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Integrating contextual behavioral science with research on psychedelic assisted therapy: Introduction to the special section

ABSTRACT

Scientific research on the therapeutic use of psychedelics has rapidly expanded over the past decade and, over the next decade, they may be approved for clinical use. Psychedelics have been used for centuries in ritual, community, and spiritual contexts and yet the potential for a scientific approach to these drugs has possibly never been greater than it is now. Modern well controlled trials show preliminary efficacy in relation to a range of different psychological problems. In this introduction we outline the aims of this special issue, present the case for integrating psychedelics and contextual behavioral science, and provide an overview of the papers in the issue.

1. Introduction to the special section

For over a decade, psychedelic research has been rapidly expanding. The bulk of clinical research has focused on psilocybin, with more than thirty approved clinical studies investigating its therapeutic potential (Clinicaltrials.gov, 2010. Psilocybin-assisted therapy shows promise as an effective treatment for depression (Carhart-Harris et al., 2018), addiction (Johnson, Garcia-Romeu, & Griffiths, 2017), and existential anxiety and depression related to life-threatening illness (Grob et al., 2011; Griffiths et al., 2016; Ross et al., 2016), among other conditions. Other classical psychedelics, such as lysergic acid diethylamide (LSD) and dimethyltryptamine (DMT) are also under clinical investigation, though generally receiving much less research attention. In addition, the non-classical psychedelic, 3,4-Methylenedioxymethamphetamine (MDMA), is currently being studied in large scale Phase 3 trials with the potential for becoming legally available in the United States for prescription use for post-traumatic stress disorder (Mithoefer et al., 2019) as early as 2021.

2. What are the classical psychedelics?

The classical psychedelics include psilocybin, DMT, LSD and mescaline. Psilocybin was introduced to the west after a sample of *psilocybe mexicana* mushrooms used by the curandera Maria Sabina, were sent from Mexico to Switzerland to be analyzed by the chemist Albert Hoffman, who later developed techniques for synthesizing the psychoactive chemical (Moriarty, Alagna, & Lake, 1984). DMT is often ingested as part of the plant brew, ayahuasca, in ceremonial contexts, as it has been for centuries (Labate, Cavnar, & Gearin, 2016). Ayahuasca research has taken place in retreat settings in South America and is increasingly being explored in clinical research settings (e.g., Sanches et al., 2016; Soler et al., 2018), although less frequently than psilocybin. Mescaline is usually ingested in its plant form via the cacti San Pedro or Peyote and also has a strong tradition of ceremonial use in Mexico and South America. Mescaline was synthesized in the late 1800s and was written about by Aldous Huxley (Pollan, 2018), but is yet to find its place in modern scientific research. The psychedelic effects of the synthesized compound LSD were first discovered in 1943 and LSD is perhaps the most widely known psychedelic perhaps due to its strong associations with the 1960s counterculture movement. In 1970, despite early evidence that psychedelics had potential therapeutic benefit and evidence that they were largely non-addictive (e.g., Johansen & Krebs, 2015), the United States Drug Enforcement Agency classified them as Schedule I substances (having no accepted medical use and high potential for dependence) in 1970 (Johnson, Griffiths, Hendricks, & Henningfield, 2018). Clinicians and researchers were increasingly banned from prescribing and studying them and psychedelic research essentially halted over the next few years. However, research on the use of psychedelics to understand more about consciousness and mental health has re-emerged over the past 20 years, with LSD being investigated as a treatment for anxiety association with life threatening illness Switzerland (Gasser, Kirchner, & Passie, 2015), and psilocybin (e.g., Griffiths et al., 2016) and MDMA (Bahji, Forsyth, Groll, & Hawken, 2020) being investigated internationally for a variety of mental health difficulties.

3. Primary aims of this special issue

This special issue has five aims. First, to summarize the current state of the literature relating to psychedelic assisted therapy for new audiences. Second, to introduce how Acceptance and Commitment Therapy (ACT) and Contextual Behavioral Science (CBS) could be used to inform psychedelic-assisted therapy. Third, to present new and innovative contributions from CBS that can inform future research on psychedelics. Fourth, to explore how psychedelic science may advance the goals of CBS. Finally, we aim to correct misinformation about psychedelics and inspire the interest of therapists and researchers in the potential of these tools to catalyze greater acceptance and help people connect with self, others, and values.

4. Why integrate contextual behavioral science and psychedelic research?

One of the unique aspects of psychedelics is that their effects depend

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profoundly upon the context in which they are used (Carhart-Harris et al., 2018) This is in contrast to most pharmacological agents, such as antidepressants or anxiolytics (Hartogsohn, 2017) where setting effects are largely ignored. This need to create a supportive "set and setting" is widely accepted among researchers of psychedelic assisted therapy and is part of why researchers are beginning to test and refine the psychotherapy component of psychedelic assisted therapy. CBS emphasizes the centrality of context for understanding or changing behavior (Hayes, Barnes-Holmes, & Wilson, 2012) and, as such, is uniquely suited to understanding psychedelic experience and its potential therapeutic benefits. CBS seems a fitting framework for informing how to focus, strengthen, and maintain the often profound acute effects these compounds (when used in a supportive context). In recognition of this fit, at least two current clinical trials of psychedelic-assisted therapy are using principles derived from ACT and CBS to guide implementation.

CBS is well positioned to address several current needs in psychedelic science. Most centrally, the scientific study of psychedelic assisted therapy has largely neglected study of the psychotherapeutic component of treatment - no existing studies having systematically manipulated this component. CBS can contribute to the development of the psychotherapeutic component of psychedelic-assisted therapy in a number of ways. First, CBS can provide guidance on how to maximize outcomes through the application of a robust body of research on processes of change underlying mental health conditions. The psychological theories emerging from CBS such as psychological flexibility (Hayes, Strosahl, & Wilson, 2012) and relational frame theory (Hayes, Barnes-Holmes, & Roche, 2001) fit with the phenomenological experience of psychedelics, existing information on processes of change, and neurobiological accounts. In sum, CBS can guide investigation into the contextual factors that affect not only how these compounds work in the acute phase, but also how acute effects can better translate into lasting change.

CBS is also uniquely positioned to address some aspects of the psychedelic experience that are not well addressed in other evidence-based approaches to behavior change. First, CBS has a long tradition of addressing the spiritual, mystical, and transcendent aspects of human experience that are often made apparent during high dose psychedelic experiences (e.g., Hayes, 1984). Second, CBS also has psychological models that can address the important role of alterations in language and cognition that are part of psychedelic experience and, in particular, the phenomenon of ineffability (Luoma, Sabucedo, Eriksson, Gates, & Pilecki, 2020). Third, CBS concepts emerging from relational frame theory may be able to address alterations in the sense of self, such as ego dissolution, encounters with inner teachers or mystical beings, or experiences of transcendent love toward self and others that are commonly experienced in psychedelic-assisted therapy (Luoma et al., 2020; Hayes, Law, Malady, Zhu, & Bai, 2020).

5. Overview of the special section

The seven papers in this special section cover a wide range of topics as part of this first attempt to link CBS and psychedelic science. The first paper provides an overview of the history of psychedelic science, attempts to correct common misconceptions about psychedelics, and explores how CBS frameworks may be applied to understanding psychedelics and their use in treatment (Luoma et al., 2020). The next two papers describe how therapeutic models based on CBS and ACT are being used to inform psychedelic assisted therapy (Watts & Luoma, 2020, Sloshower et al., 2020). This is followed by two papers that include the first empirical evidence of associations between changes in psychological flexibility and psychedelic experiences (Close, Haijen, Watts, Roseman, & Carhart-Harris, 2020; Davis, Barrett, & Griffiths, 2020), thus providing empirical support for how CBS-based models of psychological change are relevant to psychedelic assisted therapy. A sixth paper focuses on how a CBS perspective can elucidate the changes in sense of self frequently experienced as part of psychedelics (Hayes et al., 2020). The final paper in the special section explores how psychedelics might be useful in the treatment of borderline personality disorder and discusses potential processes of change linked to CBS such as mindfulness and self-compassion (Zeifman & Wagner, 2020).

Our hope is this special section will encourage further research into combination therapies that are both pharmacological and psychological, particularly including psychedelics. This work will need to include further study of processes of therapeutic change that operate regardless of the type of treatment applied. Psychedelics are interesting and potentially powerful agents for reducing human suffering and for realizing human potential to achieve and flourish. With the possible stigma associated with these chemicals, the potential for hype, or to see them as either "cure all" or nonsense, what better way to address the questions around psychedelics, broadly, precisely, and deeply, than with contextual behavioral science?

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