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https://doi.org/10.1037/pha0000684

Call for Evidence-Based Psychedelic Integration

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The use of psychedelics for various purposes was common in different civilizations throughout human history and has been explored scientifically for more than a century. Although the applications of psychedelics show promise in the treatment of various psychiatric and neurological indications, as well as in facilitation of well-being and personal growth, several psychedelic-related risks and challenges have also been identified. Psychedelic integration (PI) refers to various practices that serve to either minimize harms or maximize benefits associated with psychedelic use. PI is also recognized as a substantial part of psychedelicassisted therapy (PAT), following preparation to and facilitation of the psychedelic experience. In the context of clinical/psychotherapeutic practice, several PI models/methods have already been proposed. However, while a number of these models/methods are theory-driven, or have a history of clinical application, each lack any empirical support and thus cannot be described as evidence based. This is to the disadvantage to countless people who had and who will have their psychedelic experiences in various contexts, as the prevalence of using psychedelics increased in recent years and is expected to grow further. Therefore, consistent with general recommendations for developing and implementing evidence-based mental health practices, this article calls for scientific efforts to the development, examination, and evaluation of psychedelic integration models/methods. This article also briefly summarizes the current literature on psychedelic integration, provides a list of exemplary avenues that research on psychedelic integration might take, as well as anticipates and discusses the limitations and challenges of PI-focused research.

Public Health Significance

The use of psychedelics is associated with a number of risks and adverse consequences. Psychedelic integration refers to various practices that can limit psychedelic-related risks and harms, along with maximizing benefits related with their use. However, there is a lack of research examining the validity and effectiveness of specific models and methods of psychedelic integration. This article calls for scientific efforts to develop, study and evaluate models/methods for psychedelic integration.

Keywords: psychedelic integration, psychedelic-assisted therapy, evidence-based practices

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This article does not arise from any research project and was not supported by any grant. It is an initiative of several authors working in the field of the subject matter.

There are following conflicts of interest to disclose: Author Filip Tylš declares to have shares in "Psyon s.r.o" and is involved in Compass Pathways trials with psilocybin and Multidisciplinary Association for Psychedelic Studies clinical trial with MDMA outside the submitted work. Author Ingmar Gorman declares to have shares in "Fluence Training, Inc." and is involved in Multidisciplinary Association for Psychedelic Studies MDMA-assisted therapy clinical trials outside the submitted work. Author Marc Aixalà

declares involvement in Multidisciplinary Association for Psychedelic Studies MDMA-assisted therapy clinical trials and in Compass Pathways psilocybin-assisted therapy clinical trials outside the submitted work.

Jakub Greń played a lead role in conceptualization and writing—original draft. Ingmar Gorman played a lead role in writing—review and editing. Anastasia Ruban played an equal role in writing—review and editing. Filip Tylš played an equal role in writing—review and editing. Snehal Bhatt played a supporting role in writing—review and editing. Marc Aixialà played a supporting role in writing—review and editing.

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Psychedelics represent a heterogeneous group of psychoactive substances that are usually broken down into classical (e.g., mescaline, psilocybin, LSD, DMT) and nonclassical (e.g., ketamine, MDMA). This distinction is based on the primary mechanism of action, that is either through interaction (i.e., agonism) with serotonin 2 A receptors in the case of classic psychedelics, or through other mechanisms (Nichols et al., 2023). Psychedelics are capable of inducing intense changes in perception, emotions, and cognition, that make up specific altered states of consciousness referred to as "psychedelic experiences" (Swanson, 2018). Although not without some specific risks, these experiences can have a profound personal meaning and significance, as well as be accompanied by psychological insights, emotional breakthroughs, or mystical-type experiences (Griffiths et al., 2006). These effects have been associated with the therapeutic potential of most psychedelics (Yaden & Griffiths, 2020), though others suggest a dominant role for the neurobiological mechanisms (i.e., neuroplasticity) in this regard (Olson, 2020). Notably, it has been established that psychedelic experiences should be considered not only as a result of the psychopharmacological properties of psychedelics but rather as an interaction of these properties (e.g., substance type, dose), with the extrapharmacological factors of set (e.g., expectations and immediate prestate) and setting (i.e., physical environment and social context) in which the psychedelic experience occurs (Carhart-Harris et al., 2018).

The use of psychedelics for various purposes was common in different civilizations throughout human history (Schultes, 1969). Western science began investigating these substances in the late 19th century as a part of anthropological research and early psychopharmacology (Swanson, 2018). This has led to extensive research into the medicinal application of psychedelics, as well as their experimental use as adjuncts to psychotherapy in the first part of the 20th century, which peaked in the 1960s before being halted by regulations pertaining to "War on Drugs" (Hall, 2022). However, human research on psychedelics was reinitialized in the 1990s, while the beginning of the 21st century witnessed a surge of clinical trials in a widening range of psychiatric and neurological indications that are investigating these potential evidence-based treatments involving psychedelics (see: Luoma et al., 2020; Mertens & Preller, 2021; Kozłowska et al., 2022, for reviews). This includes studies into the treatment of posttraumatic stress disorder (PTSD), depression, substance use disorders, cancer-related distress, or neurodegenerative disorders (i.e., Alzheimer's disease), which speaks to the putative transdiagnostic utility of psychedelics (Carhart-Harris & Friston, 2019). Psychedelic use has also been suggested to have benefits for nonclinical populations, with both experimental (Griffiths et al., 2018; Smigielski et al., 2019) and cross-sectional (Orłowski et al., 2022; Raison et al., 2022) studies reported various well-being improvements in healthy participants. Moreover, the highly promising results of these studies draw loads of commercial investments and media attention (Yaden, Potash, et al., 2022).

Importantly, research into the medical application of psychedelics involves a somewhat novel form of treatment—psychedelic-assisted therapy (PAT)—which explicitly combines pharmacotherapy with psychotherapy, and consists of three stages: preparation; experience facilitation; and integration (Schenberg, 2018). Even though the latter stage has a relatively long history (Aixalà, 2022), it was only briefly mentioned and addressed in the previous research, as the

emphasis was almost exclusively on the efficacy of specific PATs or on understanding the psychedelic experience itself. In turn, the premise of evidence-based medicine is the ability to use practices for which scientific evidence consistently shows that they improve outcomes for those who are subjected to them, as opposed to no intervention or interventions with poor or no evidence of effectiveness (Drake et al., 2001). Therefore, this article calls for efforts to provide an empirical basis and evaluate models/methods of psychedelic integration.

Psychedelic-Related Risks and Challenges

As scientific research, business investments, media attention, and legislative shifts toward decriminalization of psychedelics continue (Psychedelic Alpha, 2023), the prevalence of psychedelic use is growing (Killion et al., 2021) and is expected to increase further (Pilecki et al., 2021; Yaden, Potash, et al., 2022). This is concerning use not only within the context of clinical trials but also of underground therapies, indigenous ceremonies, music festivals, self-experimentation, or other contexts in which the screening, preparation, experience facilitation, and integration are often insufficient or even omitted, which is associated with higher risks (Johnson et al., 2008; Carbonaro et al., 2016).

These psychedelic-related risks include both challenging experiences under the influence of psychedelics and adverse consequences of psychedelic experiences in general, mainly for mental health (Lutkajtis & Evans, 2023; Aixalà, 2022; Schlag et al., 2022). The former might include psychotic-like symptoms, fear of losing one's mind, or emergence of traumatic memory. Whereas the latter range from a sense of incomprehensible or unresolved experience, through prolonged anxiety, to suicidality and/or symptoms of trauma (or acute stress disorder), such as intrusive thoughts, dissociation, or panic attacks. In some rather rare cases, hallucinogen persisting perceptual disorder (HPPD) or other perceptual disturbances might occur as well (Doyle et al., 2022). More specific phenomenons, such as spiritual bypassing (i.e., avoiding challenging feelings, unresolved distress, or social responsibilities, while justifying it by focusing on spiritual/personal growth), or ego inflation (i.e., overvaluation of one's own experiences, beliefs, or insights often accompanied by a sense of superiority over others) have also been recognized as psychedelic-related risks (Carhart-Harris & Friston, 2019; Gorman et al., 2021; Aixalà, 2022).

Importantly, challenging psychedelic experiences are not necessarily solely negative. For instance, in the study of Carbonaro et al. (2016), the majority (i.e., 84% out of 1993 responders) of the naturalistic (i.e., nonlaboratory) psychedelic users who reported having challenging psychedelic experiences have also noted benefits related to this experience. Adverse reactions to psychedelics can be relatively easy to manage (e.g., by pharmacological and/or informed psychological interventions), and unfavorable consequences of psychedelic experiences often resolve naturally over time (Aixalà, 2022; Lutkajtis & Evans, 2023). Nevertheless, certain individuals may require support or specific interventions with regard to their psychedelic experiences.

On the other hand, the need to integrate psychedelic experiences that are perceived as beneficial (or positive) has also been emphasized (Gorman et al., 2021; Aixalà, 2022). This concerns primarily supporting an analysis of the psychedelic experience's content,

extraction of the resulting insight, and efforts to embody that insight into everyday life, thus maintaining the particular benefits of psychedelic experiences.

The Psychedelic Integration

The abovementioned psychedelic-related risks/challenges stress the need for education, support, and clinical practice with respect to the content and consequences of psychedelic experiences. In this context, "psychedelic integration" has become a popular buzzword, referring to various practices applied by or offered to people who have psychedelic experiences. Although no consensual definition exists, most authors point out that psychedelic integration is a process following (though ideally begins prior to) the psychedelic experience, that involves reflection, validation, and meaning making of its content, as well as the incorporation of gained insights into everyday life (Bathje et al., 2022; Earleywine et al., 2022; Timmermann et al., 2022). Thus, psychedelic integration serves to either minimize harms or maximize benefits associated with psychedelic use.

The need for such a work is also reflected by the fact that more and more people offer individual or group sessions focused on the "integration of psychedelic experiences," and a growing number of workshops and certification training in this regard are available. In parallel, numerous books, articles, and scientific publications on this subject are being published, and with these, proposals for models and methods of psychedelic integration are emerging. This was summarized in a recent comprehensive literature review (Bathje et al., 2022). However, since its completion in August 2021, more proposals have also appeared (Aixalà, 2022; Brennan & Belser, 2022; Wolfson, 2023), which demonstrates the momentum of the psychedelic integration field.

However, current models of psychedelic integration are tempered by various limitations and have yet to be thoroughly explored in research settings. Among current models some concern only very specific conditions (e.g., PTSD; Mithoefer et al., 2013) or a particular clinical trial (Watts & Luoma, 2020), while some refer to indigenous medicine practices, which might be particularly difficult to implement outside the specific setting and ritual that they include (Yaden, Earp, et al., 2022). Moreover, while some of these models were developed to work specifically with nonordinary states of consciousness, like holotropic breathwork (HB; Grof, 2014), others represent applications of already existing psychotherapeutic approaches to work with psychedelic experiences (Bathje et al., 2022). This includes models based on Jungian depth psychology (Ortigo, 2021), Internal Family Systems (Morgan, 2020), harm reduction psychotherapy (Gorman et al., 2021), or third wave of cognitive behavioral therapies (Watts & Luoma, 2020; Yaden, Earp, et al., 2022), though some models adopt a transtheoretical approach (Gorman et al., 2021; Westrum & Dufrechou, 2019; Wolfson, 2023). But most importantly, none of the currently existing psychedelic integration models and methods can be described as evidence based. While a number of them are theory driven or have a history of clinical application, each lacks any empirical support.

Previous Research Into Psychedelic Integration

Several qualitative studies indicate that participants of such trials note the importance of integration sessions for the maximization of the psychedelic experience's benefits (Breeksema et al., 2020). Among quantitative studies concerning psychedelics, to date, only a few have accounted for the effects of psychedelic integration methods. Griffiths et al. (2018) administered psilocybin to healthy participants who undertook a program of spiritual practices (e.g., meditation, spiritual awareness, or journaling) and found that these practices contributed to enduring positive changes. In the study of St Arnaud and Sharpe (2023), attempts to reflect upon and learn from psychedelic experience were associated with positive outcomes among naturalistic (e.g., recreational) psychedelic users. Whereas Amada and Shane (2022) found support for both direct and indirect effects of several integration techniques for positive psychological outcomes (i.e., self-actualization) among the clinical and nonclinical samples.

Admittedly, these studies provide preliminary support for the application of several psychedelic integration methods, but their findings comprise several limitations. This includes cross-sectional designs that do not allow for causal inference (an exception is a study by Griffiths et al., 2018), lack of comparison of different models or methods of psychedelic integration against themselves, narrow or overly general operationalizations of integration methods under study, and the use of unvalidated measures of those. In fact, the first examples of validated measures of psychedelic integration have been proposed recently (Frymann et al., 2022), but the results of their application are not yet available.

The Call

As an increasing number of people are interested in having psychedelic experiences, and PAT being gradually mainstreamed into the existing health care systems, it is reasonable to expect that the application of various models/methods of psychedelic integration will grow in the upcoming years. It will thus have an impact on the health and well-being of an increasing number of people seeking support for their health conditions, as well as positive behavioral/lifestyle changes (Teixeira et al., 2022), and personal growth (Jungaberle et al., 2018). It thus have a public health significance. Therefore, we call for extending the focus of current research efforts to the development, examination, and evaluation of psychedelic integration models/methods.

Our call is consistent with the recommendations for the development and implementation of evidence-based practices with regard to medicine and mental health in particular (Drake et al., 2001; Tanenbaum, 2005; Volkow et al., 2017). At the moment, none of the existing models or methods of psychedelic integration can be described as evidence based. Having a body of evidence on the efficacy of specific psychedelic integration models/methods for specific needs and populations can inform the decisions of clinicians and other practitioners offering psychedelic integration, as well as PAT in general.

Potential Avenues

There are a number of potential avenues that such endeavors might take. This includes, but is not limited to, the following examples, which might serve as inspiration for conducting future studies in this regard: 4 GREŃ ET AL.

- Further efforts to provide a consensus definition and operationalization of psychedelic integration, for example, based on surveys and/or qualitative studies (i.e., individual, in-depth interviews, focus groups, expert panels) among practitioners and/or recipients of psychedelic integration;
- Secondary analysis of the data from previous psychedelicfocused research that assessed particular methods or other factors comprising psychedelic integration (i.e., the specific aspects of the debriefing sessions after the psychedelic experience);
- Exploratory qualitative studies (e.g., in-depth interviews or focus groups) among various populations, such as naturalistic users of psychedelics (e.g., exploring their understanding and/or process of psychedelic integration, as well as subjective assessment of the efficacy of particular integration methods), mental health specialists working with individuals who use psychedelics, which might include also underground psychedelic therapy or psychedelic ceremonies facilitators (e.g., exploring how these specialists understand, provide and assess the effectiveness of psychedelic integration), or individuals attending traditional ceremonies utilizing psychedelic substances (e.g., exploring the effects of particular indigenous practices focused on or related to psychedelic integration, and how they may potentially be adopted into the field of clinical practice);
- Populational surveys among people who have used psychedelics, which will utilize validated measurements and include more in-depth analysis of the relationship between integration practices, psychedelic experiences, and their outcomes;
- Studies focused on holotropic breathwork, which is a specific experiential and drug-free modality of working with altered states of consciousness in the group setting (Grof, 2014). Although some research exists to evaluate that modality no studies were focused on analyzing the specific psychedelic integration methods and aspects that are applied within the frame of HB (e.g., nonverbal expression by mandala drawing, group sharing, bodywork, or music application). Both quantitative (e.g., online surveys or prepost questionnaires) and qualitative (e.g., interviews, focus groups) measurements might be used in this regard among HB practitioners and their clients;
- Extension of psychedelic-focused clinical trial designs
 to include examination of psychedelic integration models/
 methods. This may include the a priori development of
 integration protocols and their evaluation by betweengroup outcomes comparisons and follow-up assessments,
 as well as with the use of exploratory individual interviews
 or self-report assessment of a given integration models/
 methods efficacy. The use of standardized protocols might
 be particularly useful for the evaluation of specific models
 of psychedelic integration;

- Studies based on ecological momentary assessment (EMA) methodology (e.g., delivered via mobile apps or email surveys), which might be applied as a part of psychedelicfocused clinical trials or its former participants, patients of clinics offering psychedelic-assisted treatment (e.g., ketamine-assisted psychotherapy), participants of ceremonies or retreats involving the use of psychedelics, as well as among those who self-experiment or self-medicate with psychedelics. EMA involves repeated measures of thoughts, emotions, and behaviors over time (Shiffman et al., 2008), which makes it particularly relevant for examining the psychedelic integration, as it is conceptualized as a process, rather than a state. Noteworthy, digital technologies and the so-called "citizen science" have already been used in psychedelic-focused research (i.e., regarding microdosing; Szigeti et al., 2021), and recommended as vital support in further investigations (Carhart-Harris et al., 2022);
- Empirical analysis of the relationship between preparationexperience-integration PAT stages. This might inform the selection and implementation of specific psychedelic integration methods, as well as the preparation and facilitation of the psychedelic experience, which in turn may affect the process of integration;
- Evaluation and further development of the theoretical frameworks for psychedelic integration practice (e.g., application of particular psychological theories or psychotherapeutic/clinical approaches to working with the content/consequences of psychedelic experiences; adaptation of psychedelic integration models/methods to particular populations, psychedelic substances or contexts of psychedelic experiences).

Anticipated Challenges

The aforementioned statements should not go without admitting the inevitable limitations and challenges associated with research into psychedelic integration. This primarily concerns the difficulties arising from the need for an individualized approach, and the flexibility of clinicians/therapists in choosing methods for a particular case or situation. Other noteworthy challenges regard the need for precise definitions of scope, methods, and outcomes of psychedelic integration, as well as difficulties in establishing control groups, related ethical considerations (e.g., some patients may need urgent treatment regardless of research design), and the necessity of longterm follow-up in order to capture the effect of the examined intervention. Furthermore, there is a wide spectrum of factors that make up the content and outcomes of an individual psychedelic experience (see: Aday et al., 2021, for review), all of which might also influence the adequacy and efficacy of a particular psychedelic integration practice applied. The empirical models of such investigations will thus have to be fairly complex, which might be demanding for both the study design and its participants.

However, it may be helpful to highlight that similar challenges have already been faced in the field of research into the effectiveness of psychotherapy itself (Howard et al., 1996; Guidi et al., 2018). Although not without its criticism (e.g., in terms of definition and

evaluation of problem and outcome variables; Shean, 2015), this research substantially contributed to the development of several evidence-based psychotherapeutic approaches and methods that we hold today.

Conclusion

Current director of the National Institute of Drug Abuse (NIDA) in the United States, Nora Volkov, concluded her recent speech¹ by pointing out that: "with all the attention that the psychedelic drugs have attracted, the train has left the station."

With reference to these words, Tadeusz Hawrot, Founder and Executive Director of Psychedelic Access and Research European Alliance (PAREA) stated² that:

This train is powered by the best fuel that humanity invented, which is science. Now we need to make sure that the tracks are laid out ahead of the trains, and also for patients it's a light at the end of the tunnel that they can see.

While research into understanding and applying psychedelics is now, arguably, maturing from its "renaissance," research into psychedelic integration in its very infancy, which is to the disadvantage to countless people who had and who will have their psychedelic experiences in various contexts. This article sought to emphasize that scientific efforts with respect to psychedelics should put more focus on the process of psychedelic integration itself. As it is often the case, the journey is not fully complete with the train arriving at the station. In fact, it often just marks the beginning of a new, even further journey.

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¹ During the specialized workshop "Psychedelics as Therapeutics: Gaps, Challenges and Opportunities" which was organized on January 12–13, 2022, in a collaboration between the National Institute of Mental Health, the National Institute on Drug Abuse, and the National Institute on Alcohol Abuse and Alcoholism in the United States (https://www.nimh.nih.gov/news/events/2022/psychedelics-as-therapeutics-gaps-challenges-and-opportunities [Access: September 27, 2023]).

² Presentation "The time is now" during the official event launching PAREA, on June 23, 2022 (https://www.youtube.com/watch?v=y77UNY Tq8pY&t [Access: September 27, 2023]).

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Received June 27, 2023
Revision received September 7, 2023
Accepted September 8, 2023