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Stronger Together: Psychedelic, Herbal, and Behavioral Interventions as a Combined Framework for Addiction Recovery

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ABSTRACT

Psychedelic therapies have emerged as a modality of treatment for several treatment-resistant diseases, including post-traumatic stress disorder, treatment-resistant depression, and several classes of substance use disorders, including alcohol, opioids, tobacco, and cocaine. Practitioners in addiction medicine have several novel tools, which can support each other, with these three arms being psychedelic therapies, cognitive and behavioral approaches, and adjunctive medicine, which can be used alongside standard medication assisted therapy. This review aims to improve addiction treatment by providing a framework for the development of facilitator training in addiction medicine which includes these modalities. Through adoption of these techniques, it is possible that addiction treatment outcomes are improved beyond current standard treatment.

Keywords: Psychedelic-assisted therapy, Opioid use disorder, Addiction counseling, Treatment retention, Herbal medicine

Introduction

The resurgence of psychedelic-assisted therapies as promising substance use disorder interventions has been observed among populations with elevated rates of relapse and low response to conventional interventions. According to recent clinical and translational studies, psychedelics like psilocybin and ketamine may potentially ease substance use by increasing psychological flexibility, emotional insight, and the drive to change, instead of by directly inhibiting cravings in classical receptor-mediated actions.[1,2] These effects are now being seen as more process-oriented than pharmacologically deterministic, and in focusing on the role of subjective experience and later behaviour adjustment in determining long-term outcomes.[3]

Although this area of clinical attention has increasingly attracted clinical interest, there has been little standardization regarding the post-psychedelic phase despite recent changes in addiction-related care. Post-psychedelic support has been inconsistently covered in clinical models, whereas preparation and dosing sessions are well-defined.[3,4] This is a clinically relevant gap since people who are affected by substance use disorders are often vulnerable in the initial phases of recovery, which are characterized by psychological instability, withdrawal, and a higher likelihood of loss of engagement with the care.[5] Addiction medicine evidence has consistently shown that treatment continuity and retention are among the best predictors of ongoing recovery and mortality reduction.[6]
Mechanistic models have been progressively used to describe the temporary increase in neuroplasticity and cognitive-emotional openness induced by psychedelics, which creates a temporal window in which a program of behavioral and psychosocial intervention can have enhanced effects.[2,7] Nonetheless, in the absence of systematic post-treatment support, such acute benefits can fade, especially in those groups with a history of chronic addiction. Recent reviews point to the fact that psychedelic-assisted therapy outcomes strongly depend on the quality and the consistency of post-session integration and post-session care.[1,4]

Behavioral interventions are an essential but insufficiently integrated element of post-psychedelic care of an addiction. Behavioral therapies based on motivational interviewing, contextual therapy, and structured counseling models have proven effective in maintaining behavior change after a swift psychological transformation.[7,8] Those methods might be specifically effective in the post-psychedelic phase when patients usually require meaning-making, goal reorientations, and help to translate insights into long-lasting behavioral modification.[3,8] Ethical reviews also highlight that insufficient follow-up can put patients at psychological risk, especially when psychedelic experiences are combined with an increased susceptibility and suggestibility.[9]

Simultaneously, complementary and botanical methods have received interest as possible additions to post-acute care in addiction. Broad systematic and narrative reviews suggest that some herbal and nutraceutical treatments can regulate stress response, inflammation, sleep disturbance, and affective symptoms, which are frequently experienced in early recovery.[10,11] Although these interventions cannot replace evidence-based addiction treatment, they can have supportive value when applied to the models of structured post-psychedelic care that emphasize retention and stabilization.

Past evaluations of psychedelic-assisted treatment of substance use disorders have mainly addressed the effectiveness of psychedelic drugs, neurobiology, and psychotherapy administered in preparation and dosing sessions, and have frequently treated psychedelic therapy as a time-limited intervention.[1–3] Conversely, there has been a comparatively minimal focus on the post-psychedelic stage despite the fact that the long-term effects of addiction treatment are highly dependent upon treatment retention, continuity, and orderly integration after acute psychological transformation. To fill this gap, the review changes the analytical focus away from the psychedelic administration and instead focuses on the clinical course, synthesizing evidence on behavioral interventions and adjunctive herbal supports, which may stabilize patients following the use of psychedelics, mitigate the vulnerability of promptly recovering, and facilitate continued participation in care. This review redefines psychedelics as adjunctive components of a larger recovery process as opposed to mono-therapies by incorporating literature related to addiction medicine, behavioral science, and complementary therapeutics, providing a novel and clinically applicable lens that was not formalized in previous reviews of psychedelics.

Therapeutic potential of psychedelics in addiction treatment

ALCOHOL USE DISORDER.
Alcohol use disorder (AUD) is a chronic and relapsing condition, characterized by compulsive behavior and loss of control over consumption, with a great health impact contributing to global morbidity and disability in several populations. AUD remains one of the most prevalent mental disorders in the world, and recently demonstrated an exacerbation by pandemic stressors. Despite the available psychosocial, community, and pharmacologic interventions, AUD remains under-treated in many settings due to lack of access, stigma, and limited healthcare coverage.[12]

Current treatment strategies for alcohol use disorder, while effective for some populations, are limited by low utilization, inconsistencies in implementation, and delivery across poorly coordinated care systems, compromising recovery and long-term management.[13] Pharmacologic options are limited in number and range due to side effects, with only a small number of FDA- approved medications available for clinical use. These medications can be associated with side effects, difficult dosing regimens, and contraindications that may limit patient adherence, while access to behavioral therapies varies across healthcare settings. These limitations underscore a persistent need for therapeutic approaches that enhance engagement and sustain behavioral change.[14,15]

Psychedelic therapy has emerged as a potential new approach for AUD by addressing psychological and

behavioral patterns that contribute to persistent alcohol use. Psychedelics may facilitate increased insight, emotional processing, and motivation to change rather than directly suppress the craving. These interventions may facilitate re-evaluation of maladaptive drinking behaviors and engage effectively in psychotherapy. Reported benefits are most evident when these interventions are delivered as a part of a structured treatment model.[16]

Clinical evidence for psychedelic interventions for AUD has produced encouraging findings, especially in studies combining psychedelic administration with structured psychotherapy. Clinical research on these interventions dates back to the 1950s and 1960s, when lysergic acid diethylamide (LSD) was explored as an adjunct to psychotherapy in the treatment of alcoholism.[17,18] Later analyses combining results from these early studies helped clarify the clinical benefit. A meta-analysis of randomized controlled studies demonstrated that LSD interventions were associated with significant reductions in alcohol misuse and increased abstinence rates compared with control conditions, with effects persisting for several months after treatment.[19]

More recently, research has shifted toward psilocybin therapy. Psilocybin, a natural psychedelic compound derived from hallucinogenic mushrooms, has been administered in controlled clinical settings as an adjunct to psychotherapy. Clinical evidence from an early study suggested that psilocybin therapy was associated with reductions in alcohol consumption and heavy drinking days in individuals with AUD.[20] These findings were supported by a posterior randomized, double blind clinical trial that demonstrated a significantly lower percentage of heavy drinking days and higher rates of abstinence compared with placebo.[21] These results are consistent with findings from a recent meta-analysis evaluating psychedelic interventions for AUD, which found that LSD was associated with higher odds of abstinence or substantial drinking reduction compared with control therapy. At the same time, evidence for psilocybin was derived from a single recent randomized trial showing reduced alcohol use, and was considered promising, but still on limited evidence.[22]

TOBACCO/NICOTINE ADDICTION

Tobacco use is the leading cause of preventable disease and death in the United States, contributing to more than 480,000 deaths annually from cardiovascular disease, cancer, and pulmonary conditions. In 2022, an estimated 28 million U.S. adults (11.6%) were current cigarette smokers, and 49.2 million adults (19.8%) reported use of any tobacco product, including cigarettes, e-cigarettes, cigars, and smokeless tobacco.[23] An important proportion of these individuals meet criteria for tobacco use disorder, a chronic relapsing condition characterized by compulsive nicotine use, tolerance, withdrawal symptoms, and high rates of relapse despite available pharmacologic and behavioral interventions.[24]

Although pharmacologic therapies and behavioral interventions are available and significantly improve smoking cessation outcomes, absolute long-term abstinence rates for tobacco use disorder remain modest, and relapse is common, even after several quit attempts.[25] The risk of relapse observed after smoking cessation brings to light the chronic relapsing nature of nicotine dependence, which is influenced by neurological mechanisms, behavioral, and social factors.[26] As a result, tobacco use disorder frequently requires repeated and sustained treatment efforts, often combined with multiple therapeutic approaches. In response to this, a growing interest in new interventions that may target different dimensions of addiction in a broader way has arisen. Psychedelic-assisted therapies became an attractive area of investigation, with early clinical studies suggesting potential benefits in improving the outcomes of smoking cessation in a multifactorial manner.

Evidence supporting this approach is emerging, but still limited. In tobacco use disorder, much of the existing literature comes from studies using psilocybin, in which one to three psilocybin sessions are used along with structured psychotherapy or cognitive behavioral therapy. In an initial pilot study, psilocybin treatment was associated with high abstinence rates, and subsequent long-term follow-up of this cohort demonstrated a substantial proportion of participants maintained abstinence beyond 12 months.[27,28] Beyond this, a randomized controlled trial evaluating psilocybin compared with nicotine replacement therapy is currently ongoing, highlighting the interest in this psychedelic in the management of tobacco use disorder.[29]

Lastly, a recent systematic review evaluating the role of different psychedelics in tobacco use disorder identified psilocybin as the compound with the most supportive evidence to date. Psilocybin accounted for most of the clinical research and was the only psychedelic studied within a structured clinical treatment model that incorporated psychotherapy, with high abstinence rates and sustained smoking cessation at long-term follow-up. In contrast, evidence for other psychedelics was obtained from the retrospective studies, limiting the ability to draw conclusions about their efficacy.[30]

COCAINE USE DISORDER

1.5 million Americans meet the DSM-5 criteria for CUD31. In fact, in 2023, around 5 million Americans aged 12 and up used cocaine.[32] Unfortunately, 1 in 5 overdose deaths involved cocaine, with the highest death rates seen among American Indian and Alaska Native populations.[32] Over the past 20 years, cocaine-related overdose deaths have increased sharply, rising from about 2 to nearly 9 deaths per 100,000 people.[32] These numbers show that cocaine remains a serious and growing public health crisis.

There are currently no FDA-approved pharmacological interventions for CUD.[31] In a randomized controlled trial of patients with cocaine use disorder, intravenous ketamine (0.5 mg/kg) was associated with higher abstinence rates than midazolam, with 48.2% of the ketamine group staying abstinent during the final two weeks of the trial compared to 10.7% of the control group. 33 They also used mindfulness-based behavior modification (MBBM), leading to abstinence, fewer cravings, and a lower chance of relapse, suggesting that combining medication with therapy may be more effective than a single therapy.

Data from a U.S. national survey of more than 214,000 adults between 2015 and 2019 examined the relationship between classic psychedelic use and cocaine use disorder (CUD). After adjusting for demographic factors, peyote use was associated with more than a 50% lower likelihood of CUD, while LSD use was unexpectedly linked to a higher risk of CUD compared to individuals who had never used LSD. 34,35 These mixed findings show that not all psychedelics affect addiction in the same way.

In a separate study, 12 participants attended a retreat aimed at stress reduction and addiction recovery that included two ayahuasca ceremonies. Researchers collected data before the retreat and then monthly for six months afterward. The findings showed a sustained decrease in self-reported cocaine use for up to six months following the retreat.[36] While encouraging, this study was very small and is far from definitive.

Promisingly, a recently completed Phase 2 trial of Psilocybin-facilitated treatment for CUD37 assessed psilocybin's impact on default mode network functional connectivity,38 to find if psilocybin's therapeutic effects are mediated by such changes using Glx (a brain metabolite that reflects glutamate) which have been shown to play a role in cocaine addiction to see psilocybin's impacts on Glx in the anterior cingulate cortex and hippocampus via MRI.[37] The goal is to understand not just if psilocybin works, but how it might work in the brain.

A Phase 2 trial investigated psilocybin-facilitated treatment for cocaine use disorder by examining whether therapeutic benefits operate through default mode network connectivity changes.[37,38] Using MRI, researchers measured glutamate levels (Glx) in the anterior cingulate cortex and hippocampus to test if psilocybin's efficacy is mediated by modulation of glutamatergic signaling, a neurotransmitter system dysregulated in stimulant use disorders. The trial results have not yet been published, but could help treat CUD.

OPIOID USE DISORDER

Opioid use disorder (OUD) is one of the most severe and life-threatening substance use disorders, characterized by high relapse rates, physiological dependence, and a markedly increased risk of mortality.[39] Even with the availability of medications for OUD, including methadone, buprenorphine, and naltrexone, sustained benefits and long-term outcomes are dependent on continued treatment engagement. Evidence shows that mortality risk increases following treatment discontinuation, making treatment retention crucial and emphasizing the risk of relapse during out-of-care periods.[40] In addition, OUD is frequently accompanied by comorbidities such as depression, anxiety, and previous trauma, which can complicate recovery, decrease the continuation of care, and contribute to high morbidity and mortality.[41] Together, these challenges point to the need for additional approaches that go beyond symptom control to improve engagement, address psychological distress, and support sustained recovery.

The current OUD situation is the result of several factors over time. Early increase in opioid use disorder was linked to expanded prescribing of opioid analgesics, influenced by pharmaceutical marketing practices that minimized addiction risk, which, because of this, led to the rise in heroin use, resulting in the dominance of illicit synthetic opioids such as fentanyl.[42,43] These changes have increased the risk of overdose and made patterns of opioid use more unpredictable. At the same time, gaps in healthcare access and limited available non-opioid options and multidisciplinary pain management have contributed to prolonged opioid exposure. In routine clinical practice, pain assessment relies largely on patient symptoms, and when alternative treatments provide insufficient relief, clinicians may face pressure to escalate therapy in an effort to address the ongoing pain and distress. Over time, this behavior can lead to extended opioid use, increasing the risk of tolerance, dependence, and dose escalation.[44,45]

In parallel, a high prevalence of psychological trauma and psychiatric comorbidity has been consistently observed among individuals with OUD. Trauma exposure, including not only the military population, has been associated with increased vulnerability to opioid misuse and poorer treatment outcomes. Conditions listed previously are common in this population and may contribute to opioid use. These factors can complicate the continuation of treatment, increase the risk of relapse, emphasizing the importance of addressing the underlying psychological and emotional process in addition to managing physiological dependence.[46,47] The recognition of this problem has increased interest in therapeutic approaches that directly address the psychological dimensions of OUD, particularly those that extend beyond traditional pharmacologic targets.

Psychedelic interventions have gained attention as potential adjunctive treatments for opioid use disorder due to their ability to target psychological and affective dimensions of addiction that extend beyond opioid receptor modulation. Psychedelics, unlike conventional medications, can facilitate changes in emotional processing and motivational states that are critical for sustained recovery. An early double-blind randomized controlled trial in heroin-dependent individuals showed that ketamine-assisted psychotherapy led to higher long-term abstinence compared with low-dose ketamine active control (that did not induce a full psychedelic experience), with improvements in emotional processing and motivational orientation related to abstinence.[48] More recently, a randomized clinical trial in individuals with opioid use disorder and major depressive disorder found that adjunctive ketamine use was associated with rapid reductions in opioid craving and anxiety symptoms during early treatment, with effects observed within hours of administration.[49]

Beyond ketamine, clinical investigation of other psychedelics in opioid use disorder has been under research. Ibogaine has been associated with reductions in opioid withdrawal and use in observational reports. In an observational follow-up study of patients with OUD, Noller et al. reported that single ibogaine treatment was associated with reductions in heroin use and improvement

in addiction severity over a 12-month period.[50] In a separate observational analysis, Davis et al. reported that ibogaine use was associated with self-reported long-term reductions in opioid use and improvements in self-reported psychological outcomes. 51 However, significant safety concerns have been reported with ibogaine use, particularly cardiotoxicity, QT interval prolongation, and ventricular arrhythmias, which have limited the clinical application.[52,53]

In contrast to ibogaine, which is limited by safety concerns, psilocybin has emerged as another compound of interest in OUD, with research focusing on safety, tolerability, and efficacy. To date, randomized controlled efficacy results for psilocybin-assisted therapy in OUD have not been published; available human evidence is limited to preliminary safety data, while multiple trials are ongoing.[54]

Overall, current evidence indicates that these interventions may address psychological and affective dimensions of OUD that are not targeted with current approved treatment. However, with the exception of ketamine, clinical evidence remains limited and preliminary. Well-designed randomized controlled trials are needed to define the efficacy and safety of these compounds within established OUD management.

CANNABIS USE DISORDER

Cannabis use disorder (CUD) is a major negative outcome of cannabis usage, affecting 3 in 10 of the estimated 193 million people worldwide who use cannabis.[55–57] In 2023, 6.8% of people aged 12 years and older (~ 19.2 million people), and ~ 30% of those who stated using cannabis, met criteria for cannabis use disorder.[58] This means many people who use cannabis do not realize how easy it is to lose control over it.

To manage symptoms like nausea, pain, and anxiety, individuals who turn to cannabis for relief could have a higher risk of developing CUD.[59] What often starts as helping symptoms can slowly turn into dependence. Those struggling with CUD could also face a much higher risk of suicide, as this is the most common cause of death in this group.[58]

Lending to the horrible withdrawal symptoms, there is downregulation of cannabinoid-1 (CB-1) receptors in the brain from chronic use, and when activity stops at this receptor, the deficiency causes "interference with other neurotransmitter systems".60 This could be why stopping cannabis can feel physically and emotionally overwhelming for many users.

Most heavy cannabis users who want to reduce or stop their use are unsuccessful without structured support.[61] Right now, there are no FDA-approved medications to help treat CUD. Some drug classes, like those that target the body's cannabinoid system, have shown early results; they still need more testing before they can be widely recommended.[55–57] Research so far suggests that drugs that partially mimic cannabis in the body, like THC-based treatments and nabiximols, could be effective choices.[62] But the high costs, difficulty getting them, and concerns about misuse make them not the best for routine use. Sleeping aids like zolpidem, gabapentin, and quetiapine have shown some ability to lessen withdrawal symptoms. 62 At this time, treatment options remain limited.

There is currently no published peer-reviewed research on psychedelics providing therapeutic benefit for CUB. Right now, researchers at Johns Hopkins University are in phase 1 of an open-label pilot study to look at cannabis use, mood, sleep, and cravings using psilocybin-assisted treatment for CUD patients. 63 This research is still early, and strong conclusions cannot yet be made.

METHAMPHETAMINE/STIMULANT USE DISORDER

Between 2021 and 2024, stimulants were involved in nearly six out of every ten overdose deaths in the United States. During the same period, methamphetamine use stayed below 1% of the population.[64]

Right now, there are no FDA-approved medications to treat StUD. As a result, behavioral approaches play a central role in treatment.[65] An effective plan is "contingency management", which uses rewards or incentives to encourage healthier behaviors.[65] Research has shown that this method yields better results than other approaches, such as talk therapy or 12-step programs.[65] Federal agencies, including SAMHSA, have issued guidance on the safe and effective use of contingency management programs in clinical settings.[65]

A survey of 123 people who had stimulant use disorder before using classic psychedelics like psilocybin, LSD, DMT, or mescaline found improvements after psychedelic use. 76.4% had symptoms of StUD, but after psychedelics, only 3.3% continued to have severe symptoms. Overall, 78.9% no longer met the criteria for stimulant use disorder following psychedelic use.[66] This survey suggests that there could be a correlation between psychedelic use and decreased use of stimulants. Controlled double-blind randomized trials are still needed.

There is still very little research on how psychedelics affect people with StUD. While some personal stories suggest that taking part in ayahuasca ceremonies may help reduce symptoms, it is not yet clear how effective ayahuasca is at helping people completely stop using these substances.[67,68]

POLYSUBSTANCE USE DISORDER

Although the DSM-5-TR includes multiple substance use disorders, it does not recognize polysubstance use disorder as a distinct diagnosis in its latest revision.[69] But, new drug-related risks are emerging as more people use multiple substances at the same time, like stimulants, xylazine, kratom, tianeptine, and inhalants.[70]
Currently, there is no supporting evidence of psychedelic-assisted therapy in PSUD. This may be due to the higher risk of adverse effects in this patient population. This could be due to the increased medical and psychiatric risks associated with treating PSUD patients. For now, this group remains difficult to treat safely.

HERBAL INTERVENTIONS

Emerging research demonstrates the relevance of various herbal treatments in the management of withdrawal

symptoms associated with opioid use disorder (OUD). The plant-based treatments are often derived from traditional medicine, such as Traditional Chinese Medicine, and have been evaluated in clinical trials for their ability to reduce symptoms such as anxiety, cravings, myalgia, and insomnia.[75]

Sophora alopecuroides, an extract from the seeds of a legume plant with the same name, has shown strong evidence of alleviating acute heroin withdrawal symptoms. In a randomized controlled trial involving 100 patients, 400mg three times daily for 8 days showed high significance in reducing COWS (Clinical Opiate Withdrawal Scale) scores, with a large effect size of 2.64.76

Berberis vulgaris root extract, a single-agent treatment rich in alkaloids, such as berberine, demonstrated a substantial reduction in opioid withdrawal symptoms. In a double-blinded randomized trial in Iran, 500mg capsules resulted in a COWS change of -6.94 (95% CI: -9.29 to -4.59), achieving a 75% reduction (95% CI: 46% to 100%) compared to placebo. Secondly, improvements were also noted in sleep quality (Pittsburgh Sleep Quality Index) and in psychological factors.[77]

Nigella Sativa Seeds (Black Cumin), used as a single agent treatment, significantly mitigated opioid withdrawal symptoms. In a single-blind, randomized trial with 25 male patients, 500mg three times a day reduced symptom scores from 63.2 ± 13.57 on day 3 to 4.56 ± 8.13 on day 12, representing a 77% reduction compared to the placebo.[78]

The alcoholic extract of Zataria Multiflora, a single agent from this herb, effectively reduced withdrawal symptoms in opioid dependent males. In a double-blind, randomized trial, it achieved a 10-point decrease on the CINA scale (Clinical Institute Narcotic Assessment) or a 40% reduction, or a 40% greater reduction (95% CI: 26% to 54%) compared to the placebo.[79]

Chamomile essential oil (Matricaria chamomilla) provided moderate relief from withdrawal symptoms in a triple-blinded clinical trial with 202 male participants. Using 3ml three times a day for a month, it achieved COWS score reduction of -2.9 (95% CI: -3.7 to -2.1) or a 47% change (95% CI: 60% to -34%) compared to clonidine.[80]

Ajwain oil (Trachyspermum copticum), a single-agent herbal treatment, showed comparable efficacy to chamomile in the same trial, where it was dosed 6 drops 3 times daily, achieving a COWS score reduction of -2.8 (95% CI: -3.6 to -2.0) or 43% (95% CI: -55% to -31%) compared to clonidine.[80]

Rosemary (Rosmarinus officinalis) showed a statistically significant reduction in a blinded, randomized trial, with half of the participants showing a decrease in COWS score compared to the control group.[81]

Crocin (Crocus sativus), the active component of saffron, provided modest but significant relief in patients with methadone maintenance. In a randomized controlled trial, 30mg daily for 12 weeks achieved a COWS score reduction of -1.7 (95% CI: -3.0 to -0.4) compared to placebo.[82]

Corydalis extract contains several alkaloids, notably corydaline and l-tetrahydropalmatine (l-THP), which have demonstrated pharmacological activity relevant to opioid use disorder (OUD) in preclinical models.[83]

Other Herbal formulations have shown benefits, but have had less quantifiable effects. The Jinniu capsule had a 91% reduction in anxiety via the Hamilton Anxiety Scale (HAMA),84 hab-o-Shefa showed a significant reduction in opioid-positive tests and self-reported use,85, and Oryzanol with Rotundine had an 82.5% efficacy rate compared to 57.5% control.[86]

Cognitive, Behavioral, and Counseling Approaches

Multiple behavioral interventions have demonstrated statistically significant efficacy for OUD, mostly as adjuncts to medication treatments.

Cognitive behavioral therapy (CBT) has shown a reduction in opioid-positive tests among individuals receiving methadone maintenance treatment, reporting an odds ratio (OR) of 0.66 (95% credible interval [CI]: 0.66–0.96) compared to treatment as usual.[71] Educational and behavioral counseling (EBC) demonstrated even greater efficacy (OR = 0.28, 95% CI: 0.12–0.25, high certainty) in the same population.[71]

Contingency management, which uses tangible rewards to reinforce abstinence and treatment adherence, has shown significance when added to opioid agonist therapy.[72]

Motivational interviewing has also demonstrated statistical significance in aberrant opioid-related behaviors in small randomized trials, with adjusted odds ratios favoring MI-based approaches over standard counseling.[73]
The use of any of these interventions has proven to increase the likelihood of abstinence both in 3-4 (RR= 1.60, 95% CI: 1.24–2.13) months and 6-12 months (RR = 1.25, 95% CI: 1.11–1.52) compared to controlled conditions shown in different clinical trials.[74]

Facilitator Education

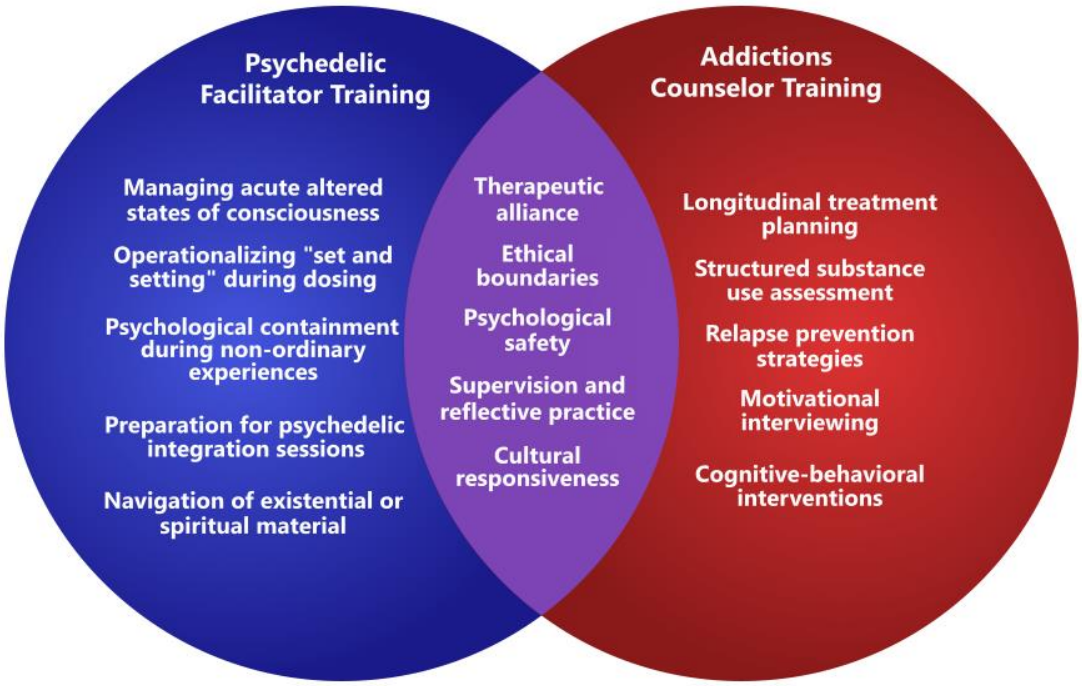
Addiction counselor training prepares clinicians for the realities of sustained patient care, including ongoing assessment of substance use severity, evidence-based treatment planning, documentation, service coordination, and ethical decision-making.[93–95] Treatment approaches are grounded in motivational interviewing and cognitive-behavioral methods, which target ambivalence about change, identify patterns sustaining substance use, and support coping strategies applicable outside the therapy setting.[96,97] Because substance use disorders rarely present in isolation, counselors must coordinate across psychiatric, medical, legal, and social services.[93,94] The work deepens over time, particularly with co-occurring mental health conditions or trauma histories, placing sustained emphasis on the therapeutic relationship,

cultural context, and continuity of care as predictors of retention and recovery.[93,94,97]

In comparison to addictions counseling, psychedelic facilitator training models emphasize that therapeutic benefit arises not from the pharmacological agent alone, but from the structured support delivered across preparation, dosing, and post-session integration.[87–89] Central to this approach is the principle of set and setting, whereby environmental context and relational factors shape the patient's experience during psychedelic states.[87,88,90] Facilitators are trained to maintain psychological safety, recognize when distress exceeds session parameters, and determine when medical intervention is warranted without unnecessarily disrupting the experience.[87,88] Ethical training addresses boundary maintenance, power dynamics, misconduct risks, and the role of supervision, alongside questions of access, cultural context, and how facilitators situate their role within regulated care.[90,91] Competence is developed primarily through supervised practice and observation rather than classroom instruction alone.[87,88] Whether personal psychedelic experience should be required remains contested, with limited evidence that it improves outcomes and concerns about coercive pressures in training.[92]

Although psychedelic facilitator and addiction counselor training have developed as separate pathways, the literature increasingly recognizes the need to integrate both skill sets for effective psychedelic-assisted treatment of substance use disorders. Psychedelic-assisted therapy combines pharmacological and psychological elements, where integration work—the structured process of translating acute psychedelic experiences into lasting behavioral change—requires competencies that overlap substantially with addiction counseling skills such as motivational interviewing and relapse prevention.[98] Supervisory frameworks aligning motivational interviewing with psychedelic integration have been proposed to bridge the gap between acute experiences and long-term therapeutic goals.[99] A growing number of training programs now incorporate psychotherapeutic principles, ethics, and integration practices, acknowledging that clinicians must support patients across the full continuum of care.[100] Integrated competencies do not imply role redundancy but rather support interdisciplinary collaboration: facilitators trained in addiction methods may better support long-term recovery planning, while addiction counselors with psychedelic process competencies may more effectively contextualize patient experiences within a recovery framework.

Figure 1: Overlap of Capabilities Taught by Training Pathway. Source: original production of the authors.



Discussion

Although psychedelic-assisted therapies have yielded promising results in a variety of substance use disorders, emerging patterns of literature and empirical studies can indicate that their effectiveness may rely on post-acute care frameworks as much as on psychedelic intervention. Modern reviews highlight the fact that psychedelics allow a temporary window of psychological and neurobiological plasticity that must be carefully maintained through directed behavioral control in order to transform temporary insight into long-term recovery.[101] This post-session phase is associated with increased susceptibility to relapse, mood, and disengagement risk in individuals with opioid use disorder, which highlights the clinical significance of longitudinal care, as compared to time-constrained intervention.[102]

Nevertheless, existing psychedelic facilitator training programs are still not evenly matched with the realities of addiction medicine. According to recent assessments of psychedelic training pathways, disproportionate attention has given to preparation, dosing-session safety and ethics, and relatively little attention has been given to addiction-specific skills (relapse risk assessment, symptom management related to withdrawal, continuity-of-care planning).[103] Clinicians working in psychedelic environments reveal qualitative data that show they feel unprepared to deal with the recurrence of cravings, destabilization, or ambivalence toward abstinence after the acute psychedelic experience, especially in patients with persistent substance dependence.[104]

Literature on addiction medicine continuously shows that treatment retention and therapeutic alliance are some of the best predictors of recovery and mortality reduction. A recent meta-analysis of psychosocial interventions in substance use disorder has revealed that systematic ways of using motivational interviewing, relapse-prevention models, and long-term involvement have a significant beneficial effect on dropout rates and long-term outcomes relative to infrequent or insight-based approaches.[105] The results can be directly translated to psychedelic-assisted therapy, where insight without any behavioral support can not help to bring about lasting change.

Neuropsychological studies also indicate that the psychedelic experiences could enhance emotional openness and suggestibility in the post-acute phase. Though therapeutic learning might be improved by this condition, psychological risk can also rise, unless it is appropriately contained. Recent empirical studies have demonstrated that persons experiencing substance use disorders are especially susceptible to post-session distress once integration is not structured or facilitators have not been trained in recovery-oriented behavioral methods.[106] The specially trained addiction counselors are equipped to manage these dynamics by monitoring relapse, reinforcing coping skills, and maintaining engagement during times of psychological instability.

In this regard, incorporating addiction counseling skills in psychedelic facilitator training is a viable and evidence-based approach. New transdisciplinary models predict that psychedelic process knowledge, combined with proven addiction counseling abilities, will enhance safety, retention, and insight translation into behavior change.[99] This is what makes such integration not reduce the experiential value of the psychedelic therapy but places it in a clinically responsible continuum of care.

Adjunctive botanical and herbal interventions, in addition to psychotherapeutic integration, can provide supportive advantages in early post-psychedelic-assisted therapy recovery, especially in opioid use disorder. According to a recent systematic review of herbal interventions in the context of opioid withdrawal, a number of plant-derived

compounds have been linked to a decrease in anxiety, sleep disturbance, and somatic withdrawal symptoms as adjuncts to conventional care.[107] These areas of symptoms have a high level of correlation with initial disengagement and relapse, implying that adjunctive supports can have a stabilizing effect when implemented wisely.

New neurobiological data also provide additional arguments in support of this approach. The recent reviews have also identified the contribution of neuroinflammation and dysregulation of stress responses to craving persistence and affective instability in substance use disorders and have pinpointed these mechanisms as potential targets of adjunctive treatment.[108] Such pharmacologic or botanical interventions that can regulate these systems can thus be used as a supplement to both psychedelic-assisted therapy and behavioral interventions during the potentially vulnerable post-acute phase.

Collectively, the existing literature justifies a redefinition of psychedelic-assisted therapy as an initiator in a continuum of more holistic addiction therapy rather than a discrete intervention. Lack of consistency in the education of facilitators, especially the low inclusion of the principles of addictions counseling and post-acute symptom management, can limit the effectiveness of therapy. Interdisciplinary training by combining psychedelic facilitation with evidence-based addiction counseling and a well-chosen adjunctive support (herbal medicine) can help to address these gaps and increase safety, retention, and lasting recovery in opioid use disorder.

Pragmatic trials comparing integrated care models with psychedelic-only models should be the priority of future research, and the outcomes of these studies should be retention, relapse, and functional recovery. It will be critical to develop standardized competency frameworks that build upon psychedelic practice and addiction medicine to convert experimental promise into clinically scalable and ethically responsible care.

Conclusion

Psychedelic-assisted therapies have returned as promising adjunctive treatment methods to substance use disorders, especially those populations that demonstrate minimal response to traditional methods. In various areas of addiction, such as opioid use disorder, there are indications that psychedelics can be used to help in psychological understanding, emotional regulation, and change motivation. Nevertheless, this review highlights the fact that the therapeutic benefit of psychedelics is not automatic and self-sustainable. Rather, the quality of after-acute care, the continuity of engagement, and the clinical competencies of the people who provide and support treatment outside the dosing session have a strong influence on long-term outcomes.

One key aspect of this review is the critical gap in existing psychedelic facilitator education. Although the currently available models of training focus on preparation, ethics, and support of acute sessions, they tend to pay inadequate attention to addiction-specific training (relapse prevention, symptom management in the withdrawal process, and treatment adherence). Addiction medicine has provided evidence continuously that discipline psychosocial interventions, especially ones that include motivational interviewing, relapse-prevention models, and long-term therapeutic engagement, are central factors in retention and recovery. The inclusion of the competencies in psychedelic-assisted care models could significantly improve the aspects of safety and effectiveness.

Simultaneously, selected herbal and nutraceutical interventions can be of supportive benefit in the vulnerable post-psychedelic recovery period, especially in people with opioid use disorder. Though these techniques are not supposed to substitute the evidence-based addiction techniques, they can be used to relieve the withdrawal symptoms, sleep disturbance, anxiety, and stress reactivity-factors closely linked with early dropout and relapse.

Generally, the evidence available justifies the restructuring of psychedelic-assisted therapy as a facilitator that lies within a continuum of addiction care and not as a separate treatment. Future studies must focus on practical, integrated models, which incorporate psychedelic treatment, addiction counseling, and supportive adjunctive strategies in order to maximize the retention, stability, and long-term recovery outcomes.

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