

Exploring Entheogen-Integrated Therapy as an Innovative Intervention for Gambling Addiction

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Abstract

Being one of the well noted behavioral addictions, gambling disorder poses complex treatment challenges due to the nature of the serious and recurring nature of problem gambling behavior among the victims. As far as conventional treatment options (e.g. cognitive- behavioral therapy (CBT) and pharmacological interventions) are concerned, their efficiency is mixed, and relapse rates remain high, and long-term success is low. Psychedelic-assisted therapy is a potentially effective method of alternative treatment of different mental conditions, such as depression, PTSD, and substance use disorders, which has recently attracted attention. This abstract identifies the possible use of psychedelic drugs otherwise known as psychedelics in the treatment of gambling disorder through psilocybin, MDMA, and ketamine drugs. When used in a controlled therapeutic environment, these substances have been demonstrated to be able to augment emotional processing, broaden cognitive flexibility, as well as experienced deep psychological insights. These effects can work directly on the habitual tendency and mood imbalances commonly present in the gambling-addict. Research and real-life examples taken in early stages indicate that psychedelic-assisted treatment may be used to break adaptive patterns and lead to long-term recovery. Yet, rigorous clinical trials and ethical models are required in order to validate safety, efficacy and long-term results. It is the author of this paper that requests the research agenda to examine the therapeutic promise of psychedelics in behavioral addictions with the focus on the gambling disorder and that underlines the need to transition these new therapies into evidence-based and regulated healthcare systems.

Keywords: *Psychedelic-assisted therapy, gambling disorder, behavioral addiction, psilocybin, MDMA, ketamine, cognitive flexibility, emotional regulation, mental health treatment, relapse prevention.*

1.Introduction

The gambling disorder (GD) is a deep mental and behavioral malady which leaves a devastating trace by causing financial losses, broken relationships, and worsening mental conditions. As defined in the DSM-5 as a behavior addiction it is expressed as a transportive and repetitive gambling pattern that compromises individual, familial, and vocational operation. Amid the availability of a variety of therapeutic measures, including those pharmacological and psychotherapeutic, including naltrexone and nalmefene, cognitive-behavioral therapy (CBT), and others, there are problems with the outcomes of treatment. A considerable number of patients relapse or simply forget about treatment, which is a sign of an urgent necessity to develop new methods of treatment. This is cured in this backdrop that the idea of applying psychedelic-assisted therapy (PAT) as an intervention of GD concept is revolutionary and necessary(1).

Psychedelic-assisted therapy is a treatment, which incorporates the use of a psychoactive agent like psilocybin or lysergic acid diethylamide (LSD) in combination with a guided psychotherapeutic effort. Not only are these classic psychedelics reputed to create hallucinogenic insights, but also are seen to induce profound emotional, and cognitive breakthroughs. Within a substance use disorder, post-traumatic stress disorder (PTSD), and major depressive disorder, PAT has demonstrated notable success in the alleviation of the symptoms and fostering the enduring psychological health. Treatment-resistant depression studies, to give an example, have disclosed a period of sustained symptom remission with a single or even two psychedelic sessions, particularly in those who are administered backed with a designed therapeutic intervention.

Reasons to such extension to gambling disorder follow the similarities between GD and substance use disorders. They are similar in terms of their neural pathways that share brain abnormalities in the dopaminergic reward circuit, similarities in patterns of compulsivity and poor decision-making and elevated psychiatric comorbidities, which include anxiety/depression. These similarities imply that the applications of the interventions, which are found to be effective in substance use disorders, can be also useful in GD. Moreover, psychedelic substances not

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only have the potential of treating the underlying addictive mechanisms, but might also treat the emotional wounds and mental inflexibility that are frequently the root cause of compulsive gambling. They can also help the individual during psyche addiction recovery because of the introspective, emotional and neuroplastic properties that they possess.

The psychedelic therapy is distinguished by the focus on the set and setting (or a concept that involves the mindset of the individual and the environment in which the experience will take place). Patients in PAT normally report the experience as one of the most significant in their lives, in a supervised and supportive environment. Such sessions can result in self-cognition, trauma healing, and restructuring life priorities and can play a significant role in the breakage of the cognitive and emotional loops that are reinforcing the act of gambling. A potential more sustainable model of intervention is that of PAT compared to traditional pharmacological treatment, as the latter needs to be followed daily(2).

Nevertheless, even though supporting the usage of PAT in GD with theory makes a very strong point, clinical evidence is still limited towards its application on this specific condition. The majority of the current studies dwell on alcohol, tobacco, and opioid use conditions. However, initial researches have been initiated. Conceptual papers and case reports suggest that there should be more stringent research into the treatment of behavioral addictions by using classic psychedelics. Case in point, there is a non-psychedelic dissociative anesthetic agent, ketamine, which has been recorded to diminish the tendency to gamble in a treatment-resistant situation. Besides, patients with co-occurring ailments which are normally observed in GD, like depression or anxiety, have recorded significant improvements following PAT practice.

Notably, the renewed attention to psychedelics has nothing in common with recreational interest but is based on a scientific approach. Neuroscience and psychology facilitate the comeback of psychedelics, commonly called by the media as the psychedelic renaissance, together with a paradigmatic shift in the popular policy and cultural politics of drug rules. The FDA and EMA have provided the designation of psychedelic compounds as a type of treatment, called a breakthrough therapy, for conditions that are perceived to have a high unmet need, thus leading to an expedited clinical trial testing process with the hope that psychedelic medication may have a broader application in the clinical setting.

However, PAT does not come without threats. Overall, psychedelics are physiologically safe and not addictive, as used in controlled studies; however, they may produce acute panic, confusion, or even dysphoria. Psychedelics are more dangerous to those who have a history of psychoses or issues in the cardiovascular area. Thus, careful screening of the patient, medical monitoring conditions, and intensive integration sessions are essential to reduce risks and provide optimum therapeutic utility.

The article by Romero and colleagues does not suggest that they have all the correct answers but they intend to create an academic discourse. They add the value of making the research field think outside the box and conduct the investigation of unexplored territory; namely, the concept of utilizing PAT as a new form of intervention in the cases of gambling disorder(3). The authors promote specific clinical trials, a heterogeneous population of participants, comparative research with other methods of treatment. Should this mode of research come to fruition, it will have altered the paradigm of behavioral addiction medicines, and it may provide potential hope to individuals left without solutions by current treatment paradigms.

To conclude, treating gambling disorder through the means of psychedelic-assisted therapy is a concept that perhaps has reached its moment. It is based on a high-quality neuropsychology theory, has a riveting amount of clinical evidence in related fields, and has vast centuries of ceremonial application. Science is still discovering the secrets behind the human mind and PAT does not just provide a treatment, it provides a transformation, one that so far has enabled people to overcome the stronghold of compulsive gambling.

2. Historical Background and the First Clinical Applications of Traditional Psychedelics

The medicinal intake of the classic psychedelics was of ancient origin whose roots were way out beyond the scope of present-day medicine. These drugs LSD (lysergic acid diethylamide) psilocybin (in so-called magic mushrooms) and DMT (dimethyltryptamine) belong to a family called 5-HT_{2A} agonists, which bind to brain receptors of serotonin. Scientists, shamans and philosophers said that their ability to greatly change perception, emotion and consciousness is fascinating. Throughout millennia, a wide array of cultures around the world, including Neolithic societies or ancient Egyptians as well as pre-Columbian cultures, have used psychedelic plants as a part of the rituals, ceremonies, and healing. These customs, which were spiritual or religious in essence did

indirectly affirm the emotional and psychological strength of altered states of consciousness in dealing with existential and personal issues.

It was in the middle of the 20th century when the modern scientific community started to take serious interest in the clinical possibilities of those substances. Researchers quickly took interest in the LSD psychological effects, after the progress made by Albert Hofmann in 1938 in the synthesis of LSD, and an accidental test of the drug on himself in 1943. Interest in clinical trials exploded in the 1950s and 1960s with over 1,000 peer reviewed studies by 1966 and then an estimated 40,000 individuals subjected to psychedelics in formal clinical contexts. Conditions like alcoholism, depression as well as existential distress in terminal illness were examined. Early anecdotal and experimental evidence indicated that psychedelics might lead to intense emotional breakthroughs and spiritual or mystical experience, and behavioral change(4). The period was the initial phase of psychedelics psychiatry.

This scientific impulse however was rudely interrupted by cultural and political events. When the recreational use of psychedelics became widespread in the 1960s, the perceived threats to the collective health, counterculture and even moral panic pressure governments, particularly those of the United States, to place stringent bans on psychedelics. Psychedelics were classified as Schedule I drugs, in part, on the grounds that they possessed, among other things, no accepted medical use and a high potential for abuse, a partial description that folks across the research spectrum are now saying was scientifically unsound. Consequently, nearly all the investigation on the therapeutic use of psychedelics was suspended roughly until the end of three decades.

The legal freeze did not kill the interest in psychedelics though. The field retained an intellectual core in a small, resolute group of scientists, psychologists and anthropologists which wrote theory about it, held clandestine therapeutic meetings, and published analyses of historical data. Since the 1990s and picking up speed in the 21 st century, psychedelic research underwent a strong revival. There were several factors leading to such revival, such as the development of neuroscience and neuroimaging, increasing discontent with the existing approaches to psychiatric treatment, and a shift in the narrative of drug policy in the public discourse. These substances also received the reevaluation of their safety and their therapeutic value that was justified by new evidence and pointing to the fact that classic psychedelics are non-addictive in a physiological way and relatively safe under controlled circumstances.

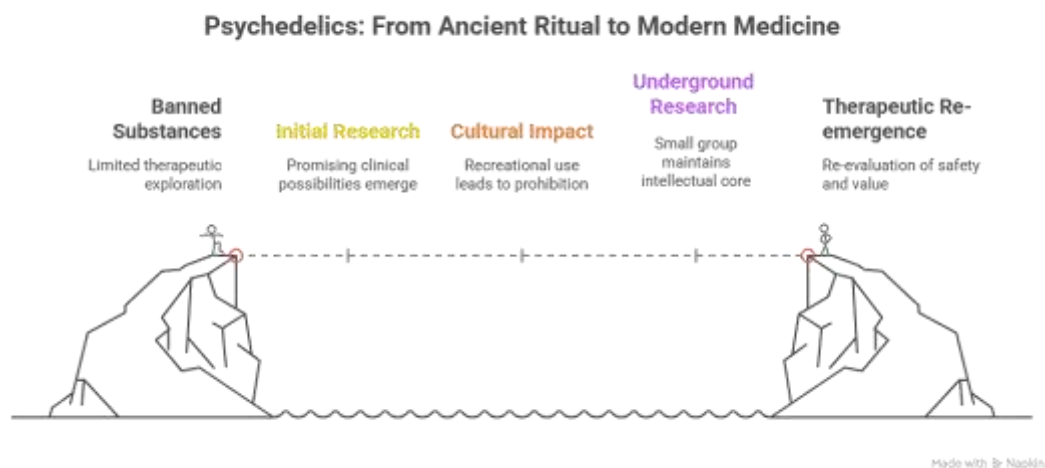


FIGURE 1 Psychedelics: From Ancient Ritual to Modern Medicine

This so called psychedelic renaissance has resulted in the reinstitution of stringent, peer-reviewed studies which investigate the use of psychedelics in the treatment of a wide range of psychological disorders. They have been of great interest especially when used in treatment resistant conditions e.g. major depressive disorder, post traumatic stress disorder (PTSD) and substance problems. In comparison to traditional antidepressants, which are prescribed on a daily basis, need many weeks to become effective, and are often associated with unwanted side effects, psychedelic therapy has the potential to create significant long-term psychological benefits both in the short-term courses, and with a single dose, especially when used in conjunction with psychotherapeutic assistance.

The contemporary researches impress on the point that the treatment using psychedelic is not connected with dealing with a drug but with the construction of the process of therapy(5). This involves preparation sessions to talk about psychological histories, objectives and expectations; the actual psychedelic session, where therapists

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are trained professionals; and the post-session integration therapy that allows patients to assimilate and make use of what they learned during the experience. This method is very well-organized compared to the sometimes unorganized and uninstructed experience of psychedelics in non-medical situations. Scientists, nowadays emphasize the need of these controlled protocols in order to enhance benefit and reduce the risk.

Moreover, psilocybin and LSD or other prototype psychedelics have been discovered to trigger a whole system of brain processes that encourage psychological flexibility, introspection, and emotional perceptiveness. Such effects are explored with more sophisticated neuroimaging research that reveals stronger associations between the various brain areas and dampened activity in the default mode network (DMN), the brain hub related to self-referential thinking, rumination, and inflexible patterns of thoughts. Psychedelics have the potential to open neural and cognitive states to novel psychological realization and behavioral flexibility, which has been one aspect termed neuroplastic catalysis.

Although most research conducted in the initial years was aimed at mood disorders and substance abuse, new studies are now starting to be conducted in other areas, such as behavioral addictions, like gambling disorder. Successful history in the treatment of alcoholism with LSD which is well documented in experiments of the 1960s has encouraged researchers to speculate that similar processes can be used in other compulsive disorders. As a matter of fact, perhaps due to their ability to induce a sense of awe, unity and meaningful reflection about existence psychedelics may be idealized in helping people reconsider their life goals and motives emotional basis behind their malpathologies(6).

Although psychedelics seem to have great potential, there are risks associated with it. Occasionally it has adverse effects including transient anxiety, confusion, paranoia or having bad trips, particularly when unprepared or unsupported. Psychosis or hallucinogen persisting perception disorder (HPPD) are more serious complications that arise, but occur infrequently and precaution has to be taken in those with predispositions to mental illness. This fact explains the importance of effective clinical guidelines and professional administration. Ethical principles of informed consent, patient selection and even harm reduction therefore have become key aspects in the current psychedelic studies.

To sum it up, despite the early history of psychedelic research being a guide of sorts it is also a warning. All of that optimism of the fifties and sixties was put to sojourn, at the end of the day, by the sociopolitical recoil and an inability to adequately take account of the ethical, cultural, and clinical situation within which those substances were put into use. The aims of the current revival, which attempt to balance previous errors, are a focus on safety, scientific precision and patient centered care. History has proved how psychedelics can change the way mental health treatment occurs forever. The issue now is how to make sure that this potential will be realised in a wise, responsible, and inclusive manner, thereby laying the ground in their future application not only in substance-related disorders but also in complex conditions such as gambling disorder which have not yet been fully addressed by available interventions.

3.Mechanisms of Action: How Classic Psychedelics Influence the Mind and Brain

The mechanisms of action of classic psychedelics (including LSD, psilocybin, and DMT) in the human brain have become a subject of much interest on the part of neuroscientists and psychologists. These are materials that have a decisive ability to change the consciousness, thinking, sensing, and feeling radically, thus this is what makes them have therapeutic promise in the treatment of different mental disorders. Though a single unifying explanation has not been found, scientists have come up with a number of interconnected theories to explain the processes through which these compounds may work in the body. These models cut across the realm of biochemistry, neurons, and psychology and provide complementary views that help shed light on the deep changes that are witnessed in the course of and following psychedelic experiences(7).

It is Entropic Brain Hypothesis that is one of the most influential theories. According to this model, mentally ill people, in conditions of depression, addiction and anxiety, have distorted thinking to the point of being overly rigid and, in a sense, quite cold. In other words, they are too logical and structured. It is suggested that psychedelics temporarily randomize (or increase the entropy of) the nerve activity providing an opportunity to rearrange the inflexible mental constructs. Such increased neural entropy disrupts the neural habits of perception and interpretation allowing people to view their thoughts and behaviors in novel, quite frequently illuminating directions. By doing that, psychedelics trigger the flow of emotional expression, mental shifts and capacities of development of new ideas, and that is extremely important in the therapeutic path.

The Hypothesis of the Default Mode Network (DMN) is closely related to it. A large-scale brain network, the DMN is linked to self-referential thought, introspection and the narrative self. In depression and addiction, DMN tends to be hyperactive resulting into spiral of rumination, worrying and identity entanglements. Psychedelics have also been observed to interfere with the linkage features of DMN, therefore loosening the barrier of usual self-absorption. The disturbance leaves room to different modes of thought and existence. In neuroimaging, diminished DMN activity has been related to ego dissolution, a short-term loss of one's normal sense of self, an experience which is commonly reported by patients to be the most important and freeing aspect of the psychedelic experience. Working in concert with that, as the DMN takes its back seat, the brain is now centered around a more global whole-brain interaction, allowing emotions, memories, and sensations to have a more flowing aspect and overall better understandable to the perceiver(8).

The other conceptual model is the Psychedelic State Model. In contrast to the other theories, which involve neural integration or breakdown, this model states that psychedelics trigger the activation of an altered state of consciousness evidenced by extreme introspection, increased emotional attunement, suggestibility, and heightened sensory experience. Under this condition, the users have been reported to experience dramatic altered perspectives, which consisted of feelings of wholeness, amazement, and transcendence. Such phenomena are not casual; they are frequently the emotional and psychological centre of the therapeutic value. Patients often come out of such sessions with a re-engineered interpretation of their life story, their relationships, or their values, and this can be a decisive thrust, which a conventional talk therapy could not reveal so readily.

Another model that builds directly on predictive coding theory is the REBUS model, short for Relaxed Beliefs Under Psychedelics model. Under this perception, the brain is regarded as a predictive machine, and it continuously builds the models to predict the sensory data according to previous beliefs. These initial beliefs are too inflexible or pessimistic in most mental disorders, which restricts the brains to process new information neutrally. It is hypothesized that psychedelics weaken the hierarchical weight of these priors or in other words, relax the assumptions and filters according to which people perceive reality. This relaxation provides a chance of a perceptual and emotional reinterpretation, which makes possible therapeutic breakthroughs to question the dysfunctional beliefs a person might have had before this relaxation; hopelessness, worthlessness, or obsessive behavior.

The Self-Entropic Broadening Theory also gives another vital lens. In this framework, the emphasis is made on how psychedelics reduce the status of self in emotional and cognitive processing. Within this lost narcissism, people might feel less alienated, more vulnerable and less engaged with self-stories of victimhood(9). It directly points to therapeutic use, particularly in conditions entailing inappropriately high levels of self-referential rumination such as depression, or ego-defensive pathological behaviours such as gambling or intoxication. Psychedelics might enable better relationship and existential healing as it helps to quiet the ego and enlarge the self conception (beyond the desires and fears) and deactivate it and activate the entire self.

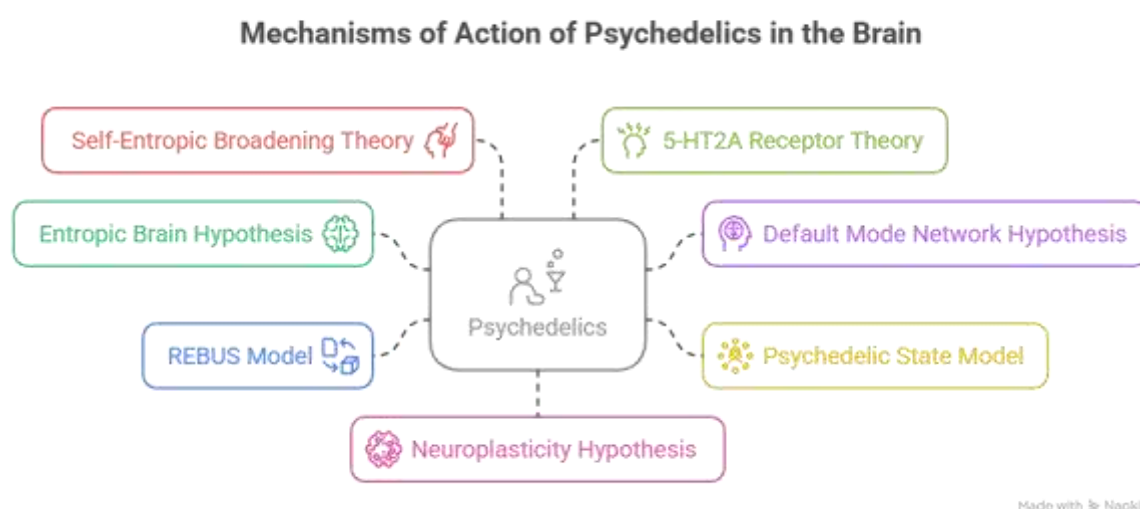


FIGURE 2 Mechanisms of Action of Psychedelics in the Brain

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Biochemically, on the simplest level, the 5-HT_{2A} receptor theory refers to the fact that the general mechanism of action of psychedelics is stimulation of the 5-HT_{2A} receptors. These receptors are more aware in the prefrontal cortex and other major brain regions in the management of moods as well as the thought process and become very active in the event of experiencing the psychedelic state. The result of this activation triggers a cascade of downstream effects such as neuroexcitation of the cortex, desynchronization of brain rhythms, and elevated plasticity. This receptor engagement is believed not only to trigger hallucinations or visual experiences, but also trigger emotional breakthroughs, repair of traumatic memories and deconceptualizing of fixed belief systems.

Lastly, the Neuroplasticity Hypothesis has been majorly taken up in the past few years. It claims that psychedelics could trigger permanent therapeutic transition through increasing neuroplasticity or the ability of the brain to build brand-new neural pathways. Researchers have found significant changes in measures of synaptogenesis and dendritic growth within 1 hour of a single dose of psychedelic drug. This implies that one becomes more or less temporarily malleable, that is, able to rewire him or herself with the help of new information or behavioral experiences. This increased plasticity creates a time of opportunity that provides the potential to create permanent and profound change when combined with psychotherapy. To the people trapped in the patterns of addiction, depression, or compulsive gambling, the neurobiological reset can be a game-changer that allows engagement in a more adaptive interaction with own thoughts, feelings, and actions(10).

All these models, although different, are not mutually exclusive. Rather, they provide a multi-dimensional psychedelic action. The biochemical models examine how things occur on the molecular level; the neural models demonstrate how the various parts of the brain are communicating with each other; and the psychological models assist in clarifying on the subjective experience and the results of therapy. According to recent integrative reviews, it appears that all these mechanisms cross levels of analysis and establish a cascade of changes which eventually leads to short and long term mental health effects.

To sum up, the mechanism of the psychiatric effect of classic psychedelics involves a multi-factor interaction at the level of receptors, in the neural network, and in the psychological plane. They can cause a decrease in concrete styles of thinking, make you more emotionally accessible, and increase neuroplasticity, making them uniquely potent vehicles in the management of quite a diverse array of mental problems. Though the evidence on their application to treat gambling disorder is still developing, the similarities existing in the neurobiological and psychological characteristics of the disorder to gambling and substance-related disorders justify expanding the research. With an increasing understanding of the science behind such mechanisms, there may be a road to safe, effective, and groundbreaking paths of treatment to those whose lives have been devastated by compulsions and addictive behaviors(11).

4.Recent Breakthroughs: Emerging Clinical Evidence for Psychedelic-Assisted Therapy

Within recent years, psychedelic-assisted therapy (PAT) has become the latest research in clinical domains, the promising horizon of psychiatric and behavioral disorder. PAT is a distinct solution unlike the traditional ways of treatment which usually includes a lifelong medication or a psychotherapeutic intervention. It incorporates a small amount of guided psychedelics, along with a structured therapy program, not aimed at relation of symptoms, but to create profound change in the mental and emotional sense. A substantial amount of supportive research on this paradigm shift care has been generated, particularly in situations where other interventions have not helped at all. The most promising results have been shown when it comes to the treatment of depression, substance abuse, and end-of-life anxiety.

Modern psychedelic research is focusing on depression as a major target. In a series of randomized controlled trials, psilocybin, a traditional psychedelic drug derived of mushrooms, has repeatedly been shown to produce rapid and long-lasting alleviation of symptoms of depression. In one of the most famous studies, among participants with major depressive disorder, at four weeks after two psilocybin sessions, more than 70 percent achieved the clinically significant improvement, and over half of them were in remission. The speed and strength of such results contrast with the slow start and the low efficacy of most antidepressants. Another placebo-controlled trial showed that a single moderate dose of psilocybin, in combination with psychotherapy, was capable of dealing a huge blow on depressive symptoms, where many participants showed remission in two weeks. Such improvements are impressive not only by their power but also by the fact that therapeutic effects regained some months in many cases, indicating that a scale of the neuropsychological reset distinctive of mainstream therapeutics was achieved.

To even greater extent these results were supported by another well-designed study in which psilocybin was compared to a placebo control (niacin) in people with treatment-resistant depression. A significant improvement in the level of depression was evident with the 25 mg of psilocybin group and it lasted at least six weeks. All these studies point to the fact that Psilocybin therapy can be an effective, rapid-action medicine to individuals who have never experienced a relief of their mental issue with the ordinary antidepressants, most of which have aversive side effects and involve long-term medication. Researchers are keen to point out the fact that the effects that psychedelic chemicals produce cannot be purely attributed to the psychedelic compound itself but are the results of a combination of the carefully designed psychotherapeutic care, preparatory and integration sessions as well.

In addition to mood disorders, substance use disorders have been a source of fertile land in investigating the efficacy of PAT. Already in 1960s, previous historical work had already provided an indication that psychedelics could have been used effectively to help in the fight against alcoholism. These early randomized controlled trials found that, after just a single dose of LSD, significant reductions of alcohol consumption and subsequent increase in abstinence were documented up to half a year. These findings were replicated in meta-analyses of these trials. The legacy has been continued in more recent studies with psilocybin. Typically, a small pilot experiment with tobacco users showed that after having three psilocybin-assisted sessions, 80 percent of respondents had been abstinent of such substances six months later. Such success rate is much higher than most of the ordinary nicotine replacement therapies or behavioral strategies.

Likewise, these have been observed during alcohol dependence. A two psilocybin session pre-post study demonstrated outstanding alcohol intake reductions even after six months. In the most remarkable study, not only was it the first modern randomized controlled trial in an alcohol use disorder, but patients treated with psilocybin plus the 12-week Motivational Enhancement Therapy and Cognitive Behavioral Therapy (MET/CBT) also experienced very strong effects in cleaning up excessive drinking. On the contrary, the improvement that resulted among the control group which comprised an active placebo (diphenhydramine) was less significant. These findings suggest psychedelic therapy can supplement the current psychotherapeutic treatments, which can make them more effective by inducing profound emotional processing and behavioral modification.

Psydelics have also proved to be effective in managing end-of-life problems and existential distress particularly in patients suffering terminal diseases. Various studies have pointed out that a single administration of psilocybin can greatly decline anxiety, depression, and hopelessness among cancer patients in late stages and other terminal illnesses. Patients have frequently spoken of these as spiritually significant and thus have led to acceptance, death reduced fear and an all round better lifestyle. Such advantages are not temporary in nature since in most cases, follow-up statistics indicate that the feeling of relief is experienced over several months after one has received the treatment.

The focus on detail concerning the so-called set and setting of psychedelic sessions is another of the reasons why the outcomes of these studies are so promising. This also involves a psychological preparation of the patient, the physical and interpersonal conditions of the moment of the session, as well as the integration process during the period of follow-up. They include preparation sessions to help establish a rapport between the patient and therapist and clear any misunderstanding or expectation management like the setting of points about therapeutic goals. Psychedelic experience actually takes place in a very quiet and comfortable environment in presence of music, eye shades and supportive therapists. Later, the integration sessions assist the person in processing knowledge, feelings, images and start to apply it into everyday life. It is a logical way of making sure that there is safety, that the outcomes are best, and there is a differentiation between the clinical usage and the recreational usage, where people are unsupervised.

Another major benefit of PAT as far as treatment logistics go is its efficiency in terms of time. Whereas conventional pharmacological treatments can be a lengthy and lifelong affair with high dropout credentials and adverse effects, PAT usually entails one or three dose sessions, accompanied by a few sessions of therapy. The long-term implications of this model would be cost-effectiveness and access of mental health services, in particular, to treatment-resistant groups that could be experiencing a cycle of interventions that do not work.

There is however no real risk-free psychedelic-aided therapy. There are also severe reactions, i.e., anxiety, confusion, emotional flooding, and temporary psychological distress, which are not an exception during sessions. In an even more abnormal case, some persons can go through extended bouts of psychosis, depressive episodes, or the Hallucinogen Persisting Perception Disorder (HPPD). Physical dangers are not too serious and involve an elevated heartbeat, high blood pressure which may become a threat to those who have heart conditions. Some

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mental disorders, especially psychosis, bi-polar disorder or epilepsy are contraindications of PAT. More so, the presence of drugs such as selective serotonin reuptake inhibitor (SSRI) might withhold the benefits of psychedelics. In that sense, screening of the patients, medical observance and expert advice are unavoidable aspects of any therapy regime.

Irrespective of these problems, the safety mechanism of psychedelics in controlled circumstances has remained good. The majority of negative events are short-term and treatable in case of the adequate support. Most researchers are of the opinion that the benefits definitely overshadow the risks provided therapists are well trained and proper protocol is well observed especially on the patient who is well selected. Furthermore, the astounding results in mood, addiction, and existential health are indicative of a treatment tool that is effective not only in treatment of symptoms, but the causative origin of mental suffering.

Summing up, recent clinical results have yet again seen a new light of hope with regard to the initiate of psychedelics in the treatment of mental illness. Treating chronic depression, interrupting patterns of addiction, and helping patients to accept their own death, psychedelic-assisted therapy is the complete opposite of a typical treatment process; it focuses on introspection, change, and connection. With the new era of psychedelic science just emerging, researchers, clinicians, and policymakers have a role to play in the event that these powerful tools are ethically, responsibly, and equitably utilized. The following step would be to consider the ways in which such breakthrough in therapy could be adjusted to behavioral conditions such as gambling addiction which is already undertreated by the current methods but has much in common with substance use disorders in terms of psychology and neurobiology.

5. Conclusion

The condition also has serious consequences, yet gambling disorder (GD) is one of the most poorly understood and lowly treated mental health issues in the world today. People with GD develop significant losses in several areas, such as economical instability, family dispute, employment disturbance, and decreasing psychological health. Moreover, research has revealed that GD has a very high rate of comorbidity with other psychiatric conditions, which include depression and anxiety, and substance use disorders. The prevalence of suicidal ideation and attempts is startling as GD individuals report many cases, which points at the necessity of identifying less abrasive interventions. As the current remedies (including cognitive-behavioral therapy (CBT), motivational enhancement therapy (MET) and pharmacological interventions, such as naltrexone) may be rewarding, their effectiveness is usually weak, relapse is frequent, and patient loss, relatively high. This situation is even more urgent in the context of the identified challenges related to the insufficiency of the existing solutions, the necessity of tracing approaches that are able to break the vicious cycle of symptoms management and instead pursue the origins of the disorder in order to remove them. Psychedelic-assisted therapy (PAT) can be one of these solutions. The scientific evidence to employ PAT to GD is high. As it has been shown in the research more than once, GD overlaps in a number of similarities with substance use disorder. They are compulsive behavior pattern, dysregulation of the brain reward system, cognitive control deficit, and dependence on maladaptive coping fundamentals. Since psychedelics and substances that retain the same effect as these drugs such as psilocybin and LSD have proved to be effective in alleviating some of the symptoms of addiction and in changing the psychology that leads compulsive people to addiction, it is not farfetched to expect that the drugs have as much potential in treating GD. Classic psychedelics seem to put the breaks on ingrained thought and emotional patterns by encouraging a sense of psychological fluidity. It is during this so called therapeutic window, that in some way a person might be more cultivated to change, more competent to engage in self-reflection, and more open to the possibility to cultivate new and more healthy views of their actions and their identity.

Moreover, the projected potential of PAT is not only in focusing on the gambling behavior per se, but also on managing the numerous comorbid conditions that tend to co-exist with GD. Anxious and depressive symptoms are among the most reported among the problem gamblers, e.g. These circumstances are both the cause and the effect of inappropriate behavior of gambling, as it creates an endless wheel of emotional distress and maladaptive coping skills. Given the long-term effects described above of psychedelic therapy on mood and anxiety disorders, it can also be used in the management of the emotional distress as the predisposing factor behind urges to gamble. Such combined intervention- handling so the whole person and not just treatment of the behavior- might bring a paradigm change in the approach to GD.

There is a limited research on PAT in the gambling disorder; however, initial signs are promising. As an example, successful results after use of ketamine, a non-classic psychedelic having some similarities in their mechanism, have been reported in case reports in people with chronic gambling problems. A middle-aged man who had been involved with compulsive gambling since an early age and upon which he totally gave up fuelling his habit upon undergoing a series of IV ketamine made up one such case. These were present several months following treatment indicating that it was more than a placebo effect. With all the limitations of being anecdotal, these results further support the hypothesis that psychedelic drugs have the potential to create a significant change in the gambling behaviour by influencing fundamental cognitive and emotional mechanisms.

Although alcohol, tobacco, and opioids have been the topic of the primary body of work on psychedelics, it is rational and becoming urgent to apply that knowledge to behavioral addictions such as GD. Compulsive behaviors, either to substances or activities such as gambling, gaming or sex, tend to have similar maladaptive processes of reward seeking as well as the in abilities to regulate emotions. Consequently, the use of PAT in treating more conditions in the behavioral field is becoming increasingly popular. Some research plans and preliminary research already examine the involvement of psilocybin therapy on eating disorders, compulsive sexual behavior, and internet gaming disorder. Such studies, in case of successful results, might open the door to large scale trials aimed specifically at gambling disorder.

There are some very important steps that need to be taken in order to have a responsible development in this field. To start with, intensive clinical studies must be initiated to determine the safety, efficiency, and long-term effect of PAT in view of GD. The various categories of gamblers that should be considered in these trials would include the youthful adult gamblers who have been on online betting activities as well as the older ones, who adhere to chronic casino gambling behaviors. A subtle comprehension of patient typologies will permit a more outstanding handling style. Second, precautions should be seen as a priority. Not every a person with GD may turn out to be a good candidate to PAT especially when he or she has certain psychotic conditions or the cardiovascular disease. The safeguarding process involving complete screening measures and risk assessment along with medical supervision is necessary.

It is also important to set ethical and professional boundary in regards to therapist who also participate in psychedelic treatment. Psychedelic experience is sometimes intense, emotional, and vulnerable, so clinicians need to be properly prepared to not only use the techniques of therapies but also consider that the labor in the altered state of consciousness requires specific preparation. This entails emotional containment skills, trauma-related skills, and post session integration. Otherwise, even a well-intended therapy might not take full advantage of the therapeutic potential of psychedelics or even harm.

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Conflicts of interest

The authors have no conflicts of interest to declare

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