



Viewpoint

The tripping point: The potential role of psychedelic-assisted therapy in the response to the opioid crisis

Elena Argento^{a,b}, Kenneth W. Tupper^{c,d}, M. Eugenia Socias^{c,e,*}^a *Interdisciplinary Studies, University of British Columbia, 270-2357 Main Mall, H. R. MacMillan Building, Vancouver, BC, V6T 1Z4, Canada*^b *Centre for Gender & Sexual Health Equity, 1190 Hornby Street, Vancouver, BC, V6Z 2K5, Canada*^c *British Columbia Centre on Substance Use, 400-1045 Howe St, Vancouver, BC, V6Z 2A9, Canada*^d *School of Population and Public Health, University of British Columbia, 5804 Fairview Avenue, Vancouver, BC, V6T 1Z3, Canada*^e *Department of Medicine, University of British Columbia, 2255 Wesbrook Mall, Vancouver, BC, V6T 2A1, Canada*

ARTICLE INFO

Keywords:

Psychedelics

Opioid use disorder

Opioid crisis

Psychedelic-assisted therapy

Addiction treatment

ABSTRACT

The increasing contamination of the drug supply with illicitly manufactured fentanyl and related analogs in North America has resulted in the most severe drug-overdose crisis in history. Available pharmacotherapy options for the treatment of opioid use disorder have had limited success in curbing the current crisis, and a growing body of evidence highlights the need for innovative interventions that target underlying social-structural drivers of opioid use disorder. Re-emerging clinical research suggests that psychedelic-assisted therapy has potential as an alternative treatment for refractory substance use disorders and related comorbidities. Based on the available evidence, our viewpoint supports advancing research on the potential role of psychedelic-assisted therapy within a multifaceted response to the opioid crisis.

The escalating opioid overdose crisis in North America is a multi-dimensional health challenge with complex causes and no single solution. Despite the availability of several evidence-based pharmacotherapies for the treatment of opioid use disorder (OUD), these have had limited success in curbing the current crisis (Wood, 2018). A broader focus on the socio-structural determinants of OUD, alongside trauma-informed biomedical interventions, is urgently needed. Many people with OUD have complex relationships with both physical and emotional pain, underscoring inextricable links between comorbid OUD and post-traumatic stress disorder. Indeed, a growing body of evidence highlights socio-structural factors, such as stigma, psychological trauma, social disadvantage and isolation, as drivers of OUD (Dasgupta, Beletsky, & Ciccarone, 2018). As such, the opioid crisis necessitates continued expansion of evidence-based addiction treatments and research on innovative responses that address root causes.

The renaissance in psychedelic medicine thus comes at an opportune time. Re-emerging clinical research and evidence suggest psychedelic-assisted therapy shows potential as an alternative treatment for refractory substance use disorders and mental health conditions, and thus may be an important tool in a crisis where existing approaches have yielded limited success. A recent systematic review of clinical trials published over the last 25 years summarizes some of the

antidepressive, anxiolytic, and anti-addictive effects of classic psychedelics (dos Santos et al., 2016). Among these, are encouraging findings from a meta-analysis of randomized controlled trials of LSD therapy and a recent pilot study of psilocybin-assisted therapy for treating alcohol use disorder (dos Santos et al., 2016). Similarly encouraging, are findings from a recent pilot study of psilocybin-assisted therapy for tobacco use disorder, demonstrating abstinence rates of 80% at six months follow-up and 67% at 12 months follow-up (dos Santos et al., 2016; Johnson, Garcia-Romeu, & Griffiths, 2017) – rates considerably higher than any documented in the tobacco cessation literature. Notably, mystical-type experiences generated from the psilocybin sessions were significantly correlated with positive treatment outcomes. These results coincide with burgeoning evidence from recent clinical trials lending support to the effectiveness of psilocybin-assisted therapy for treatment-resistant depression and end-of-life anxiety (Carhart-Harris & Goodwin, 2017).

Research on the potential benefits of psychedelic-assisted therapy for OUD is beginning to emerge, and accumulating evidence supports a need to advance this line of investigation (Tupper, Wood, Yensen, & Johnson, 2015). Available evidence from earlier randomized clinical trials suggests a promising role for treating OUD: higher rates of abstinence were observed among participants receiving high dose LSD-

* Corresponding author at: Department of Medicine, University of British Columbia Research Scientist, BC Centre on Substance Use, 400-1045 Howe St, Vancouver, BC, V6Z 2A9, Canada.

E-mail address: bccsu-es@bccsu.ubc.ca (M.E. Socias).

<https://doi.org/10.1016/j.drugpo.2018.11.006>

and ketamine-assisted therapies for heroin addiction compared to controls at long-term follow-ups (dos Santos et al., 2016; Savage & McCabe, 1973). Recently, a large US population study among 44,000 individuals found that psychedelic use was associated with 40% reduced risk of opioid abuse and 27% reduced risk of opioid dependence in the last year, as defined by DSM-IV criteria (Pisano et al., 2017). Along the same lines, we found a protective moderating effect of psychedelic use on the relationship between prescription opioid use and suicide risk among marginalized women (Argento, Braschel, Walsh, Socias, & Shannon, 2018). Ibogaine treatment has also been associated with attenuation of opioid withdrawal symptoms and cravings. In a study among thirty individuals with heavy (daily) opioid use, ibogaine treatment was associated with significantly reduced opioid withdrawal symptoms, and half of participants reported no drug use at 1-month follow-up (Brown & Alper, 2017) – a sizable clinical effect. Despite the promise of these preliminary findings with ibogaine, given its potential toxicity further research is warranted to determine what it may contribute to the opioid crisis response. Meanwhile, growing evidence on the safety and efficacy of psilocybin for the treatment of mental and substance use disorders should help to motivate further clinical investigation into its use as a novel intervention for OUD. There is no easy fix to the opioid crisis, yet the research and evidence relay strong signals that psychedelics may play a key role in improving addiction issues and mental wellbeing. Alongside scaling up evidence-based prevention and treatment programs, and addressing upstream socio-structural factors, out-of-the-box thinking is urgently required to curb the deadliest drug epidemic in history. Could psychedelic-assisted therapy be the missing element of a multifaceted response? Without the research, we might never know.

Funding statement

EA is supported by a Canadian Institutes of Health Research (CIHR) doctoral award. MES is supported by a Michael Smith Foundation for Health Research (MSFHR)/St Paul's Foundation scholar award.

Conflict of interest statement

We wish to confirm that we have no conflict of interest to declare.

Acknowledgments

The authors would like to thank Isabella Tak for her administrative assistance.

References

- Argento, E., Braschel, M., Walsh, Z., Socias, M. E., & Shannon, K. (2018). The moderating effect of psychedelics on the prospective relationship between prescription opioid use and suicide risk among marginalized women. *Journal of Psychopharmacology*, 32(12), 1385–1391.
- Brown, T. K., & Alper, K. (2017). Treatment of opioid use disorder with ibogaine: detoxification and drug use outcomes. *The American Journal of Drug and Alcohol Abuse*, 1–13.
- Carhart-Harris, R. L., & Goodwin, G. M. (2017). The therapeutic potential of psychedelic drugs: Past, present and future. *Neuropsychopharmacology*, 1–9.
- Dasgupta, N., Beletsky, L., & Ciccarone, D. (2018). Opioid crisis: No easy fix to its social and economic determinants. *American Journal of Public Health*, 108(2), 182–186.
- dos Santos, R. G., Osorio, F. L., Crippa, J. A. S., Riba, J., Zuardi, A. W., & Hallak, J. E. C. (2016). Antidepressive, anxiolytic, and antiaddictive effects of ayahuasca, psilocybin and lysergic acid diethylamide (LSD): a systematic review of clinical trials published in the last 25 years. *Therapeutic Advances in Psychopharmacology*, 6(3), 193–213.
- Johnson, M. W., Garcia-Romeu, A., & Griffiths, R. R. (2017). Long-term follow-up of psilocybin-facilitated smoking cessation. *The American Journal of Drug and Alcohol Abuse*, 43(1), 55–60.
- Pisano, V. D., Putnam, N. P., Kramer, H. M., Franciotti, K. J., Halpern, J. H., & Holden, S. C. (2017). The association of psychedelic use and opioid use disorders among illicit users in the United States. *Journal of Psychopharmacology*, 1–8.
- Savage, C., & McCabe, O. (1973). Residential psychedelic (LSD) for the narcotic addict: A controlled study. *Archives of General Psychiatry*, 28, 808–814.
- Tupper, K., Wood, E., Yensen, R., & Johnson, M. (2015). Psychedelic medicine: A re-emerging therapeutic paradigm. *Canadian Medical Association Journal*, 187(14), 1054–1059.
- Wood, E. (2018). Strategies for reducing opioid-overdose deaths: Lessons from Canada. *The New England Journal of Medicine*, 378(17), 1565–1567.