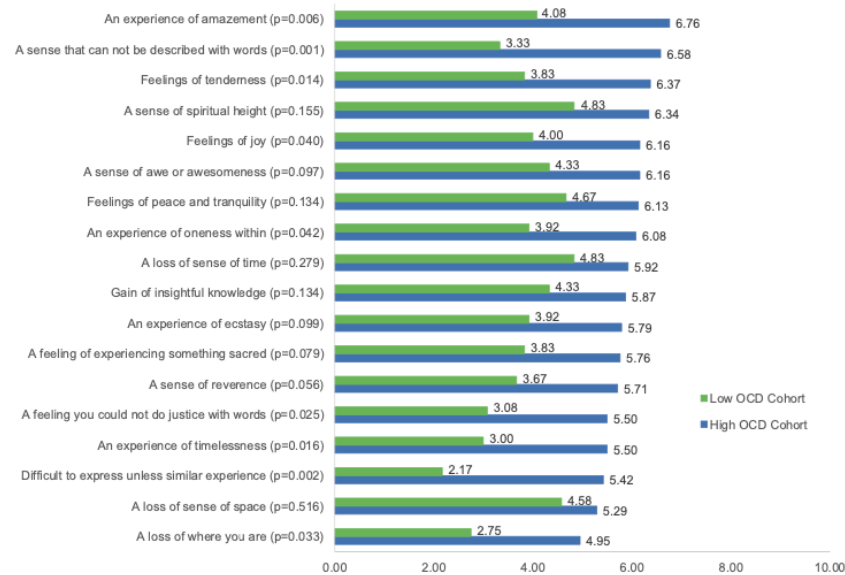
Table 2. Cohort Characteristics

| | 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 |
| African American or Black, % | 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, 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 Scores (PES)

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 (Exp(B) 7.76; p=0.049) was predictive of a lower Y-BOCS score. (Table 3)
- African American or Black race (Exp(B) 0.040; p=0.022) and comorbid PTSD (Exp(B) 0.22; 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

| | Exp(B) | 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 |
| African American or Black | 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 report 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

- Santos HC and Marques JG. Porto Biomed J. 2021. 6:1 (e128).
- Moreno et al. J Clin Psychiatry. 2006 Nov; 67(11): 1735-40.
- Charlson M et al. J Clin Epidemiol. 1987;40:373-83.
- Charlson M et al. J Clin Epidemiol. 1994;47:1245-51.
- Goodman WK et al. Arch Gen Psychiatry. 1989;46:1006-11.
- Rapp AM et al. J Cent Nerv Syst Dis. 2016;8:13-29.