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Abstract

Psychedelic use, within therapeutic settings and to a large extent in non-clinical use, is considered safe. However, some individuals experience distress and even enduring psychological problems following psychedelic use. Until now, psychedelic research has provided only general claims and suggestions regarding risk factors predisposing to adverse effects. Therefore, problems are usually discovered and addressed when it is too late. This article offers a general framework and rationale for preventing adverse outcomes from psychedelic use. First, it offers a multidimensional framework for understanding human consciousness and psychedelic experience, comprising 5 S's: Substance, Soma, Set, Setting, and Self. The Self signifies the more stable aspects of identity. These aspects may help in identifying risk factors for long-term adverse effects following psychedelic use. The proposed research path avoids conventional tools and favors bottom-up, qualitative (or mixed) research methods in an attempt to predict the long-term adverse effects of psychedelic use. Qualitative research may lead to the development of a psychedelic-friendly, advocacy-based, and context-sensitive research approach that will resonate with the psychedelic experience.

INTRODUCTION

Psychedelic research and therapeutic practice are flourishing ^[1]. After decades of neglect and stigmatization by society, the therapeutic potential of psychedelics is being rediscovered. It is now evident that psychedelic psychotherapy can offer new, effective, and safer solutions to diverse mental health problems. The issue of safety is a major one, partly due to years of anti-psychedelic propaganda as well as documented cases of adverse effects of psychedelic use in both therapeutic and recreational settings. However, little is known about individual risk factors for such outcomes ^[2]. Typically, problems are discovered and addressed after the point at which an intervention would be effective.

This article offers a general framework and rationale to confront this problem. It suggests a research path that focuses on the self-concept to assess risk. This approach aims to understand better the complex interrelations between psychedelic substances, a specific human body, set, setting, and self, and to minimize harm from psychedelic use (in therapy or elsewhere). First, the notion of set and setting and its importance will be presented along with its limitations. Next, a broader framework for understanding psychedelic experience and human consciousness in general will be sketched. Finally, the critical role of the self will be discussed within this framework for risk assessment, and potential research directions will be considered.

<u>SET AND SETTING AS A THEORY OF</u> <u>CONSCIOUSNESS</u>

One of the significant contributions of psychedelic therapy to the general therapeutic discourse and practice is the notion of Set and Setting. As Hartogsohn ^[3] notes, "the idea of set and setting has been present since the early days of psychedelic therapy." Indeed, since the early 1960s, psychedelic Avissar

researchers and therapists noticed that the effect of psychedelic drugs (LSD in particular) is dependent on both internal (Set - mindset, intentions, and expectations) and external (Setting - physical, interpersonal, and cultural environment) factors ^[4]. Although originally ^[5] it also related to more stable or structural aspects of personality, it is suggested here to be distinct from situational or temporary conditions. The two aspects (stable and situational) seem to differ significantly in how they are subjectively perceived and how they may be scientifically examined. In addition, there is reason to believe that statestructural aspects of identity (trait) and situational-temporary conditions (pre-state) may influence the psychedelic experience in different ways ^[6].

The effect of the Set and the Setting on the quality of the personal experience of people under the influence of psychedelics has been studied extensively, especially during the 1960s ^[3,7]. Reactions to psychedelics following manipulations in Set and Setting variables led to the conclusion that a variety of non-pharmacological, interrelated internal and external factors influence the personal experience and therapeutic effect.

This simple claim can be seen as revolutionary when it comes to understanding medical and psychotherapeutic processes. It marks a shift from a linear view of change processes, which distinguishes between the individual and the external environment that is usually considered to be responsible for the change. Conversely, Set and Setting are viewed here as factors that shape the individual experience (and hence play an active role in change processes) and are, in turn, being shaped by the individual. For example, depending on the individual's background, a medical setting – a hospital ward – may be experienced as safe and trustworthy, cold and impersonal, or intimidating. Each of these options is expected to affect how the individual interprets the actions taken or not taken,

views their own existing and desirable (cognitive, emotional, behavioral) responses, evaluates interpersonal interactions, and so forth. All of the above are expected to impact change processes, both medical and psychotherapeutic. Seen this way, therapy is neither exclusively dependent on the accuracy of the procedures or on professional knowledge and judgment, nor is it independent of the client's views, values, expectations, etc. Therefore, similar actions may lead to very different outcomes, depending on the interrelations between the individual's set (their preferences, expectations, and intentions) and the specific characteristics of the Setting (the physical and human environment).

One may regard the notion of Set and Setting as a foundation for understanding how human consciousness works ^[8] — not as a simple and closed system, but as an open and complex one, affecting the environment (and the way it is construed and hence experienced) and being affected by it. Seen as such, therapeutic processes - pharmacological and others - cannot be regarded as linear, preserving binary distinctions such as internal and external or active and passive. Surprisingly, this revolutionary idea of Set and Setting, which offers a new way of understanding therapeutic processes and human development, has had limited impact on research and discourse in related or adjacent fields.

A few studies, however, have referred to the notion of Set and Setting outside the context of psychedelic research and therapy. For example, Aton ^[9] focuses on sensory plasticity and discusses research findings that "have yielded fundamental insights into mechanisms by which an organism's "Set," or internal state, shapes how it experiences the external world, even at the earliest stages of sensory information processing." The author concludes: "these studies should improve our understanding of how state-dependent brain changes [...] affect how information about the world - one's setting - is encoded,

processed, stored for future use, and integrated with past experiences" (p. 13). It is proposed that the sensory system functions as a reciprocal process involving Set and Setting. Dahan^[10] suggests examining the experience of childbirth in terms of Set and Setting. The author claims this prism "can help design, navigate, and explain many psychological and physiological elements of the human birth process.". Human birth, like psychedelic experiences, is not merely a physiological mechanism; rather, it is a mindful and conscious process. In the process of giving birth, a woman is mentally active in ways that may shape her experience and, at the same time, responds to the specific environment with its attributes (the Setting).

Pioneering works, such as those mentioned above, may pave the way for a significant change in how we understand human consciousness. If the mind is inherently interactive and continuously changing (or reconstructed) through reciprocal interactions with its environment, then understanding and assessing it outside a specific context is likely problematic. Disregarding essential contextual factors and data may lead to biased or false conclusions and inhibit desirable change (by over-emphasizing the influence of internal and stable factors or attributes). The result is a reductionist or oversimplified view of the human mind as a static, self-contained system. Indeed, many psychological theories have stressed the importance of the interaction between the internal subjective experience of the individual and the external objective reality. From this perspective, personal development is seen as an interactive process.

PSYCHEDELIC PARADIGM SHIFT AND HUMAN CHANGE PROCESSES

Although it is clear that the notion of Set and Setting contributes significantly to the study of human consciousness and development,

both within and outside the field of psychedelic research, this framework still needs to be developed. While it does allow for an understanding of the interaction between internal and external factors and how they shape human experience, it neglects factors that may be critical in understanding the mechanisms that take part in, influence, or shape the subjective experience (including but not limited to the context of psychedelic research and therapy). Simply put, Set and Setting draw attention to the interaction between two critical facets - the internal/individual/subjective on the one hand and the external/environmental/objective on the other. Hence, at least to some extent, this conceptualization perpetuates such binary distinctions.

The underlying question here touches upon the very basis of the practice of psychiatry and psychotherapy and their assumptions regarding change. While psychiatry tends to emphasize biological explanations, psychotherapy emphasizes relationships and subjective experience. Likewise, while medical explanations of psychedelic therapy emphasize (or, in some cases, focus exclusively on) biological experience-independent mechanisms, such as molecular neuroplasticity ^[11], psychotherapeutic models offer interactive explanations, such as connectedness ^[12]. Accordingly, Schenberg [13] discusses "the current psychiatric crisis" and the "paradigm shift in psychiatric research and development." In search of a holistic approach to psychiatry, the author offers a three-axis model integrating therapeutics, diagnostics, and understanding and states, "PAP can conceptually enrich psychiatric explanations for mental disorders and their treatment." While psychiatric research and practice may be criticized for bio-medical reductionism, psychedelic assisted psychotherapy (PAP) "can greatly contribute to the understanding of how social circumstances and adverse life experiences shape mental health and brain

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activity, and how meaningful treatment experiences foster resilience."

The medical and psychotherapeutic perspectives presented above are different. The former focuses on experience-independent biological processes, while the latter offers an integrative view (e.g., body and mind, inside and outside) of psychedelic therapy. Psychedelic trials (in contrast to standard drug trials) emphasize contextual effects – including the interaction between physiology and experience - and, in this sense, resemble the psychotherapeutic perspective ^[14]. This research paradigm advances a complex understanding of how psychedelic therapy works. Hence, PAP may offer a more complex and holistic view of human development. This may be one of its major contributions.

However, at this point, PAP research still lacks clarity and integration: "psychedelic trials are surrounded by a cloud of conceptual confusion arising from the fact that they are simultaneously drug and psychotherapy trials" ^[14]. The following conceptual framework wishes to promote a more holistic understanding of psychedelic therapy and human consciousness. This model of consciousness may facilitate an interdisciplinary discussion, which seems to be needed in current psychedelic research and therapy.

5 S'S OF CONSCIOUSNESS

To widen the scope of Set and Setting as a theory of consciousness, a detailed model is presented, comprising five interrelating and interactive components: Substance, Soma, Set, Setting, and Self. Each of these components represents an aspect of a holistic bodymind experience. Each of them is briefly explained below, with a particular focus on the self.

Substance – refers to studying substances and their possible influences on the human body and mind. This field of study is likely as old as humanity. In modern times, it is represented by pharmacological research ^[15]. Within the current context of consciousness and psychotherapy, psychedelic pharmacology is an important research field that shows both promise and peril ^[16].

Soma – represents the medical research of the body and its mechanisms. Current medical research acknowledges that each body is unique and may respond differently to similar drugs and procedures. Gender medicine, for example, explores how male and female bodies respond to specific medications ^[17]. Personalized medicine challenges the traditional "one drug fits all" by recognizing the interaction between Substance and Soma, aspiring toward precision medicine that will enable clinicians to tailor treatment and prevention strategies to an individual's unique characteristics ^[18]. Thus, modern medical research and discourse acknowledge the effect of this interaction between a specific substance and a specific body.

Set – refers to the individual mindset prior to and throughout the psychedelic experience (e.g., intentions and expectations). Within the context of PAP, the Set (and setting, see below) plays a crucial role. Much of the effort in the initial preparatory sessions is dedicated to promoting a mindset that will support the possibility of constructive change [19].

Setting – in psychotherapy relates to the conditions external to the therapeutic process, including physical aspects (e.g., the clinic), duration and frequency of the sessions, payment, and more ^[20]. The Setting provides stability and, therefore, a sense of safety, a necessary condition for constructive change. The characteristics of the Setting may differ; however, it is important that they are discussed and agreed upon by the therapist and client. This process allows for the formation of a therapeutic contract and rapport, which can positively affect the client's state of mind. Thus, Set and Setting are related and often interact.

Self – refers to the stable or structural characteristics of the personal identity (or personality traits). Baker ^[21] states, "the selfconcept is a set of beliefs about the self that guide people's behaviour, encompassing temporal frameworks of the past, present, and future self." This is a simplification since the Self is dynamic, constantly changing, affecting, and being affected by diverse factors. Therefore, separating the Self from contextual factors is virtually impossible. However, this analytical division between the more stable and the more transient aspects of the personal experience may allow us to make helpful distinctions that will, in turn, promote our understanding of the contribution of internal and more stable factors to the psychedelic experience and consciousness in general.

It is noteworthy that in this context of psychedelic therapy, the term Self (or selfconcept) should be preferred over the widely used term personality. Self-concept is "the totality of a complex, organized, and yet dynamic system of learned attitudes, beliefs, and evaluative judgments that people hold about themselves" ^[22]. Self-concept relates to how people view and evaluate themselves subjectively, whereas personality is assessed by others, frequently using standardized tests/questionnaires (many of which are based on the Big-5 personality traits model). Self-concept and personality signify two distinct ways to evaluate personal identity: the former is based on the subjective personal experience, and the latter draws on general statistical factor analysis findings. Hence, while the first represents a bottom-up research rationale, the second emphasizes top-down design (or, qualitative vs. quantitative research). The dynamic and integrative quality of self-concept thus lends itself to the context of psychedelic research and therapy (see elaboration below).

The above 5 S's of consciousness are, of course, interrelated. That is, each affects and is affected by the other. Therefore,

understanding change processes in general and psychedelic experience in particular, entails an examination of the *connections* between them. Focusing on each of them independently of the others is analogous to attempting to understand the experience tasting a delicious cake by examining the quality of its ingredients. Instead of analysis, this article calls for an integrative approach to the research and discourse of psychedelics and consciousness.

PAP AND SUBJECTIVITY

The proposed integrative approach to psychedelic research and practice and the preference for subjective (i.e., Self) over objective (i.e., Big-5) terminology underscores the importance of PAP in understanding the psychedelic experience, maximizing its therapeutic potential and minimizing its risk. PAP, in its very essence, is subjective and integrative, frequently examining the interrelations between Self (or identity), Soma, Set, and Setting.

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ience is beneficial on both professional and personal levels. On the more general professional research-practice level, it may advance a nuanced understanding of the mechanisms and dynamics that shape the psychedelic experience and its possible outcomes. Thus, a "detailed study of the subjective aspects of PAP has enormous consequences for the explanatory axis" ^[13, p. 733]. On the more personal-therapeutic level, the inquiry of the subjective psychedelic experience is productive in integrating the experience into the more stable sense of self and the individual's emotional, cognitive, behavioral, and interpersonal patterns. Integration, then, describes "the higher-level understanding of the experience and the proper application of the insights and lessons derived from it in our daily lives" ^[23, p. 45]. This "higher-level understanding" signifies the connection between

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different aspects of the psychedelic experience. It is a crucial part of PAP and a major element in the safety of the therapeutic process.

Furthermore, the examination of the internal experience is found to have therapeutic value: "patient's subjective experience during and after the psychedelic trip seems to play an important causal role in recovering from mental illness [...] in psychiatric populations [...] as well as increases in well-being in healthy populations" ^[24]. As the authors note, this emphasis creates a need for phenomenological and qualitative research in PAP. As importantly, a similar subjective approach is needed prior to the psychedelic experience in an attempt to predict its outcomes and reduce harm.

RISK ASSESSMENT

PAP is found to be a very safe practice, even with high doses of psychedelic substances ^[25]. A review of 14 clinical trials examining the benefits and risks of psychedelic therapy conducted since 1991 found that no serious adverse events have been reported ^[26]. Another systematic review of 34 contemporary experimental studies found that "psychedelics have been shown to be relatively safe when used with the proper preparation, supervision, and integration, but it is unclear the extent to which this generalizes to recreational use" ^[27]. Indeed, in the context of nonclinical use, findings are not as conclusive. Nevertheless, many studies also found that risks are relatively low and "have been exaggerated" ^[28].

Still, in both contexts, there is evidence that some individuals (again, depending on specific factors, i.e., Set and Setting) develop adverse reactions and experience distress ^[29-31]. A recent study found that 2.6% of users of classic psychedelics reported seeking medical, psychiatric, or psychological help following a challenging, difficult, or distressing psychedelic experience ^[32]. Another study found enduring psychological problems (for more than one year) in 7.6% of the cases ^[33]. In a minority of cases, significant negative long-term consequences, such as hallucinogen persisting perception disorder or HPPD ^[34], have been attributed to psychedelic journeys. It is also believed that psychedelic experiences might trigger substance-induced psychosis and even schizophrenia ^[35].

So far, psychedelic research has produced little data and insights regarding personalstructural-psychological risk factors ^[2]. Our current knowledge allows us to articulate only general claims and suggestions regarding a-priori risk factors (e.g., mental illness in the family, and traumatic life experiences). As such, professional advice is no better than a common-sense reasonable guess. We should aspire toward more empirical data and evidence-based answers that will allow us to assess risk and reduce potential harm in psychedelic use, as is the norm for other mental conditions.

<u>SELF, PERSONALITY, AND RISK AS-</u> <u>SESSMENT</u>

There is a significant body of research examining the interrelations between psychedelics and personality. Some studies focus on the influence of personality on the psychedelic experience ^[36], whereas others focus on the influence of the psychedelic experience on the individual's personality ^[37-39]. Some studies found positive personal changes, including reduction of psychiatric symptoms, following the psychedelic experience ^[40; 41]. However, very few contemporary studies examined the possible connection between this interrelation (personality and psychedelics) and the risk of adverse events.

Personality (Big-5) and self-concept measures have been used to predict the individual's experience of religious/spiritual struggles and found that both are likely to

play a role in challenging and distressing circumstances ^[42]. It is reasonable to assume that these factors will be relevant to the prediction of the quality of the psychedelic experience and possible adverse outcomes in particular. The findings in this field, however, are inconclusive. In their attempt to predict the effect of psychedelics (psilocybin in particular), Studerus et al.^[43] found that "personality traits only marginally contributed to the prediction of psilocybin responses." The authors continue to state that "this is rather surprising because personality traits have been postulated by many authors to be among the most important determinants of hallucinogen response." However, as Haijen et al.^[2] remark, this study ^[43] was limited to predicting the acute experience and not the longterm effects. Likewise, Barrett et al. [44] found that neuroticism is associated with challenging psychedelic experiences, but they did not examine enduring effects. Concerning future research, the authors suggest that it "may benefit from further investigation of the role of personality in predicting response to psychedelics."

Adav et al. ^[45] examined both state and trait factors as predictors of the response to psychedelics. Their review revealed three (related) personality traits that were most consistently linked to positive or mysticaltype psychedelic drug reactions (and at the same time involved fewer adverse reactions): absorption, openness to experience, and acceptance. The authors conclude that "those high in the traits of absorption, openness, and acceptance as well as a state of surrender may represent ideal candidates for psychedelic therapy. In contrast, individuals low in those traits or that are in preoccupied, apprehensive, or confused states are more likely to experience adverse reactions." This conclusion may prove to have a potential practical value, as the authors comment: "If states and traits that facilitate the benefits of psychedelics become firmly established, then a natural question will be how to alter those baseline variables to enhance treatment effects." A similar conclusion can be drawn here about predicting adverse effects and risk management.

In conclusion, it is necessary to explore whether the self-concept and personality traits contribute to the ability to predict adverse effects, especially long-term, of psychedelic use and to reduce harm.

METHODOLOGICAL DILEMMAS

Psychedelics offer a new understanding of human experience, illness, as well as treatment and healing processes. They offer an alternative to the present hegemonic medical model of psychopathology and psychotherapy. Indeed, psychedelic research is considered revolutionary, as it may dramatically change our understanding of human life, development, interpersonal relations, society, and culture. However, psychedelics are sometimes regarded as substances used within the dominant medical experience-independent paradigm. Similarly, research focusing on the self and its interaction with the other four S's should consider the fundamental premises of the existing tools for diagnosing and evaluating personality structures (questionnaires, etc.) and their possible biases.

This discrepancy or dissonance between the medical paradigm and the research tools derived from it, on the one hand, and the quality of the specific research area of psychedelics on the other, requires a different research strategy from the traditional medical one. Indeed, it calls for a change in the research (mind)Set and Setting. As Read and Papaspyrou ^[46] write:

"We think that theoretical models of psyche can help us navigate the psychedelic experience, but we should not confuse the map for the territory. This danger could not be overstated: overreliance on our favored models may constrict our perspective and limit our capacity to observe and respond to that which lies beyond our conceptual framework."

One should be critical and even suspicious of findings related to the psychedelic experience resulting from the use of standard research tools (such as conventional personality questionnaires), which may demonstrate a different set of implicit assumptions regarding human consciousness. Among them, the view of human beings and their consciousness as relatively closed systems, of human identity as relatively static, and of human development as relatively linear. As previously mentioned, western theories and research on personality tend to study individual identity by analyzing it and breaking it down into its basic elements or "ingredients." In contrast, psychedelic experience tends to emphasize connectedness and a holistic quality that the term Self better represents. For psychedelic research and therapy to be coherent, there must be consistency between and within concepts and tools. Thus, instead of top-down research aspiring for generalizations, a bottomup approach seeking differences and outliers is more useful and appropriate here.

In other words, qualitative research tools may be valuable and constructive in the process of developing a psychedelic-friendly, advocacy-based, and context-sensitive research approach that will resonate with the psychedelic experience.

QUALITATIVE RESEARCH AND PSY-CHEDELICS

In a systematic review of qualitative research examining experiences of psychedelic treatments for psychiatric disorders Breeksema et al. ^[47] state:

"Exploring patient experiences can increase our understanding of underlying therapeutic mechanisms and processes, the role of (extra) pharmacological factors in these treatment modalities, which may contribute to optimizing treatment context, and lead to improved clinical responses and personal benefits."

In a more recent study examining adverse events in clinical treatments, the authors discuss the challenges in assessing adverse events (particularly acute ones), partly because some of them were retrospectively evaluated as therapeutic and beneficial ^[48]. The authors note that "qualitative research can also add nuance by detailing and understanding the meaning of challenging experiences." So, qualitative research may offer a better vantage point into the complex psychedelic experience, the factors shaping it, and its aftereffects. It may allow us to make valuable distinctions, for example, between stable (Self) and situational (Set) personal qualities or between different external influences (Substance and Setting). More importantly, personal narratives and other qualitative data may help us consolidate the contribution of different factors (the 5 S's) into one integrative narrative.

Moreover, qualitative research (or combined mixed method research) may contribute uniquely to the understanding of the therapeutic processes within PAP and to the possibility of formulating a bottom-up, grounded theory ^[49] of PAP. In this growing field that is considered by many to represent a possible paradigm shift in medicine and psychotherapy, this kind of open-minded and humble stance is crucial.

CONCLUSION

While concerns about the safety of psychedelic use in clinical and recreational settings persist, little is known about the factors contributing to the risk of adverse outcomes. This article discusses the importance of the

notion of Set and Setting as a theory of consciousness and explores its limitations in this context. It offers a nuanced conceptual framework of consciousness, comprising 5S's – Substance, Soma, Set, Setting, and Self – all of which affect the psychedelic experience. This framework emphasizes the complex interrelations between the components rather than the quality and potency of each of them separately.

Within this general framework, the importance of the Self, or the stable personality attributes of the individual, is underlined. We argue that focusing on this component and how it interacts with others may help us develop means to predict the quality of the psychedelic experience. More specifically, it may advance our knowledge and understanding of long-term adverse effects and contribute to risk assessment and harm reduction efforts.

While research in this field must be critical of conventional tools assessing personality, we stress that qualitative research is critical in the pursuit of understanding the complex psychedelic experience, the factors shaping it, and its aftereffects. Qualitative research may play a key role in the endeavor to develop new theories and research tools that resonate with the psychedelic experience and help to realize the promise of a paradigm shift attributed to psychedelic research and therapy.

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Beyond the Headlines: A Closer Look at IV Ketamine Therapy in Practice

Joseph Pullara, M.D.

As a co-owner and co-founder of an IV ketamine clinic in Florida, I read the article *The Ketamine Economy: New mental health clinics are a 'Wild Wesst' with few rules* ^[1] from Health News Florida. I found it to be full of misinformation regarding the logistics of day-to-day clinic operations and its description of ketamine's implications in mental health treatment. I feel it's essential to delve deeper into the issues this article raised about ketamine clinics and provide a more comprehensive perspective on not only the logistical aspects but also the fundamental scientific aspects of IV ketamine treatment.

The portrayal of ketamine clinics as "forprofit" get-rich-quick schemes seeking to exploit patients overlooks the reality of healthcare provision as a whole. Like any medical clinic, ketamine clinics require financial sustainability to continue operations. If the clinic doesn't make money, the owners can't pay its staff to provide care and patients can't continue to receive treatment. Our clinic, for instance, was founded not out of a desire to "get rich quick," but from a genuine belief in ketamine's potential to alleviate suffering in those with treatment-resistant depression, PTSD, and anxiety. The term "forprofit" carries an undeserved negative connotation, suggesting a misalignment of priorities. In reality, any clinic's survival hinges on its ability to cover costs and reinvest in its services, ensuring patients receive the highest quality care. This includes paying for skilled staff, upholding safety and sanitation standards, and investing in ways to facilitate the ideal setting for treatment.

Criticism of ketamine's off-label use as a radical departure from established medical

practice fails to acknowledge the substantial body of research supporting its efficacy. This evidence dates back to 1973 in Iran and was first brought to the United States formally in 2000 by physicians Robert Berman and John Crystal at Yale University. By the time the article suggests skepticism was widespread, academic journals had already published many different studies from additional respected institutions such as Stanford, Johns Hopkins, and Harvard. This abundance of scholarly research underscores ketamine's therapeutic benefits and, in my opinion, challenges the portrayal of its application in mental health as unfounded.

The article's description of the patient experience in ketamine clinics, particularly the use of sensory aids like blankets, headphones, and eye masks, is misleading at best and purposefully dissuasive at worst. I have met many providers from across the US and attended national conferences like the Amer-Society of Ketamine Providers ican (ASKP3). I have met precisely zero clinicians in the ketamine space who provide these tools to enhance the dissociative effects. Instead, these therapeutic aids foster patient comfort, reduce external stimuli, and allow patients to focus inwardly. To be clear, the goal of the treatment is introspective self-reflection and trauma processing, not going on a dissociative "trip." It's a gross misrepresentation to suggest these practices aim at anything other than optimizing the psychotherapeutic experience, underscoring a fundamental misunderstanding of the treatment's objectives.

Regarding treatment costs, the article's focus on the raw cost of ketamine without considering the broader economic context of healthcare provision is overly simplistic. The

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assertion that clinics significantly mark up the price of ketamine to exploit patients ignores the complex reality of healthcare economics. The author claims the cost of ketamine is \$1 per patient and cites no source for this claim. This is just plain false. While the cost of ketamine is nowhere near astronomical (like one would expect to see for a rare chemotherapy medication), using the clickbait \$1 figure is just that: click-bait.

The article then goes on to contrast this figure by saying that the average cost of treatment is \$600-1000 per treatment, with no citation included. The price of treatment at my clinic is \$375/infusion. This encompasses not just the drug itself but also the nursing care provided by board-certified registered nurses (RN), the use of medical equipment to ensure the safety of the treatment, and facility overhead costs, including but not limited to rent, insurance, malpractice, utilities, electronic medical record-keeping, sanitation services, medical supplies, etc. No large corporations or pharmaceutical companies are providing us with the funding to implement care. Our clinic is self-funded, and we take pride in the level of care we can provide and the affordable cost at which we are able to offer it to our community.

Furthermore, the critique of ketamine's cognitive effects is based on a selective interpretation of the evidence. The article's reference to research suggesting adverse cognitive outcomes overlooks significant findings to the contrary. Studies have shown that at therapeutic doses, IV ketamine can have positive effects on cognition, particularly in patients with treatment-resistant depression. This body of research indicates potential benefits that the article fails to consider, contributing to a skewed portrayal of ketamine's risks and benefits.

In challenging the narrative presented in the article, it's crucial to advocate for a balanced and informed discussion on the role of IV ketamine in mental health treatment. Misinformation and sensationalism can alienate those needing help and hinder the progress of innovative therapies. A nuanced understanding of the scientific, economic, and ethical considerations involved in providing IV ketamine therapy is essential for anyone engaged in this conversation.

In conclusion, the media portrayal of IV ketamine clinics and their practices requires a more nuanced and evidence-based discussion. By addressing the misconceptions and providing a clearer picture of the motivations, economic realities, and scientific basis for IV ketamine therapy, we can foster a more informed and constructive dialogue on its place in mental health care. Through such discussions, we can ensure patients have access to safe, effective, affordable, and compassion-ately provided treatments that hold the promise of alleviating suffering and improving quality of life.

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Analyzing the Impact of Matthew Perry's Death on Ketamine Clinics and Psychedelic Research

Tyler Kjorvestad, M.D.

The unexpected and tragic loss of actor Matthew Perry took an unforeseen turn when his autopsy report noted that ketamine played a role in his death ^[1]. Expectedly, after this news broke, a wave of increased scrutiny was cast upon Ketamine Clinics, and calls were made to make changes to the safety and regulatory guidelines. These sequences of events share similarities with the cultural backlash waged against psychedelics in the late 1960s and early 1970s, which should serve as a cautionary reminder for all those involved in psychedelic research and the psychedelic space at large. A failure to adequately address and respond to the concerns raised by the media and general public about the safety and efficacy of psychedelic and psychedelic-like compounds could result in increased apprehension by the public, a reduction in funding through grants or private entities, and possibly even another psychedelic research embargo. Ketamine and its associated derivatives serve as a significant test case for future psychedelic treatments, and the lessons we have learned, such as the medicalization model and the regulatory framework associated with esketamine, are valuable pieces of information as we approach MDMA and psilocybin approval.

Ketamine clinics have rapidly emerged and increased over the last decade and have played a significant role in providing treatment for psychiatric disorders to patients who had insufficiently responded to other treatments. However, despite the successes that these clinics have had, there are concerns, particularly around the misuse and potential risks associated with ketamine. Highlighting Matthew Perry's case, the likely use of oral ketamine, given that Ketamine was found in his stomach,

in combination with his infusion schedule. raises significant concerns about patients utilizing psychedelic or psychedelic-like compounds outside of a medicalized setting. Companies like Mindbloom are trying to bridge the gap between in-office treatments and medically unsupervised uses of ketamine by offering remote monitoring. However, remote telemonitoring still presents several patient safety issues, particularly in patients who may be using other medications, such as opioids or sedatives, which increases the risk of a life-threatening adverse event. It is imperative that if ketamine is prescribed for home use, this be done responsibly and that appropriate patient safety precautions are in place prior to dosing sessions.

The regulatory framework for esketamine is an important contrast to at-home oral ketamine. While many ketamine providers feel that the Risk Evaluation and Mitigation Strategies (REMS) are excessive or overly burdensome, they do provide structure for enhanced patient safety, especially compared to at-home oral ketamine. At a minimum, for those providers who still elect to utilize at-home oral ketamine, partial adoption of some of the esketamine REMS standards should be strongly encouraged-specifically, intermittent observation, vital sign assessments during treatment, and post-treatment safety evaluation. Additionally, having abortive medications pre-prescribed should be strongly recommended in the event of adverse experiences. The need for further research and standardized protocols is essential to harness the full potential of psychedelics in mental health care. In light of Matthew Perry's tragic death, Ketamine Clinics and researchers in psychedelic

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medicine must prioritize patient safety, adherence to best practices, and transparency in their operations. Striking a balance between innovation and caution is vital to advancing mental health treatments while mitigating potential risks associated with these powerful substances.

Matthew Perry's untimely demise serves as a sobering reminder of the complexities surrounding the use of ketamine in mental health care. As we navigate this evolving landscape, ketamine providers must collaborate, share knowledge, and uphold ethical standards to ensure that ketamine therapies and psychedelic research continue to offer hope and healing to those in need. This editorial calls for a collective effort to learn from Perry's tragedy, strengthen regulations, enhance patient care standards, and foster responsible innovation in the realm of ketamine clinics and psychedelic research. Only through a concerted commitment to safety and efficacy can we honor Perry's memory by advancing mental health treatments that positively impact individuals' lives.

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