

# Associations between classic psychedelics and opioid use disorder in a nationally-representative U.S adult sample

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## Background + Methods

**Background:** Opioid use disorder (OUD) is a major source of morbidity and mortality in the U.S. and there is a pressing need to identify additional treatments for the disorder. Classic psychedelics (psilocybin, peyote, mescaline, LSD) have been linked to the alleviation of various substance use disorders and may hold promise as potential treatments for OUD.

**Aim:** The aim of this study was to assess whether the aforementioned classic psychedelic substances conferred lowered odds of OUD.

**Methods:** We used recent data from the National Survey on Drug Use and Health (2015-2019) (N = 214,505) and multivariable logistic regression to test whether lifetime use (yes/no) of classic psychedelics was associated with lowered odds of OUD.

## Results – Table 2

### Associations between psilocybin and the 11 DSM-IV criteria for opioid dependence and abuse

Covariates: Identical to Table 1 + Lifetime use of other psychedelics (LSD, peyote, and mescaline), other illegal substances (cocaine, heroin, PCP, inhalants) and other commonly misused legal/medicinal substances (pain relievers, tranquilizers, stimulants, sedatives, and marijuana);

Opioid Dependence and Abuse Criteria	Frequency (unweighted N)	aOR (95% CI) (psilocybin as independent variable) <sup>1</sup>
1. Significant Time Spent Getting/Using	2,249	0.83* (0.70, 0.98)
2. Use More Than Intended	1,030	0.71* (0.54, 0.93)
3. Decreased Effects/Need More for Same Effect	2,901	0.82* (0.70, 0.96)
4. Unable to Cut Back	914	0.80 <sup>†</sup> (0.62, 1.04)
5. Emotional/Physical Health Problems	1,383	0.73** (0.60, 0.90)
6. Fewer Important Activities	1,320	0.71** (0.58, 0.87)
7. 3+ Withdrawal Symptoms	1,724	0.86 (0.71, 1.05)
8. Significant Work/Home/School Problems	1,063	0.66** (0.50, 0.86)
9. Use in Physically Hazardous Situations	910	0.66** (0.49, 0.88)
10. Recurrent Legal Trouble	454	0.72 (0.45, 1.15)
11. Social/Interpersonal Issues	906	0.75 <sup>†</sup> (0.56, 1.01)

<sup>†</sup>p<0.10; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001; aOR = adjusted odds ratio; CI = confidence interval

## Results – Table 1

### Associations between lifetime use of various substances and opioid use disorder (OUD)

Covariates: Demographic factors (sex, age, race/ethnicity, educational attainment, self-reported engagement in risky behavior, annual household income, and marital status)

Lifetime Use	Frequency (unweighted N)	aOR (95% CI) <sup>1</sup>
<b>Psilocybin</b>	<b>22,276</b>	<b>0.70*** (0.60, 0.83)</b>
Peyote	3,766	0.84 (0.63, 1.12)
Mescaline	4,595	1.13 (0.86, 1.49)
LSD	22,552	1.15 (0.94, 1.42)
MDMA/Ecstasy	21,195	1.66*** (1.35, 2.03)
PCP	3,935	1.63** (1.25, 2.12)
Cocaine	32,783	3.54*** (2.89, 4.34)
Inhalants	21,856	1.44*** (1.21, 1.73)
Tranquilizers	48,572	3.40*** (2.79, 4.14)
Stimulants	32,033	1.44*** (1.24, 1.68)
Sedatives	27,218	1.93*** (1.61, 2.30)
Marijuana	110,175	2.39*** (1.71, 3.35)

<sup>1</sup>\*p<0.05; \*\*p<0.01; \*\*\*p<0.001; <sup>2</sup>aOR = adjusted odds ratio; CI = confidence interval

## Lifetime psilocybin use was associated with lowered odds of OUD.

No other substances, including other classic psychedelics, were associated with lowered odds of OUD.

Additionally, sensitivity analyses revealed psilocybin use to be associated with lowered odds of seven of the 11 DSM-IV criteria for OUD (aOR range: 0.66-0.83)

Future clinical trials and longitudinal studies are needed to determine whether these associations are causal.