



AKADÉMIAI KIADÓ

Psychedelic integration challenges: Participant experiences after a psilocybin truffle retreat in the Netherlands

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ABSTRACT

This article reports on integration challenges that were experienced by nine individuals who attended a three-day legal psilocybin truffle retreat in the Netherlands. The study employed a qualitative phenomenological approach, using semi-structured interviews to gain an understanding of participants' ($n = 30$) psilocybin experiences and their after-effects. While the study did not actively seek to measure integration issues or unexpected side effects, nine out of thirty participants (30%) spontaneously reported a post-experience integration challenge. These challenges included: mood fluctuations, 'post-ecstatic blues', disconnection from community, re-experiencing symptoms, spiritual bypass and perceived lack of support. Integration challenges were transient; they occurred immediately after the psilocybin experience (once the main psychedelic effects had worn off) and in the days and weeks following the retreat, and resolved with time. Integration challenges were also correlated with positive after-effects including long-term remission of significant health conditions. The experiences related in this article align with existing literature that describes the 'spiritual emergency' phenomenon; that is, the potential challenges that can arise after ecstatic experiences and how these challenges may be integral to the transformative potential of such experiences. We discuss the implications for psychedelic integration and harm reduction practices and for future psychedelic research.

INTRODUCTION

Psychedelics are a class of psychoactive substances which engender an altered state of consciousness. A number of First Nations cultures utilize psychedelic containing plants and fungi in religious and healing rituals, and psychedelics appear to have featured in the spiritual practices of various civilizations throughout history (Schultes, Hofmann, & Rätsch, 2001). Modern Western interest in psychedelic substances began in the late nineteenth century and peaked in the 1960s, before being curtailed by prohibitive drug laws (Lutkajtis, 2020). However, recently there has been a renewal of interest in psychedelics, including a surge in academic research, corporate investment, advocacy movements, new religious movements and media coverage (Lutkajtis, 2022; Pollan, 2019; Sessa, 2012) (Table 1).

Most current psychedelic research is focused on the potential therapeutic effects of these compounds. In particular, studies suggest that psychedelics may be an effective treatment for a variety of clinical issues, including treatment-resistant depression (Carhart-Harris et al., 2021), cancer-related distress (Griffiths et al., 2016; Ross et al., 2016), obsessive compulsive disorder (Moreno et al., 2006), substance use disorders (Bogenschutz et al., 2015, 2018; Johnson, Garcia-Romeu, & Griffiths, 2017), eating disorders (Spriggs, Kettner, & Carhart-Harris, 2020), and neurodegenerative disorders (Saeger & Olson, 2021). Psychedelics have also been posited to promote healthy lifestyle changes (Lutkajtis, 2021; Madsen et al., 2020; Teixeira et al., 2022), increase nature-relatedness (Lyons & Carhart-Harris, 2018) and foster environmental virtues (Kirkham & Letheby, 2022). Additionally,

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Table 1. Participant demographic information

Pseudonym	Age	Gender ID	Religious Orientation	Reason for Attending Retreat	Retreat	Psilocybin Dose	Integration Challenge
Zoe	20s	F	SBNR	ME	3 Day	High	Lack of support
Sofie	20s	F	SBNR	EC, PD	3 Day	High	Lack of support; Disconnection from community
Paul	30s	M	Atheist	EC, ME, PD	3 Day	High + Booster	Post-ecstatic blues
Tim	30s	M	SBNR	H (depression), PD	3 Day	High + Booster	Mood fluctuations
Alana	40s	F	SBNR	H (cluster headaches), PD	3 Day	Moderate	Spiritual bypass
Danielle	20s	F	SBNR	PD	3 Day	High + Booster	Post-ecstatic blues; Lack of support
Kylie	50s	F	SBNR	ME	3 Day	High	Lack of support; Mood fluctuations
Libby	30s	F	SBNR	EC, IC	3 Day	High + Booster	Mood fluctuations; Disconnection from community
Claire	50s	F	SBNR	H (trigeminal neuralgia)	3 Day	High + Booster	Mood fluctuations; Re-experiencing symptoms

F = female

M = male

SBNR = spiritual but not religious

ME = have a mystical experience

EC = expand consciousness

H = heal a mental health or other health condition

PD = personal development

IC = increase creativity

Gandy, Bonnelle, Jacobs, and Luke (2022) argue that psychedelics might act as potential catalysts of scientific creativity and insight.

There is also a small but growing body of research on challenging and adverse psychedelic experiences (Aixala, 2022; Barrett, Bradstreet, Leoutsakos, Johnson, & Griffiths, 2016; Guthrie, 2021; Johnstad, 2021). A possible adverse reaction to psychedelics is a 'bad trip' (in lay language) or a 'challenging experience' (in therapeutic language) (Schlag, Aday, Salam, Neill, & Nutt, 2022). Such experiences may involve feelings of anxiety, panic, paranoia, confrontations with personal trauma, a sense of 'losing oneself' or the fear of 'going crazy' (Gashi, Sandberg, & Pedersen, 2021; Johnstad, 2021; Schlag et al., 2022). 'Ego dissolution' experiences – episodes where the sense of being a separate 'self' distinct from the rest of the world diminishes or completely dissolves – may be particularly frightening (Gashi et al., 2021; Johnstad, 2021). Most challenging psychedelic experiences are short-lived and do not persist after the peak drug effects have worn off. Some researchers suggest that such adverse experiences under clinical settings are very rare (Schlag et al., 2022) and that when challenging experiences do occur they tend to resolve themselves in a way that the experiencer ultimately sees as positive and life-enhancing (Carbonaro et al., 2016; Gashi et al., 2021).

Challenging or adverse reactions can also occur after the psychedelic experience has ended and the main psychoactive effects have ceased. For example, there have been rare cases of psychedelics triggering persistent perceptual aberrations;

Hallucinogen Persisting Perception Disorder (HPPD) is a condition in which an individual experiences persistent visual disturbances or perceptual distortions after previous use of psychedelics (Hermle, Simon, Ruchow, & Geppert, 2012; Schlag et al., 2022). Additionally, there are a number of case reports that describe prolonged altered states (in particular, manic or psychotic episodes) associated with ayahuasca and N,N-Dimethyltryptamine (DMT) use (Dos Santos, Bouso, & Hallak, 2017; Szmulewicz, Valerio, & Smith, 2015). Overall, the incidence of such episodes appears to be rare and psychiatric screening before administration of psychedelic compounds appears to significantly reduce the possibility of adverse reactions with psychotic symptomatology.

However, there is some emerging evidence that the field could be under-estimating the frequency of adverse psychedelic experiences (Ona, Kohek, & Bouso, 2022). For example, the Global Ayahuasca Survey found that 55.9% of people who tried ayahuasca reported adverse mental health effects (including feelings of disconnection, loss of pleasure, anxiety, depression and altered perception) and 12% sought professional psychological support after their trip (Bouso et al., 2022). Interestingly, mental health adverse effects were positively associated with the strength of the acute spiritual experience and around 88% of participants considered challenging mental health effects to be part of a positive process of growth or integration. The authors report that while there is a high rate of adverse physical effects (mainly vomiting) and challenging psychological effects associated with ayahuasca use, these effects are generally not severe,



and most ayahuasca ceremony attendees continue to use ayahuasca, suggesting that they perceive the benefits to outweigh any adverse effects (Bouso et al., 2022).

In modern Western culture, challenging altered states of consciousness are generally viewed pathologically as symptoms of mental illness, rather than as paths to mental wellness. However, evidence suggests that in the case of psychedelics, adverse or challenging experiences, when resolved, could result in lasting positive change (Carbonaro et al., 2016; Gashi et al., 2021). While mainstream clinical and medical paradigms have not historically considered such experiences to be a mode of transformation, parallels can be found in the transpersonal psychology literature, particularly the work on ecstatic experiences and ‘spiritual emergency.’ Spiritual emergency is defined as a difficult developmental process, whereby an individual passes through a state of crisis and emerges “to a higher level of psychological organization with an enhanced sense of spirituality” (Evans & Read, 2020, pp. x–xi). Evans and Read (2020) posit that spiritual emergencies – which can arise spontaneously or as the result of engagement with spiritual tools and practices such as meditation or psychedelics – are a natural, yet frequently ignored, aspect of human experience. Although there is some evidence to suggest that spiritual emergencies are increasing in frequency as more people engage in spiritual practices, the term is rarely used outside of transpersonal psychology, and Western mainstream culture still does not have a sophisticated language with which to describe such experiences (Evans & Read, 2020: 201). While the term spiritual emergency may not be an appropriate descriptor for all psychedelic-related adverse effects, we argue that the spiritual emergency literature holds value when attempting to understand some of the challenging experiences described in the current study. Further, this study suggests that integration challenges in the context of a therapeutic or mystical psychedelic experience may be relatively common and in some cases could also be integral to the transformative potential of such experiences.

THE PRESENT STUDY

This article describes the integration challenges that were reported by nine individuals who attended a three-day legal psilocybin truffle retreat in the Netherlands. The nine individuals derive from a qualitative study ($n = 30$) that examined the phenomenology of the psilocybin experience among healthy volunteers in a retreat setting. The study employed a phenomenological approach, using semi-structured interviews to gain an understanding of participants’ psilocybin experiences and their after-effects. While the study did not actively seek to measure integration issues or adverse side effects, nine out of thirty participants (30%) spontaneously reported an integration challenge.

We have chosen to use the term ‘integration challenge’ to describe these effects, as they occurred: 1) after the main psychedelic effects of the psilocybin had worn off, and 2) during the period in which the individual was attempting

to integrate the psychedelic experience into their lives in order to create meaningful, lasting change. In psychedelic parlance, ‘integration’ is defined as an important process for bringing the insights and benefits from a psychedelic experience back into daily life, and also for assimilating any challenges that arose during the experience (e.g. Aixala, 2022; Bathje, Majeski, & Kudowor, 2022; Earleywine, Low, Lau, & De Leo, 2022; Gorman, Nielson, Molinar, Cassidy, & Sabbagh, 2021; Pilecki et al., 2021; Read & Papaspyrou, 2021). The term ‘challenge’ is employed as it denotes an experience that is demanding but transient, and that does not result in any serious or lasting harm – in fact it may be ultimately understood as cathartic.

The integration challenges reported in this study include: mood fluctuations, ‘post-ecstatic blues’, disconnection from community, re-experiencing symptoms, spiritual bypass and perceived lack of support. Integration challenges were transient; they occurred immediately after the psilocybin experience (once the main psychedelic effects had worn off) and in the days and weeks following the retreat, and resolved with time. They were also correlated with positive after-effects including long-term remission of significant health conditions. The experiences related in this article align with existing literature that describes the spiritual emergency phenomenon and the potential challenges that can arise after ecstatic experiences. We discuss the implications for psychedelic integration and harm reduction practices and for future psychedelic research.

METHOD

Participants

Participants were thirty volunteers (15 male, 15 female) who attended a legal psilocybin retreat at Synthesis in the Netherlands, between the months of April 2018 and February 2020. Twenty eight participants attended a three-day retreat (which involved one psilocybin dose) and two participants attended a five-day retreat (which involved two psilocybin doses). Participants ranged between 26 and 67 years of age ($M = 46.5$). Participants were from Europe ($n = 12$), United States ($n = 10$), Central America ($n = 1$), United Kingdom ($n = 5$) and Australia ($n = 2$). Religious affiliation was Atheist ($n = 6$), Christian ($n = 1$), Buddhist ($n = 1$), Jewish ($n = 1$), Spiritual But Not Religious (SBNR) ($n = 17$) and Undefined/Other ($n = 4$). Broad reasons for attending the retreat included “heal a mental health or other health condition (H),”¹ “explore consciousness (EC),” “personal development (PD),” “increase creativity (IC),” “quit smoking or other addiction” and “have a mystical experience (ME).”

¹While the Synthesis retreat is not explicitly aimed at treating health conditions, and participants who have contraindicated mental illnesses are excluded via a screening process, several participants did report having had experienced periods of depression and/or anxiety at times during their lives. Four participants stated that healing such conditions was a specific intention.



Prior to the retreat, participants went through a screening process, which included questionnaires and an interview, to check for any pre-existing health conditions that might rule out attendance, and to determine psychological readiness. Individuals also had a number of online preparation sessions in the weeks leading up to the retreat, a full day of preparation the day before the psilocybin session (day one of the retreat), and a half day of preparation the day of the psilocybin session (day two of the retreat).² Preparation activities included pre-reading, meditation, breath work, and one-on-one sessions with an expert facilitator. The day after the psilocybin session, and for several weeks afterwards, participants took part in a structured integration program which addressed somatic and social integration. During the psilocybin session all participants consumed one dose of psilocybin containing truffles (average dose range 30–40 g) in the form of a tea. Approximately 90 min into the session participants could choose to take a second “booster” dose of truffles (an amount up to the same initial dose) if required. Therefore, the dose range of psilocybin containing truffles was between 30 and 80 g.³

Interviews

Data was collected via a short online survey which gathered basic demographic information, and a semi-structured interview of approximately 1 h duration. Each interview was conducted over Zoom and took a story-telling approach, which involves asking questions in such a way that participants respond with a story (Minichiello, Aroni, & Hays, 2008, p. 95). This approach enables the interviewee to feel comfortable with talking for extended periods, as stories are usually extended monologues. Because a psychedelic experience is often difficult to put into words, a loose structure was suggested. Participants were told that they could tell the interviewer about their experience in any way they liked, and that one possible approach was to (1) start by talking about what brought them to the retreat, (2) describe the psilocybin experience, and (3) relate their experience since the retreat, including any significant after-effects and changes. All participants followed this general approach. Follow-up questions were used for clarification and to probe for more detail. Each interview was recorded and transcribed verbatim. Five participants also volunteered copies of journal entries that they had written immediately after, or in the days following, the psilocybin experience. All participant data was

²This was the standard format for a three-day retreat. On a five-day retreat participants took a dose of psilocybin on days two and four. The screening, preparation and integration information is based on the Synthesis retreat program at the time of data collection. Details of the program may have slightly changed and evolved between the months of April 2018 and February 2020, however capturing such data was beyond the scope of this study.

³Almost all participants in the study (27 out of 30) reported taking a ‘high’ or ‘high + booster’ dose of truffles. Three people reported having a ‘moderate’ dose however the amount in grams was not specified. Lack of precise information regarding dosing was a limitation of this study.

de-identified in order to preserve anonymity. All individuals mentioned in this article have been given pseudonyms.

RESULTS

All participants had good recall of the psilocybin experience and all reported enduring positive after-effects that had persisted since the retreat. Out of the thirty participants interviewed, nine individuals (30% of total participants) described an integration challenge. These effects occurred both immediately after the psilocybin experience (once the main psychedelic effects had worn off) and in the days to weeks following the retreat. Six main categories of integration challenges were identified and are outlined below.

Mood fluctuations

Emotional volatility and mood fluctuations (including anxiety, depression and hypomania) have been reported in the days and weeks following a psychedelic experience (Aixala, 2022). As such, clinical trials with psychedelics have excluded individuals with bipolar disorder, and most have excluded individuals with a family history of bipolar disorder, due to the perceived risk of occasioning a manic episode or inducing a rapid mood shift (i.e. a Treatment Emergent Affective Switch) (Gard et al., 2021). In the current study, six participants mentioned changes to mood, energy and cognition that occurred after the psilocybin experience. Sometimes mood fluctuations occurred immediately following the psilocybin session, as in the case of Kylie (f; 50s), whose psilocybin experience mainly involved feelings of overwhelming sadness and cathartic crying. She spoke of the emotional challenges she encountered towards the end of the session and described fearing that she may have somehow damaged herself or “created a psychosis:”

Towards the end, I thought I’ve got to just move and sit outside, I felt very claustrophobic, and I asked one of the guides to go out, so I sat outside for a little bit. And of course you’re all a bit spacey, and I was trying to say, “I don’t understand what’s going on. Have I damaged myself?” And I was just thinking, “What have I done, have I hurt myself?” And everybody else was like giggling in the kitchen, and I just thought, “Oh my God, I am not in a good place at all.” Then I was sick. I literally vomited ... And then everybody else went for food and I was like, “I just want to be on my own, I do not want to interact with anybody.” And I went to my room and I had a shower which made me feel a bit better, and I got into bed. I was like, “I just want this all to go away.”

Kylie reported that the effect was transient and the next morning she felt “completely different” and “light” and that by the time she got on the plane to travel home:

I was just smiling at everybody. I was like, “Hi! How are you!” It felt like cleansing, healing and gentleness. It was like “Ok it’s good, now I know I need to integrate these two worlds together and it’s going to be really important.” But it was awful - horrible horrible, horrible - as I was going



through it. And I think when we were doing the de-brief afterwards and people were saying, “I had this wonderful experience, never felt joy like it!” I was like, “Ok I didn’t have any of that.”

Libby (f; 30s) also described low mood following the experience:

The next day ... following the retreat, I was kind of raw. I mean, they tell you not to make any big decisions for the first two weeks afterwards because you kind of ... you’re not fully integrated back into the world yet and so you start to question a lot of things ... They recommend that you don’t immediately go back to work but I didn’t really have a choice. And it didn’t even dawn on me that this would be something that would be a little bit uncomfortable.

Libby relayed that upon returning to work she felt that she wanted to quit her job, but she “waited for those feelings to pass” and “as time went on, I started to feel better”. She posited that the experience may have “uncovered” depression that she wasn’t aware of, noting that “psilocybin is not going to fix your problems, it’s just going to help you find where they are I think. So it helped me see these aspects of myself that I hadn’t seen before.”

Tim (m; 30s) had a history of depression that started when he was ten years old. His depression went into remission for six months following his psilocybin session at Synthesis, however he reported that the first two weeks after the experience was “a really messy time”. Immediately after the psilocybin session he felt “dizzy,” “disorientated,” “very confused” and could not sleep properly. He noted:

And when we left the retreat ... I had a lot of thoughts. It was a mess, basically ... the first two weeks my head was all over the place and very hyperactive and I thought, “Maybe I’m bipolar and now the mania has started.” And I was really scared. I thought, “Okay, I don’t want to have mania. I don’t want to start buying flights here and there.”

Tim said that while his mood and cognition were erratic, his actions were actually “really calm” and he did not do anything irrational, it was “only my head that was all over the place”. He said that meditation helped him “get grounded” and that slowly his feelings “started getting more calm, stable and happy or neutral”. This return to stable mood resulted in Tim experiencing a full remission of his depression symptoms, which lasted for approximately half a year.

Mood and energy elevation were also reported. Claire (f; 50s) attended the Synthesis retreat with the goal of treating her trigeminal neuralgia. She described a period of transient “hypomania” that lasted for one week following the retreat. She said she only slept for four hours per night:

I would wake up in the middle of the night as the dreams were coming, you know ... and then I would have to write and write and write and write ... everything was coming back. All these files that I had subconsciously tucked away just became accessible. And I was just opening up books, you know, file after file after file. And so my poor husband had to put up with me being like that for about a

week. And yeah, my kids thought I was a little strange for about a week. I’d say I was strange for about three weeks.

During this period Claire noticed that she no longer had trigeminal neuralgia pain and her condition was still in remission at the time of the interview, one year later.

Post-ecstatic blues

The literature on ecstatic experiences describes expressions of ecstatic highs followed by periods of low mood and desolation, or what mystics term ‘dryness’ or ‘divine homesickness’ (Evans, 2017). Immediately following an ecstatic experience, an individual can feel that they have transcended mundane reality and their previous psychological concerns and issues. Low mood or despondency can occur when this high inevitably wears off and the individual returns to their previous baseline state (Grof & Grof, 1980). Mundane reality can feel ‘ugly’ and ‘fake,’ and a post-ecstatic depression can ensue.⁴ Scholar Chris Bache, who privately pursued a course of high dose LSD sessions over many years, describes his own experience of post-ecstatic depression:

In the years after stopping my [LSD] sessions, I found myself entering a deep existential sadness. There was joy in my life, but my enthusiasm for life itself was fading. Once you have known the ecstasy and freedom of becoming Light, of dissolving completely into the crystalline body of the Divine, life on Earth can begin to feel dried up. I began to feel marooned, separated from my Beloved by the very conditions of my earthly existence. Eventually, I reached a point where I realized I was just waiting to die (Quoted in Read & Papaspyrou, 2021, p. 335).

For two participants, low mood was experienced specifically in relation to a feeling of disconnection from the psilocybin peak experience. Danielle (f; 20s) described having an experience during her psilocybin session where she went to another world - a “cloud place”. In this place, she saw her loved ones and had a deep insight into how their lives were meaningfully connected both to her own life and to a greater metaphysical cosmology. This experience was characterized by overwhelming feelings of love, euphoria and gratitude. Danielle described having an epiphany where she suddenly understood the meaning of life:

It was broader than just my family and friends. It was just like, “I get it. I get the meaning of life, I get why I’m here. I get it all and I just felt such relief. I was like”, “Oh my gosh, I get it. Like, of course, this has been the answer the whole time” ... I just felt like I cracked the code on life. I was so excited, because in my mind, I was like, “Oh, I don’t have to live with this stress anymore, any insecurity”. I don’t have to feel this anymore. I can just live and I can just bask in this ... ‘light’ is all I can really describe it as.

⁴This is why spiritual traditions suggest that one should not get attached to ecstatic experiences, remind oneself they are temporary and not of value in themselves, and even lean into the disappointment and mundanity that often follows such experiences (Aixala, 2022; Evans & Read, 2020; Grof & Grof, 1980).



However, as the experience came to an end, Danielle underwent a challenging return to ordinary reality:

Shortly after that, I started to dissipate from the clouds, essentially. I was brought back to reality. That hit me hard - like if I were falling from the sky and hit the pavement. I realized that that's a place [the cloud place] that's not here. I was like, "I just lost that place. It's over. I just fell." I think everybody in the room could see it on my face. I was just drained. I went from such a 'high high' and then it just plummeted to a 'low low.' And my personality is very stable. I don't really have a lot of high highs or low lows personally ... For me to go from that to that was such a foreign, abrupt feeling. I became quite depressed ... There were no words to describe it.

Danielle said this depressed mood lasted for several hours and then the next day improved to "almost neutral". In the days following the retreat she felt "severe dips" in her mood and it took her a few weeks to integrate the experience and return to a normal baseline mood.

Paul's (m; 30s) psilocybin experience was abstract with very little narrative content and aligned with descriptions of 'ego dissolution' and 'pure consciousness' experiences. Paul said he completely lost his sense of a separate personal identity self and became "infinity". He experienced himself as infinite universal love. After the session, Paul experienced an 'afterglow', which is a period of improved subjective well-being that persists after the acute psilocybin effects have subsided. He said he "felt that something very special had happened" and that "everything felt perfect". The afterglow lasted for one month and then faded quickly when he returned to "normal life". He described this period of time as a 'dark night of the soul.'

As soon as I came back to [my home country] and I got back to my normal life, it faded very quickly. It was not only the psilocybin experience, but also the trip [the holiday] that was over, an amazing time. And then it was like reality came crashing back. And I would even say that, you know ... you have to be careful with the terms ... but it was kind of a 'dark night.' It wasn't like a depression or anything like that, but something felt wrong. And I think the core of the feeling was that maybe my day-to-day life doesn't live up to that mystical experience.

Paul said he felt that the gap between his psilocybin experience and his real life was too wide and he did not know how to reconcile this:

I was having the feeling "Okay so what? You know, that was a great experience. And I definitely learned a lot about myself and many other things, but what do I do with that now?" The day-to-day reality is so different and distant. And I think maybe it's fruitless to try to be connected [to the experience], even though I was trying in day-to-day life. And so I had this 'dark night' type of feeling for a while. But at some point it settled down, and I would say that once I got to that phase, I feel quite different. But maybe not in the way that I was expecting. And I don't know how to explain the difference.

Disconnection from community

Feeling disconnected from community after an ecstatic experience is a relatively common phenomenon. Such reports can be traced back thousands of years to Plato (c. 428-7 BCE - 348-7 BCE), who wrote of the illuminated mystic struggling to re-integrate into society and being mocked for their unworldliness (Plato & Bloom, 1968). Psychiatrist and transpersonal pioneer Roberto Assagioli (1888-1974) also noted that an individual may appear unworldly and even less functionally effective in the days and weeks following an ecstatic experience, and could attract criticism from their community as a result (Grof & Grof, 1980).

In the present study, Libby reported feelings of disconnection after her psilocybin experience, including a period of "really heavy brain fog". She noted:

my roommate at the time was not a very supportive person and so the reintegration period was a little bit difficult for me because I had to go home the next day to live with this person who didn't, first of all, understand what I was doing, and secondly, didn't understand that my feelings afterward were normal. I was actually pretty sad for a while because I just didn't know what to do with what I saw, and I still had, I think, some of the physical effects [of the psilocybin] because I just felt like I was disconnected for a good week afterwards.

Additionally, individuals who have experienced an altered state of consciousness may view themselves as different, special or even superior to others who have not had a similar experience (Aixala, 2022; Evans & Read, 2020). Feelings of dissimilarity could also lead to a sense of disconnection from one's community. Sofie's (f; 20s) psilocybin experience contained a large variety of themes and content including an "emotional purge", ego dissolution, feeling 'God' inside her, a feeling of understanding her place in the universe ("I made sense in the grand scheme of things") and a spiritual feeling of being 'home' ("my spirit was home, not just my body"). After the experience she had an afterglow which lasted a few days and a period where her mental health improved and her brain felt "more susceptible" to new ideas.

While her psilocybin experience was overwhelmingly positive, Sofie described feeling disconnected from others who had not had this type of experience:

I felt like I was a lot more open to energy after it. It made me feel a little disconnected from others around me because ... [it's like] you get on an elevator and you reach the top floor, and you see something that's really amazing. And then you go back down to the first floor, and you're unable to explain to others what you saw at the top floor. It can be quite isolating sometimes. Some people kind of looked at me like I was mad ...

She also noted the significance of having a supportive community, saying: "it's really important to be able to talk about these experiences with people who can relate, and not people who are going to look at you skeptically and make you question your own experience."



Re-experiencing symptoms

‘Flashbacks’ or re-experiencing symptoms have been reported after psychedelic experiences (Hermle et al., 2012; Wesson & Smith, 1976). As mentioned above, visual flashbacks that continue to occur after the original psychoactive drug effects have worn off are a medically recognized phenomenon called Hallucinogen Persisting Perception Disorder (HPPD) (e.g. Müller et al., 2022). While no participants in this study reported HPPD, Claire recounted that during her weeklong period of self-described “hypomania” she re-experienced elements of her psilocybin experience. She described having somatic re-experiencing symptoms for seven days and that during this time:

I re-birthed my first son, I re-had my pulmonary embolism. And I guess that’s where I realized that I didn’t have pain [trigeminal neuralgia] anymore. But I had these very physical ... so I’d had all the mental stuff, but then I had these very physical experiences. I guess maybe about four days later, I couldn’t breathe properly. And I was re-having the pulmonary embolism. My body was like shedding the tissue memory ... and the birth of my son, same thing.

Another participant in the study (f; 50s) mentioned that she occasionally experienced trembling in her hand in the weeks following the retreat, and she interpreted this as a transient cathartic after-effect.⁵ While currently under-researched in the psychedelic field, reoccurring somatic responses have been mentioned in the spiritual emergency literature and in the meditation literature. For example, ‘kundalini awakening’ – a challenging psychophysical phenomenon that arises from prolonged engagement with religious or spiritual practices – can lead to involuntary physical movements such as shaking and tremors. In some cases these effects can last for many weeks (Grof & Grof, 1980). Energy-like somatic experiences have also been reported by Western Buddhist meditators (Cooper, Lindahl, Palitsky, & Britton, 2021). For example, in his pioneering phenomenological study of *vipassana* meditators, Jack Kornfield (1979) found reports of involuntary movements, anomalous somatic sensations, and out-of-body experiences. More recently, Lindahl, Fisher, Cooper, Rosen, and Britton (2017) discovered a variety of somatic effects in meditators, including reports of cardiac irregularity, breathing irregularity and pressure and tension in the body. In their study, the release of tension was sometimes associated with electricity-like ‘voltage’ or ‘currents’ of somatic energy surging through the body. When such surges in somatic energy were strong, involuntary body movements sometimes followed.

Spiritual bypass

‘Spiritual bypass’ is a term that is used to describe situations where an individual seeks to evade or ignore their

psychological issues by immersing themselves completely in a spiritual worldview (Welwood, 1984 1984; Cashwell, Bentley, & Yarborough, 2007). Cashwell et al. (2007, p. 140) defines the concept:

Spiritual bypass occurs when a person attempts to heal psychological wounds at the spiritual level only and avoids the important (albeit often difficult and painful) work at the other levels, including the cognitive, physical, emotional, and interpersonal. When this occurs, spiritual practice is not integrated into the practical realm of the psyche and, as a result, personal development is less sophisticated than the spiritual practice ... Common problems emerging from spiritual bypass include compulsive goodness, repression of undesirable or painful emotions, spiritual narcissism ... spiritual obsession or addiction, blind faith in charismatic leaders, abdication of personal responsibility, and social isolation.

Both Read and Paspaspyrou (2021) and Aixala (2022) report instances of spiritual bypass in their psychedelic integration work with clients. Aixala (2022) posits that repeatedly taking psychedelics, without sufficient integration between sessions, is a form of spiritual bypass.

In the present study, one participant explicitly mentioned experiencing spiritual bypass. Alana (f; 40s) had a history of migraine and cluster headaches. Treating her headache condition was one of Alana’s key motivations for attending the Synthesis retreat. In the two month period following the Synthesis retreat, Alana attended several additional personal development courses and had “many insights” which she described as an eight week period of “awakening”. She said this was like “opening up a tap. I had ten insights every day for a while”. In the three month period following the Synthesis retreat Alana made a number of significant life changes. She broke up with her partner, quit her job and travelled to Bali to do a yoga course. She described how when she arrived in Bali she went through a period of “spiritual bypass.”

So when I came to Bali, I went into spiritual bypass. I thought I was talking to the trees and my frog [her spirit animal that she encountered in her psilocybin experience], and all that stuff, but it was actually more about dealing with my own personal problems and all these relationships in my life. When I came to Bali, the yoga teacher there who had the school, he had worked with psychedelics and he kind of told me “You need to stop focusing on this and start focusing on that.” And he guided me with somatic experiencing ... and there I learned that spirituality is actually about being connected to myself, like truly connected to myself, so I can be connected to others and be connected to nature and the environment that we are currently just destroying like crazy, because we’re so disconnected. So this is my definition of spirituality.

After her psilocybin experience at Synthesis, Alana’s headache condition went into remission, and at the time of interview she had not had a cluster headache for almost two years. She attributed this to the psilocybin experience and to other insights and positive changes she had since implemented in her life.

⁵This was a brief comment and the interviewer did not probe for further detail. This incident was not included as a challenging experience however it is worth noting that such effects may occur and should be investigated in further detail in future studies.



Lack of support

Challenging experiences are more likely to become spiritual emergencies if a person is isolated and lacking social support (Evans & Read, 2020). Aixela (2022) has found that having a network of good social support is one of the main predictors for successful integration of a psychedelic experience. Similarly, Rosalind Watts (2022) writes:

People were flocking to psychedelic retreats, many had wonderful experiences, but most of them did not receive the kind of aftercare they needed. After such an intense experience they found themselves left alone to understand it, process it, and try and incorporate the teachings into their lives. This is the work of a healing community, but after their brief taste of one they found themselves back home treading the same old pavements and feeling a bit disconnected from their new 'medicine family' that they had shared the ceremony with. Now they were left alone with all the emotions, insights and questions the ceremony had revealed.

Four individuals in the current study mentioned that lack of support was a challenge. Kylie felt that she needed more one-on-one support during the psilocybin experience and immediately after:

I think personally there needs to be more support for people during the trip. Because I felt very alone. Even though the guides will say, "If you had asked for it, we were there." But not everybody is good at asking for help, and I think when you're that upset and distressed, I think it might have really helped to have somebody with me all the time, holding my hand, talking to me about it. Or change the scenery, or doing something with nature ... I think if I was going to do it again, I would want a one-on-one guide with me for when it got really tough.

Danielle said that she needed more help putting her experience into context:

You kind of have like one opportunity or two opportunities to talk through things a little bit, but things are still very much raw. Then you leave ... There was one moment where I turned to one of the facilitators, and I essentially described my experience of being so high and then falling. I was like, "It's just gone. It didn't mean anything." He was like, "Did it not mean anything?" That was it. I was like, "No, like, I need a process ..." In hindsight, maybe that's not really what they want you to do because you have to kind of make your own sense of things and not be primed by other people ... But I definitely needed more support after that. I didn't set that up for myself afterwards. I should have had a therapist.

Sofie also mentioned that she should have worked with a therapist or "integration specialist" after the retreat, as she got "sucked back into the cycle of reality" and she believes this is why some of her positive after-effects were not enduring. Similarly, Zoe (f; 20s) commented that she did not integrate the experience properly and that she could possibly have gained more positive and lasting after-effects if she did, noting: "I did my work before [preparation]; I didn't do my work after - that was the biggest mistake". She related:

I don't think I reintegrated properly. It was a quite intense phase of my life and I didn't take the time to slow down and try to take what I learned and transfer it into behavioral changes which I intended to do in the beginning. And I did so well on the retreat. It was like this bubble. You're in a safe space and they guide you, and you have time for journaling and meditation and walks in nature, and then you come back home and yes, they do the Skype afterwards but it's not enough ... I saw that they [Synthesis] are working on something for a more extended reintegration program and I think that's a perfect idea because that's what was missing for me. I didn't do anything to keep up with it.

DISCUSSION

This article presents the integration challenges that were experienced by nine individuals who attended a three-day legal psilocybin truffle retreat in the Netherlands. Integration challenges occurred in the hours immediately following the psychedelic experience (i.e. after the main psychoactive effects of the psilocybin had worn off) and in the days and weeks following the retreat (particularly during the 'afterglow' period). This suggests that the immediate post-experience and post-retreat period may be a critical time when additional support, care and monitoring is vital. The participants in this study were self-selected based on having had a 'mystical-type experience' and had maintained a relationship with the Synthesis retreat centre; participants were recruited via the Synthesis mailing list and social media and many spoke in complimentary terms about the retreat and their overall experience. Hence, this suggests that even in situations where the psychedelic experience is considered to be beneficial and the set and setting is optimally controlled for, integration challenges can still occur.

This article identifies six main categories of integration challenges, however it is important to note that binary categories are limited and the boundaries between some of our classifications are blurred. For example, low mood may be related to serotonergic drug effects, or it could be the result of feeling disconnected from community or from the peak ecstatic experience itself (i.e. 'post-ecstatic blues'). Future studies should examine the phenomenology of integration challenges in more detail and attempt to further delineate emerging themes. The categories in the current study should be regarded as preliminary and not conclusive. Further, future studies should seek to discover additional types of integration challenges. For example, a number of participants in this study (i.e. the larger cohort; $n = 30$) reported after-effects related to increased sensitivity. One participant (m; 40s) who was not included in the above analysis mentioned that returning to his home city environment immediately after the retreat felt "extremely overwhelming". Specifically, he said he felt his sensory "aperture" was more open than usual. Other participants described hypersensitivities to various foods and substances such as cannabis or alcohol, resulting in reduced intake and healthier behaviours. These instances were not included in the above



analysis as integration challenges but future studies should seek to investigate hypersensitivity effects in more detail.

Powerful psychedelic experiences can sometimes occasion an abrupt ontological shift in worldview (i.e. “ontological shock”) (Davis et al., 2020). Such experiences appear to have the capacity for mediating major shifts in perspective, including lasting changes to metaphysical beliefs (Timmermann et al., 2021). Interestingly, the participants in this study did not report ontological shock as a challenge. Participants seemed to regard any spiritual conversion experiences or changes in ontological worldview as beneficial and non-problematic. However, as mentioned above, this study was not actively seeking to discover integration challenges. Therefore it is possible that ontological shock did present a challenge for some participants but was not self-reported. For example, in their research into meditation-related adverse effects, Lindahl et al. (2017) argue that due to the influence of authority structures and demand characteristics, individuals are unlikely to volunteer information about negative reactions to interventions without being directly asked. Following, they posit that passive monitoring of adverse events and challenging experiences may underestimate the prevalence of such effects by more than 20-fold. Hence, it is important that future studies actively assess integration challenges and do not rely on self-reporting of adverse effects.

It should be emphasized that the integration challenges in this article are presented in isolation, however when considered within the context of the whole retreat experience, participants reported that their psilocybin experiences were overwhelmingly positive. In all cases, integration challenges were transient and had resolved by the time of interview. Further, all participants mentioned positive and enduring after-effects following their psilocybin experience. These included: improved mental and physical health; increased sense of connection to self, others and nature; improved relationships; strengthened sense of spirituality; decreased fear (including fear of death); increased appreciation of beauty; health-related behavior changes (e.g. Alana quit drinking alcohol and Kylie stopped eating meat). Interestingly, several participants reported the resolution of significant health conditions. Tim experienced a six month remission from long-term depression, Claire reported remission from trigeminal neuralgia and Alana reported remission from cluster headaches. There is some evidence to suggest that challenging experiences during and after a psychedelic session are more likely to occur if the individual has poor physical or mental health, and challenging experiences can sometimes be connected to breakthroughs in healing (Gómez-Sousa et al., 2021; Guthrie, 2021). These findings also align with the literature on spiritual emergency, which suggests that the resolution of such crises can ultimately lead to positive personal transformations (Evans & Read, 2020).

Finally, some participants voluntarily reported information regarding practices that assisted with the resolution of their integration challenges. For example, Tim found meditation to be beneficial; Alana received helpful advice

from a yoga teacher who had experience with psychedelic integration. However, as the current study was not seeking to actively investigate integration challenges, data regarding the resolution of these challenges was limited, and future studies should investigate how people approach and resolve such issues. In the interim, psychedelic therapists, clinics and retreat centres should prepare participants for the potentiality of adverse effects; specifically, they should advise individuals that they could be in a mild altered state of consciousness for a period of time after their psychedelic experience, and to seek additional support if needed. Regarding mood fluctuations and spiritual bypass, it is recommended that individuals are advised not to make any significant life changing decisions immediately following a psychedelic experience (the Synthesis retreat centre does give this advice to retreat participants). Regarding feelings of disconnection from community, it could be recommended that people brief their loved ones before a psychedelic experience and organize to have a network of support in the days and weeks following the event.⁶ Several participants in this study mentioned lack of support as a specific issue. Clinics and retreat centres could consider offering more intensive integration services or providing more information regarding integration experts and integration circles, either online or near to where the participant lives. However, it is important to note that even when help is available some people may have trouble asking for assistance (as was the case with Kylie).

CONCLUSION

There is at present very little research on the integration challenges that individuals could potentially face following a psychedelic experience. The preliminary results presented in this article suggest that psychedelic integration challenges may be relatively common, even in situations where the set and setting is optimally controlled for and the psychedelic experience is largely beneficial. Future research studies should actively investigate the phenomenology of psychedelic integration challenges, as well as their frequency, severity, duration and any dose-related effects. Future analyses should also endeavor to understand how these challenges are successfully managed and resolved. Additionally, it would be particularly interesting to explore whether psychedelic integration challenges are significantly correlated with positive after-effects such as the resolution of chronic health conditions. In such cases, re-framing integration challenges as paths to wellness rather than symptoms of mental illness is especially important, particularly as psychedelic therapy becomes more mainstream. Bringing challenging and potentially misunderstood aspects of a

⁶The Synthesis retreat centre holds an integration workshop after the psilocybin session which discusses some potential challenges that might arise including the concept of the ‘honeymoon’ or afterglow phase ending, and reconnecting to family and friends.



psychedelic experience to the fore could actually foster wider acceptance of psychedelics as a therapeutic pathway. Future research into challenging psychedelic experiences will therefore be of benefit to consumers of psychedelics, providers of psychedelic services, and to the burgeoning field of psychedelic medicine.

Ethics: This study was approved by and carried out in accordance with the recommendations of The University of Sydney Human Research Ethics Committee. Participation was voluntary and no incentive to participate was provided. All participants gave their written informed consent to participate and were told that they could withdraw from the study at any time.

REFERENCES

- Aixala, M. (2022). *Psychedelic integration: Psychotherapy for non-ordinary states of consciousness*. Santa Fe, NM: Synergetic Press.
- Barrett, F. S., Bradstreet, M. P., Leoutsakos, J. S., Johnson, M. W., & Griffiths, R. R. (2016). The Challenging Experience Questionnaire: Characterization of challenging experiences with psilocybin mushrooms. *Journal of Psychopharmacology*, 30(12), 1279–1295. <https://doi.org/10.1177/0269881116678781>.
- Bathje, G. J., Majeski, E., & Kudowor, M. (2022). Psychedelic integration: An analysis of the concept and its practice. *Frontiers in Psychology*, 13, 824077. <https://doi.org/10.3389/fpsyg.2022.824077>.
- Bogenschutz, M. P., Forechimes, A. A., Pommy, J. A., et al. (2015). Psilocybin-assisted treatment for alcohol dependence: A proof-of-concept study. *Journal of Psychopharmacology*, 29(3), 289–299.
- Bogenschutz, M. P., Podrebarac, S. K., Duane, J. H., et al. (2018). Clinical interpretations of patient experience in a trial of psilocybin-assisted psychotherapy for alcohol use disorder. *Frontiers in Pharmacology*, 9(100), 1–7.
- Bouso, J. C., Andi6n, 6., Sarris, J. J., Scheidegger, M., T6foli, L. F., Opaleye, E. S., et al. (2022). Adverse effects of ayahuasca: Results from the global ayahuasca survey. *PLOS Glob Public Health*, 2(11), e0000438. <https://doi.org/10.1371/journal.pgph.0000438>.
- Carbonaro, T. M., Bradstreet, M. P., Barrett, F. S., MacLean, K. A., Jesse, R., Johnson, M. W., & Griffiths, R. R. (2016). Survey study of challenging experiences after ingesting psilocybin mushrooms: Acute and enduring positive and negative consequences. *Journal of Psychopharmacology*, 30(12), 1268–1278. <https://doi.org/10.1177/0269881116662634>.
- Carhart-Harris, R., Giribaldi, B., Watts, R., et al. (2021). Trial of psilocybin versus escitalopram for depression. *New England Journal of Medicine*, 384: 1402–1411.
- Cashwell, C. S., Bentley, D. P., & Yarborough, P. (2007). The only way out is through: The peril of spiritual bypass. *Counseling and Values*, 51, 139–148.
- Cooper, D. J., Lindahl, J. R., Palitsky, R., & Britton, W. B. (2021). Like a vibration cascading through the body”: Energy-like somatic experiences reported by western Buddhist meditators. *Religions*, 12(12), 1042. <https://doi.org/10.3390/rel12121042>.
- Davis, A. K., Clifton, J. M., Weaver, E. G., et al. (2020). Survey of entity encounter experiences occasioned by inhaled N,N-dimethyltryptamine: Phenomenology, interpretation, and enduring effects. *Journal of Psychopharmacology*, 34(9), 1008–1020. <https://doi.org/10.1177/0269881120916143>.
- Dos Santos, R. G., Bouso, J. C., & Hallak, J. E. C. (2017). Ayahuasca, dimethyltryptamine, and psychosis: A systematic review of human studies. *Therapeutic Advances in Psychopharmacology*, 7(4), 141–157. <https://doi.org/10.1177/2045125316689030>.
- Earleywine, M., Low, F., Lau, C., & De Leo, J. (2022). Integration in psychedelic-assisted treatments: Recurring themes in current providers’ definitions, challenges, and concerns. *Journal of Humanistic Psychology*. Advance online publication. <https://doi.org/10.1177/00221678221085800>.
- Evans, J. (2017). *The art of losing control*. Edinburgh, Scotland: Canongate Books.
- Evans, J., & Read, T. (Eds.), (2020). *Breaking open: Finding a way through spiritual emergency*. London, UK: Aeon Books.
- Gandy, S., Bonnelle, V., Jacobs, E., & Luke, D. (2022). Psychedelics as potential catalysts of scientific creativity and insight. *Drug Science, Policy and Law*. <https://doi.org/10.1177/20503245221097649>.
- Gard, D. E., Pleet, M. M., Bradley, E. R., et al. (2021). Evaluating the risk of psilocybin for the treatment of bipolar depression: A review of the research literature and published case studies. *Journal of Affective Disorders Reports*, 6. <https://doi.org/10.1016/j.jadr.2021.100240>.
- Gashi, L., Sandberg, S., & Pedersen, W. (2021). Making “bad trips” good: How users of psychedelics narratively transform challenging trips into valuable experiences. *International Journal of Drug Policy*, 87. <https://doi.org/10.1016/j.drugpo.2020.102997>.
- G6mez-Sousa, M., Jim6nez-Garrido, D. F., Ona, G., Dos Santos, R. G., Hallak, J. E. C., Alc6azar-C6rcoles, M. 6., & Bouso, J. C. (2021). Acute psychological adverse reactions in first-time ritual ayahuasca users: A prospective case series. *Journal of Clinical Psychopharmacology*, 41(2), 163–171.
- Gorman, I., Nielson, E. M., Molinar, A., Cassidy, K., & Sabbagh, J. (2021). Psychedelic harm reduction and integration: A trans-theoretical model for clinical practice. *Frontiers in Psychology*, 12, 645246. <https://doi.org/10.3389/fpsyg.2021.645246>.
- Griffiths, R. R., Johnson, M. W., Carducci, M. A., et al. (2016). Psilocybin produces substantial and sustained decreases in depression and anxiety in patients with life-threatening cancer: A randomized double-blind trial. *Journal of Psychopharmacology*, 30(12), 1181–1197.
- Grof, C., & Grof, S. (Eds.), (1980). *Spiritual emergency: When personal transformation becomes a crisis*. New York, NY: Tarcher.
- Guthrie, L. (2021). *A phenomenology of challenging psychedelic experiences: From relational trauma to relational healing*. Doctoral dissertation. Duquesne University. Retrieved from <https://dsc.duq.edu/etd/2011>.
- Hermle, L., Simon, M., Ruchsow, M., & Geppert, M. (2012). Hallucinogen-persisting perception disorder. *Therapeutic Advances in Psychopharmacology*, 2(5), 199–205. <https://doi.org/10.1177/2045125312451270>.



- Johnson, M. W., Garcia-Romeu, A., & Griffiths, R. R. (2017). Long-term follow-up of psilocybin-facilitated smoking cessation. *The American Journal of Drug and Alcohol Abuse*, 43(1), 55–60.
- Johnstad, P. G. (2021). Day trip to hell: A mixed methods study of challenging psychedelic experiences. *Journal of Psychedelic Studies*, 5(2), 114–127.
- Kirkham, N., & Letheby, C. (2022). Psychedelics and environmental virtues. *Philosophical Psychology*, 1–25 (ahead-of-print).
- Kornfield, J. (1979). Intensive insight meditation: A phenomenological study. *The Journal of Transpersonal Psychology*, 11(1), 41.
- Lindahl, J. R., Fisher, N. E., Cooper, D. J., Rosen, R. K., & Britton, W. B. (2017). The varieties of contemplative experience: A mixed-methods study of meditation-related challenges in western Buddhists. *PLoS One*, 12(5). <https://doi.org/10.1371/journal.pone.0176239>.
- Lutkajtis, A. (2020). Lost saints: Desacralization, spiritual abuse and magic mushrooms. *Fieldwork in Religion*, 14(2), 118–139. <https://doi.org/10.1558/frn.40554>.
- Lutkajtis, A. (2021). Four individuals' experiences during and following a psilocybin truffle retreat in The Netherlands. *Journal of Psychedelic Studies*, 5(1), 22–32. <https://doi.org/10.1556/2054.2021.00162>.
- Lutkajtis, A. (2022). Ministry of the mushroom: Psilocybin churches, psychedelic experience and sacred sensemaking. *International Journal for the Study of New Religions*, 11(2), 179–202.
- Lyons, T., & Carhart-Harris, R. L. (2018). Increased nature relatedness and decreased authoritarian political views after psilocybin for treatment-resistant depression. *Journal of Psychopharmacology*, 32(7), 811–819. <https://doi.org/10.1177/0269881117748902>.
- Madsen, M. K., Fisher, P. M., Stenbæk, D. S., et al. (2020). A single psilocybin dose is associated with long-term increased mindfulness, preceded by a proportional change in neocortical 5-HT_{2A} receptor binding. *European Neuropsychopharmacology*, 33, 71–80.
- Minichiello, V., Aroni, R., & Hays, T. (2008). *In-depth interviewing* (3rd ed.). Melbourne, VIC: Pearson Education Australia.
- Moreno, F. A., Wiegand, C. B., Taitano, E. K., et al. (2006). Safety, tolerability, and efficacy of psilocybin in 9 patients with obsessive-compulsive disorder. *Journal of Clinical Psychiatry*, 67, 1735–1740.
- Müller, F., Kraus, E., Holze, F., et al. (2022). Flashback phenomena after administration of LSD and psilocybin in controlled studies with healthy participants. *Psychopharmacology*, 239, 1933–1943. <https://doi.org/10.1007/s00213-022-06066-z>.
- Ona, G., Kohek, M., & Bouso, J. C. (2022). The illusion of knowledge in the emerging field of psychedelic research. *New Ideas in Psychology*, 67. <https://doi.org/10.1016/j.newideapsych.2022.100967>.
- Pilecki, B., Luoma, J. B., Bathje, G. J., et al. (2021). Ethical and legal issues in psychedelic harm reduction and integration therapy. *Harm Reduction Journal*, 18(40). <https://doi.org/10.1186/s12954-021-00489-1>.
- Plato, & Bloom, A. (1968). *The republic*. New York, NY: Basic Books.
- Pollan, M. (2019). *How to change your mind*. New York, NY: Penguin Books.
- Read, T., & Papaspyrou, M. (Eds.), (2021). *Psychedelics and psychotherapy: The healing potential of expanded states*. Rochester, VT: Park Street Press.
- Ross, S., Bossis, A., Guss, J., et al. (2016). Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: A randomized controlled trial. *Journal of Psychopharmacology*, 30(12), 1165–1180.
- Saeger, H. N., & Olson, D. E. (2021). Psychedelic-inspired approaches for treating neurodegenerative disorders. *Journal of Neurochemistry*, 162(1), 109–127.
- Schlag, A. K., Aday, J., Salam, I., Neill, J. C., & Nutt, D. J. (2022). Adverse effects of psychedelics: From anecdotes and misinformation to systematic science. *Journal of Psychopharmacology*, 36(3), 258–272. <https://doi.org/10.1177/02698811211069100>.
- Schultes, R. E., Hofmann, A., & Rätsch, C. (2001). *Plants of the gods: Their sacred, healing, and hallucinogenic powers*. Rochester, VT: Healing Arts Press.
- Sessa, B. (2012). *The psychedelic renaissance*. London, UK: Muswell Hill Press.
- Spriggs, M. J., Kettner, H., & Carhart-Harris, R. L. (2020). Positive effects of psychedelics on depression and wellbeing scores in individuals reporting an eating disorder. *Eating and Weight Disorders*, 26(4), 1265–1270.
- Szmulewicz, A. G., Valerio, M. P., & Smith, J. M. (2015). Switch to mania after ayahuasca consumption in a man with bipolar disorder: A case report. *International Journal of Bipolar Disorders*, 3(4). <https://doi.org/10.1186/s40345-014-0020-y>.
- Teixeira, P. J., Johnson, M. W., Timmermann, C., et al. (2022). Psychedelics and health behaviour change. *Journal of Psychopharmacology*, 36(1), 12–19.
- Timmermann, C., Kettner, H., Letheby, C., Roseman, L., Rosas, F. E., & Carhart-Harris, R. L. (2021). Psychedelics alter metaphysical beliefs. *Scientific Reports*, 11. <https://doi.org/10.1038/s41598-021-01209-2>.
- Watts, R. (2022). *Can magic mushrooms unlock depression? What I've learned in the five years since my TEDx talk*. Medium. 1 March 2022. <https://medium.com/@DrRosalindWatts/can-magic-mushrooms-unlock-depression-what-ive-learned-in-the-5-years-since-my-tedx-talk-767c83963134> [Accessed 28 August 2022].
- Welwood, J. (1984). Principles of inner work: Psychological and spiritual. *The Journal of Transpersonal Psychology*, 16(1), 63–73.
- Wesson, D. R., & Smith, D. E. (1976). An analysis of psychedelic drug flashbacks. *The American Journal of Drug and Alcohol Abuse*, 3(3), 425–438. <https://doi.org/10.3109/00952997609014284>.

