Chapter 11
Ayahuasca as a Healing Tool Along the Continuum of Recovery from Eating Disorders

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Eating disorders (EDs), including anorexia nervosa and bulimia nervosa, are serious mental health disorders that involve disturbances in both eating behavior and perception of body image (American Psychiatric Association 2013). They are associated with a wide spectrum of symptoms and associated conditions that can have a devastating impact on physical, psychological, and social well-being (Löwe et al. 2001). For example, EDs are associated with a range of serious health problems including dermatological, gastrointestinal, cardiovascular, and endocrine issues (Mehler et al. 2010). They are notoriously comorbid with disorders of anxiety, depression, and substance use (Blinder et al. 2006) and can significantly and negatively impact meaningful interpersonal relationships as well (Hartmann et al. 2010). Moreover, EDs have high rates of morbidity and premature mortality (Arcelus et al. 2011) and are among the most challenging psychiatric illnesses to treat. Current treatment approaches for adults offer limited success with elevated dropout and relapse rates (Fassino et al. 2009; Waller 2016). For these reasons, new treatments must be explored.

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Ayahuasca has been used for centuries by indigenous Amazonian peoples in folk healing and spiritual contexts (Stephan 2010). Ayahuasca drinking has been gaining popularity worldwide over the past few decades for purposes including spiritual, therapeutic, and spiritual growth (Fotiou 2016; Labate et al. 2016; Tupper 2008). A growing body of research has pointed to the potential for ayahuasca to assist individuals in the improvement of mental health issues, such as problematic substance use and depression (dos Santos et al. 2016; Loizaga-Velder and Verres 2014; Osório et al. 2015; Thomas et al. 2013). More recently, the potential for ayahuasca to offer healing to individuals along the continuum of recovery from an ED has begun to be explored (Lafrance et al. 2017; Renelli et al. 2018, 2020). This chapter will review and deepen these investigations on the basis of retroactive qualitative studies exploring perceptions of the outcomes associated with ritual ayahuasca use among individuals with a history of a diagnosed ED. New themes and quotes will be presented for illustrative purposes. Data from a subset of participants who engaged in conventional ED treatment in North America and ceremonial ayahuasca use in both underground circles and ayahuasca retreats in South America will also be discussed. Finally, perceived and experienced risks and challenges associated with ceremonial ayahuasca use will be described.

Method

Participants The total sample consisted of 14 women and two men with a mean age of 34 years (range 21–55). In terms of diagnosis, ten of the participants reported suffering from anorexia nervosa and six from bulimia nervosa. Thirteen of the 16 participants had at some point engaged in conventional ED treatment in inpatient, day hospital, and outpatient settings with various psychotherapeutic approaches (Renelli et al. 2020). A history of trauma was shared by 14 participants, and these experiences were related to emotional, physical, or sexual abuse, or learning of the violent death of a loved one ($n = 4$). Frequency of participation in ceremonial ayahuasca use ranged from 1 to 30 times. Prior to their experiences with ayahuasca, six of the participants were psychedelic naïve, and ten participants reported previous experience with the following substances: psilocybin ($n = 9$), lysergic acid diethylamide (LSD: $n = 5$), methylenedioxymethamphetamine (MDMA: $n = 3$), salvia ($n = 2$), phencyclidine ($n = 1$), mescaline ($n = 1$), and N, N-dimethyltryptamine (DMT: $n = 1$).

Interview Procedure and Analysis Interviews were conducted via telephone, recorded and transcribed, and were 75–180 min in length. Questions covered a broad range of topics. Using the methodology of thematic analysis (Braun and Clarke 2006), the interviews were analyzed by at least two separate raters, and common themes were identified. A theme was identified as major when 50% or more of the sample endorsed the theme. Themes were rated as minor when they did not meet the 50% threshold but were considered of theoretical or clinical importance.

Qualitative descriptive analysis (Sandelowski 2000) was utilized for the analysis of perceived challenges and risks of ceremonial ayahuasca. This method was used to capture all perspectives relating to real and potential risks as well as any hypothetical concerns and actual challenges experienced firsthand by participants.

Results

In terms of outcomes, all but one participant reported that the ayahuasca-induced experiences contributed to a greater sense of well-being and were beneficial to them with respect to ED thoughts and symptoms. Most participants perceived benefits in an integral way, which we have conceptualized using a biopsychosocial-spiritual framework (Renelli et al. 2018). Specifically, the major themes reported related to positive shifts that were psychological, physical or body-oriented, relational, or spiritual in nature. Table 11.1 includes an overview of each of these themes in order of frequency in reporting along with new quotes for illustration purposes.

As Table 11.1 suggests, participants reported therapeutic outcomes that were related to several key themes, including psychological changes, body perception and physical sensations and effects, relational effects and experiences, and spiritual or transpersonal effects and experiences. The psychological changes ranged from emotion processing and increased self-love or self-acceptance to feeling that ayahuasca helped address the root cause of the ED or predisposing underlying trauma. A number of subjects also reported reduced symptoms of other co-occurring mental health issues, including anxiety, depression, suicidality, and problematic substance use. Bodily perceptions or physical sensations that were noted include insights into purging as a symptom of ED (vs. purging in ceremony as an acute effect of drinking ayahuasca), improved relationship with the body, with food and eating, and overall better physical health, including weight regulation. Relational effects included improved relationships with family or loved ones and intergenerational or relationship insights from the ayahuasca experience. Spiritual or transpersonal experiences included greater awareness of spiritual connections and, in some cases, a deepening of spiritual or religious practices.

One particularly interesting finding that perhaps makes sense of these positive outcomes was reflected in a theme relating to participants' newfound sense of self-efficacy with respect to their own healing. Several participants ($n = 7$) reported that their ayahuasca experiences facilitated the activation of inner psychological resources and instilled within them a belief in their innate capacity to heal. Many spoke of discovering and mobilizing these internal resources to heal psychologically, physically, relationally, and spiritually. They also spoke of an ability to maintain a greater sense of health and wellness in these domains post-ayahuasca. This recognition and belief in one's ability to heal is expressed by participant 2:

> Just using myself as a resource and to know that I really do possess everything I do need to treat and to manage whatever it is that I'm dealing with. More specifically, she [ayahuasca] gave me a reference point, an idea of where to go during my own meditation sessions to

Table 11.1 Overview of themes related to outcomes

Theme	Subtheme	Quote	Participant endorsement (%)
Psychological changes	Improved ability to respond to and process emotion	I choose [my emotions], they don't choose me. Sometimes I choose anger, sometimes I choose disappointment, and sometimes I even choose sadness.	87.5
		My emotional awareness is heightened and with that I feel that I can sit with my emotions longer without them taking over.	
	Validated or changed personal theory of the ED	The eating disorder was a form of self-care, although it was not an optimal form of self-care. It was a way of trying to manage the trauma.	81.3
		I felt a very deep sense of meaning, like [the ED] just really made sense to me, and that was something I had been searching for a really long time. I began to make meaning of it, and it was just a deep felt "I get it now." That in itself was very helpful for me.	
	Developed more self-love, self-acceptance, self-esteem, self-forgiveness, and self-compassion	I felt like I needed to have acceptance for myself and having love for myself… I learned that once I could learn to fully love myself unconditionally, I wouldn't need the eating disorder.	81.3
		I seem to think about myself and talk about myself a lot more kindly than I previously did. And I'm a lot gentler [to myself].	
	Decreased or stopped ED symptoms	It was a 100% reduction of any bulimic-related purging	68.8
		I also haven't done any over-exercising whatsoever… that used to be a daily ritual for me. It just doesn't exist.	
		I would say that I've been tempted. It's been a really, really tough year, it's been a really, really hard year… And somehow, I have managed not to engage in eating disorder behavior.	

(continued)

Table 11.1 (continued)

Theme	Subtheme	Quote	Participant endorsement (%)
	Healed root cause of the ED and/or trauma	You know how there's different tiers of vulnerability, like psychological vulnerabilities? And how some people tend towards anxiety, some people tend towards depression, depending on other personality features? But we all have a certain underlying psychological vulnerability. I see that ayahuasca gets at those underlying psychological vulnerabilities, for they could manifest themselves in all different kinds of ways, whether it's an eating disorder, whether it's anxiety, or other things.	62.5
		What I noted from the group therapy, the ayahuasca experiences were, they said, ayahuasca seems to tackle the trauma, it focuses in on trauma.	
	Reduced anxiety, depression/self-harm, suicidality	I still experience periods of feeling anxiety, but I feel like they don't last as long, whereas before I would spiral downward and get depressed and then start to restrict and start to purge and binge and all of that. I feel like I can notice when my energy is changing, and then I am more able to be with it and sort of resist it and then it moves after.	56.3
		Since ayahuasca, I don't even imagine being dead. I mean I know it's going to happen, but I don't want to die. I want to live.	

(continued)

Table 11.1 (continued)

Theme	Subtheme	Quote	Participant endorsement (%)
	Reduced cravings and/or use of psychoactive substances	I don't do any pharmaceuticals at all anymore, and I don't even do alcohol. There have been a few times when I'm like "hmm" and no, not really, don't even really want it.	50.0
		My experience with ayahuasca has very much taught me how to interact with these sacred medicines and how to hold them with such reverence and respect and intention and prayer, and certainly I am not wanting to use any psychedelic substances recreationally even… I definitely would say I don't have any drive to use substances recreationally, and that's been since my relationship with ayahuasca.	
	Increased self-efficacy	I think that's just the biggest thing for me, was that it showed me how I could heal myself in a deeper way and that I could continue doing that in every part, every aspect of my life.	43.8
		So, she made it really clear to me that… she isn't my own innate power to heal, she's just there to help reveal that truth in me. Yeah, so I see it as this potent way to help us become aware not only of our wounding and its origins but also of our inherent ability to heal our inherent wholeness.	
	Increased mindfulness	Just to be. The three key points that I took away from the experience were to stay humble, to stay grateful, and to stay mindful. And these were points that were very well made and are exceptionally good at serving to manage negative mind chatter, which is still present, though the voice has been identified.	37.5
		I think it goes hand in hand with the kind of skills that I've been learning [in the ED program]. It put a big emphasis on being mindful and being in the present and think that kind of is what I got from [an experience I had].	

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Table 11.1 (continued)

Theme	Subtheme	Quote	Participant endorsement (%)
Body perception and physical sensations and effects	Received insight into purging in ceremony in comparison to purging as a symptom of the ED	Vomiting that you engage in while experiencing ayahuasca is vastly different from any self-harming, bulimic behavior. You're very aware during the ayahuasca sessions, exactly what it is you are expelling from the body via vomiting, and it's very clear to you that this is a process in your body that's natural, that purging of the poison is something that needs to take place. Whereas doing so in a bulimic sense is an expression of an unconscious desire to reject something, or at least that's the way it was manifesting for me.	62.5
		I started thinking about the purging during ceremonies like a release and so it was like, well, no wonder, I kind of created my own ritual as release. So, I didn't know what to do with this energy that I was feeling. So, it helped me gain a lot of compassion for myself, and I think it took a lot of the shame away from it… And I think that is huge, especially with bulimia.	
	Improved the relationship with the body	I'm in love with my body. I've never been in love with my body. I've always been too tall, too this, too that, and there is a newfound relationship with my very own body. I look in the mirror, and I'm like "Hmm, I kind of like this."	50.0
		I've certainly learned to validate myself when it comes to my body. I can look in the mirror and look at myself and think that it's okay exactly how it is.	
	Improved the relationship with food and eating	I would tell you that I started working with the medicine in May, and it probably has cleared up since I started working with the medicine. Completely, where food and I are not arguing. You know either dieting or wanting to lose weight and being frustrated with obsessing over what I ate or didn't eat, what I should eat.	50.0

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Table 11.1 (continued)

Theme	Subtheme	Quote	Participant endorsement (%)
		When I am having a bad day, I will notice the tendency to crave foods or notice a tendency to catch myself picking at bad foods like I used to before when I was sick and being cognitively able to be "I'm having a bad day. It makes sense I'm eating this way," because it served a purpose and then being able to stop, whereas before I mistook it as actual hunger.	
	Regulation of weight	I'm doing well. I'm gaining weight. Fifteen pounds since last summer. It's a little hard to accept my body changing, but my health has improved.	31.3
		So, for me, last January, I got the plant telling me again, the intuition I have inside me telling me "Are you ready to go to, to start losing weight? You're going to start to walk. You can take stairs, in the subway, in your office, your work, whatever, you just take stairs. And then, next month, I want you to start taking the first four floors of your building, and then five floors next week… Ok, now I want you to start walking once a week to the office," which is half an hour. And I released 15 pounds.	
	Improved general physical health	I'm becoming healthier. My own cardiologist for the third time since I've come back from [the retreat] he tells me, "What's going on? You're just getting better. And your blood pressure, and this blood test and that ... you're just getting better." And I said, "Well, for the third time, I'm doing ayahuasca, and also mindfulness every day."	18.8
		I've done ten ceremonies since May because it was like my body moves, it's changed, it's physically changed (participant with chronic fatigue).	

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Table 11.1 (continued)

Theme	Subtheme	Quote	Participant endorsement (%)
Relational effects and experiences	Improved relationships with family, children, and/or romantic partners	I definitely have more compassion for myself, for other people, my relationships with my family. They have really improved… I feel like whatever it is that has changed in me has allowed me to be more open with them, forgive, forgiveness. That ability to really genuinely connect and be loving.	62.5
		I guess one of the biggest things is my relationships with people. I don't experience conflict in the same way that I did anymore… I definitely can see now how imperfect relationships are.	
	Experienced intergenerational or relational visions/insights in ceremony	I had an encounter with an ancestor. She showed me the lineage of the maltreatment or abuse, and she sat with me and held circle with me, and she helped me heal.	56.3
		In one of my visions I held myself as a child at the age of three. I just held hands with her for the entire ceremony, and so for some reason that vision or that picture sticks with me when I think about myself and when I think about when I shame myself, and it just kind of keeps me in check a little bit.	
Spiritual and/or transpersonal effects and experiences	Received awareness of spiritual/transpersonal connections	I think that it helped me look at the world and at the Earth and the medicines that were put here as more sacred. I think it has overall confirmed a sense of spirituality that I have in me and an overall sense of sacredness about my body and the life that I have.	93.8
		I didn't really have [religion in my life], I put that all on pause in my mind… It just became not really important, and I didn't have the desire to really connect with that spirituality. And after I would say that it changed my desire. It made me feel more hopeful and it gave me a fresh start.	

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Table 11.1 (continued)

Theme	Subtheme	Quote	Participant endorsement (%)
	Experienced spiritual and/or transpersonal connections in ceremony	I saw like this: it was like mathematical; it was like what some people call the fifth dimension. So intricate, there's all these intricate lines, and there was so much space, so much depth… I felt like there was something beyond what we see with our senses. There's something completely beyond because like it blew my mind. I saw palaces, I saw worlds, and just colors, and it was completely something I could not fully describe. I don't know that I can say it could be possibly scientifically observable.	62.5
		I did have both visions of my body being like the Universe, so really expansive and big and also really, really small as a tiny part of the Cosmos.	
	Transformed spiritual or religious practices	I think it gave me a deeper appreciation for prayer.	56.3
		I had that satisfaction [with religion] before going to ayahuasca, but I guess, after doing ayahuasca in a ceremonial context, there was a greater sense of "this could be so much more," like going to church could be so much more… I go to church every week, like a muscle that I exercise, a spiritual muscle that I exercise. Church, it provides some community and so does the ayahuasca. It's an opportunity for me to put some time aside to commune with God or the creator.	

address specific issues, just to reflect on where I went and what it means to be stripped down to virtually nothing and also to understand the kind of language that I use with myself.

Participant 13 similarly describes: "I think, overall, the medicine confirmed the power of my internal resources and in my self-healing and collective healing abilities in terms of my own journey and my work with others."

Comparison of Ayahuasca with Conventional ED Treatment Interviews from a subset of participants (n = 13) who had a history of participation in both conventional ED treatment and ceremonial ayahuasca drinking were explored for compari-

son purposes. Five central themes were identified that related to the differences participants noted with respect to their experiences with conventional ED treatment and ceremonial ayahuasca use. They noted that, in comparison to conventional ED treatment, their work with ayahuasca (1) allowed for deeper healing, (2) provided a more effective and efficient process of healing, (3) helped process intense emotions and/or memories, (4) facilitated the embodiment of self-love and self-care, and (5) incorporated a spiritual component to healing and recovery (Renelli et al. 2020).

Participants described therapeutic advantages of ayahuasca-assisted treatment in comparison with conventional therapeutic practices for EDs. Some stated that participating in ayahuasca ceremonies allowed them to experience a more integral way of healing. Ayahuasca was considered an experiential form of therapy in contrast to other therapeutic interventions that focused more on addressing cognitive aspects of the psyche and associated behaviors. Participants also expressed that their experiences with ayahuasca were more effective and efficient at targeting their ED symptoms. In some cases, it allowed for therapeutic breakthroughs, where conventional therapeutic approaches had been less successful. Participant 6 stated: "It's by far the most healing experience I've ever had in my life."

Another perceived difference between ayahuasca and conventional ED therapy was that ayahuasca enabled better access to and understanding of profound emotions and memories. One participant, a medical doctor, suggests that ayahuasca works on an experiential level helping to process and work through intense feelings and recollections of the past that may have contributed to the development of the ED:

> I think it adds a dimension that is missing [to the Western model], which is this ability to really experience in a very embodied way all of the implicit material that played a role in leading into the formulation of the eating disorder, the wounding that happened… so I think ayahuasca adds to a large degree what can be added in a slower fashion maybe a less psychedelic fashion, that which somatic therapy could really add to standard Western therapy, which is just slowing down, working in body time, anchoring resource, feeling safe, and feeling the feelings that were buried in real time and giving them their time in acknowledgment. (P7)

Unlike conventional ED treatment, some participants described that ceremonial ayahuasca use led to spiritual experiences that were perceived to be therapeutically important. As participant 12 stated: "It tended to the part of recovery that is usually not included in treatment, like the spiritual recovery." Several participants also cherished the spiritual component of the ayahuasca experience, which they viewed was missing from conventional approaches. This was the case for participant 3: "To embody a connection with whatever you want to call it: God, greater intelligence, whatever word you want to use for it. And therapy could not."

A final theme expressed by the participants related to the cultivation of self-love. For one participant, although conventional ED treatment targeted self-love, it was through her experiences with ayahuasca that this lesson was embodied: "What it really communicated to me was self-love and I'd never, in over a decade, been able to identify something that's as effective as ayahuasca in doing this" (P2).

Challenges and Risks of Ceremonial Ayahuasca

Qualitative descriptive analysis using data from the total sample (n = 16) was utilized for the exploration of the perceived challenges and risks of ceremonial ayahuasca use (Sandelowski 2000). Specifically, whereas, in the previous sections, themes were identified based on frequency with which they were described by interviewees, in the following sections, all perceived challenges and risks identified by the participants, whether speculative, potential, or based on lived experience, are presented. One of the risks previously discussed in Lafrance et al. (2017) related to the preparatory diet. Specifically, two participants described that the food restrictions prior to the ayahuasca ceremony triggered some transitory ED thoughts and behavior patterns. Additional risks and challenges are discussed further.

Psychological Challenges Several participants (n = 10) described feeling challenged by the experience of acute emotional pain during the ayahuasca experience, including moments of what felt like overwhelming sadness, fear, anger, shame, and disgust. One participant likened this phenomenon to the concept of noble suffering, that is, suffering in the service of healing:

> It wasn't pleasant and it wasn't easy. It was kind of really horrid, it was horrible… like giving birth is really painful. It's the same; it's the same thing. Giving birth is very, very painful but… you don't look back at the pain, you're thankful to have done what you've done, and it's very much like that. (P16)

Two participants also described a sense of lingering emotional pain following ceremonial ayahuasca use. A participant described an ayahuasca experience that left her with a feeling of heaviness lasting for more than a month, which she attributed to a lack of therapeutic support offered at the retreat. Also, she cautioned against the use of ayahuasca for those with complex trauma, in particular in the absence of skilled integration or therapeutic support:

> I think the risk is to open up a whole can of worms, and if they have no way to integrate that, then it can be harmful. And people can have intense experiences and misinterpret them and that can be harmful. And that's why the integration is so important. And I also think, for certain people, it might not be the right thing; like, if somebody has a really severe and complex trauma and then they go and drink the medicine and, you know, it comes off, the default network is, you know, no longer there and people having intense experiences all around you and you've got somebody with a nervous system that's already so dysregulated from the trauma, the complex trauma they had, that may not be, that could be really terrifying and maybe not the appropriate thing. (P7)

Integration and Sharing Another challenge commonly reported by participants related to difficulties in sharing their ayahuasca experiences with family, friends, and colleagues (n = 8). Participants reported that, as a result, they often kept these experiences private or secret. Among those who did share with family and friends, they reported to have been met with responses that seemed to discourage further discussion. For some, this resulted in feelings of invalidation, frustration, and disappointment. As one participant stated: "There's a secrecy on my end for some people.

And also, I see the world in a very different way sometimes so, in terms of being able to relate to people, it has made it difficult" (P8).

Restricted Economic and Geographic Access Challenges associated with ceremonial ayahuasca drinking were attributed to the difficulties in the financial and geographic accessibility (n = 7) of ceremonial ayahuasca use. According to the participants interviewed, ceremonies ranged in price from approximately 75 to 350 USD (excluding travel), and participants attended a range of one to 30 ceremonies. Some participants indicated that their lack of financial resources limited their ayahuasca drinking. At the time of the interviews, all participants were living in North America, where ayahuasca is typically regarded as a preparation of a controlled substance (i.e., DMT), making it challenging to access retreats close to home. Participants either had to join underground circles or incur significant travel costs in order to drink ayahuasca legally, which for some included travel to remote areas of the Amazon. One participant believed that had she had been able to attend an ayahuasca retreat of longer duration, she could have recovered more fully from her ED symptoms:

> I feel like it took quite a few ceremonies for me to start digging deeper. I feel like if I could have had more ayahuasca ceremonies in shorter periods of time I wouldn't have struggled so long with my eating disorder. Like if I could have gone away somewhere for like six weeks or two months or something like that and just did a bunch of ayahuasca ceremonies it would've healed my eating disorder completely. (P14)

Legal Risks Under the legal regimes of most countries that are signatories to the 1971 Convention on Psychotropic Substances, a key component of the ayahuasca brew, DMT, is prohibited (Tupper and Labate 2014). This means that people who drink ayahuasca in these countries may be putting themselves at risk of arrest and criminal prosecution. Because of the potential legal risks, some participants (n = 3) expressed concerns about their own and others' involvement with ayahuasca:

> I have to be very careful about what I say and how I say it and who I say it to just to protect, you know because it is a Schedule 1, so I have to be able to protect the person serving the medicine here. You know, that's a bummer because it's just such a beautiful, wonderful, helpful, transformative tool. (P3)

Participants also expressed their disagreement with the legal status of ayahuasca from which they had received important therapeutic benefits, expressing hope that the legal situation might change:

> I think it's confirmed to me how important plant medicines are for the healing process and for healing in the eating disorder process. I hope to one day use ayahuasca in my own work as well as other plant medicines. Giving the political and legal climate that we live in today, I'm hoping that these things will change to allow for better use and integration of these medicines into health and wellness practices. I think it's given me a greater sense of hope. (P10)

Contextual Challenges Lastly, three participants spoke to the potential for serious risks in the event the ceremonial leader or other staff lacked adequate training, expertise, or integrity. As reported in Lafrance et al. (2017), one participant reported significant distress after having experienced inappropriate sexual contact by a support staff at the end of a ceremony. Additionally, a participant with a professional background in harm reduction commented on the risks related to the trust participants must place in the shaman's ability to safely prepare and administer the medicine:

> You don't self-administer it. I don't know how strong it is; I don't know anything about it. So, I want to have a shaman be able to administer it to me safely, but that is all out of my control, and I don't know how they assess that. And I think I did, in some ways, overdose on it that time. Overdose in the sense that I couldn't stand up and it's hard to know what component of that was psychological or what component of that was physical. (P16)

Queries Regarding Addiction Potential A question in the semi-structured interview invited participants to reflect on the addiction potential of ayahuasca. Although two participants described a type of fascination with ayahuasca, and one participant described that, at one point, her seeking of ayahuasca felt compulsive, none of the participants perceived ayahuasca as a substance that could lead to chronic dependent patterns of use nor did they feel concerned about its potential for addiction. Many participants noted that the foul taste was a factor in ayahuasca being an unlikely object of addiction, while others noted that, while many other psychoactive substances seem to numb emotional distress, ayahuasca brings one closer to the core of one's pain. That being said, one participant perceived that the feeling of connection and belonging that exists when people come together for an ayahuasca retreat could be a factor worthy of attention:

> I don't think people can become dependent on or addicted to ayahuasca as a substance. What I do think people can become dependent on is sort of the pseudo-culture of ayahuasca… because it is creating community, and community is something that's totally lacking in our culture; it's part of the pathology of a lot of mental illness that is present in our culture, as we don't have healthy communities. So, all of a sudden you have a community of people who are opening up and doing their healing work and, you know, having social experiences, and I've seen people return to the medicine, I think, for reasons that are more about being in the community than they are about drinking the medicine, but the medicine comes with it, so they do it. (P7)

As a follow-up question, participants were asked whether they would describe themselves as a "drug user" with respect to drinking ayahuasca. None of the participants endorsed this label; instead, 11 perceived ayahuasca as a medicine or form of therapy and not a "drug." Participant 1 likened the use of ayahuasca for the treatment of mental illnesses to the use of pharmaceuticals for the treatment of cancer: "I think it's about as accurate to call somebody who's undergoing chemotherapy a 'drug user'" (P2).

Discussion

Our findings suggest that, for some people along the continuum of ED recovery, ceremonial ayahuasca drinking may be therapeutically valuable. Not only did ceremonial ayahuasca use lead to a reduction of ED thoughts and behaviors, remarkably, a few participants reported experiencing complete resolution of ED symptoms following their ayahuasca experiences. They also reported and highly valued noted improvements across several other domains of psychological well-being; specifically, experiences with ayahuasca helped transform psychological, relational, and spiritual aspects of the self as well, including positive outcomes related to emotion processing and regulation, interpersonal relationships with close others, and spiritual and religious connectedness. The nature of ayahuasca healing can, therefore, be considered integrative and holistic.

Ceremonial ayahuasca use also appears to facilitate an internal process of healing of the various and sometimes disconnected parts of the self (Carhart-Harris et al. 2017). In fact, ayahuasca may act as a catalyst for the innate healing wisdom of the body and psyche to integrate the wounded parts of the self into an embodied whole. These findings are in line with recent investigations of psychedelic substances (e.g., LSD, psilocybin) as adjuncts to psychotherapy in treating certain mental illnesses (Tupper et al. 2015). Specifically, researchers studying MDMA-assisted psychotherapy for the treatment of chronic PTSD describe an "internal healing intelligence" that is defined as an individual's innate capacity to heal emotional wounds and trauma (Mithoefer 2013). The individual's inner healing intelligence, in tandem with the temporary non-ordinary state of consciousness induced by ingesting MDMA, allows for needed for healing and growth. In the same vein, ayahuasca has been described as a tool used to access internal healing resources of the self (Shanon 2002).

These findings are particularly compelling given that our sample included several individuals who had previously participated in conventional ED treatment programs in North America and who continued to struggle in their ED recovery. In fact, those participants with experience with both healing contexts claimed that their ayahuasca experiences were more significant for their healing process overall. Although many strengths were noted with respect to their experiences in the healthcare system, conventional treatment was perceived as lacking in integration in its focus, with too strong an emphasis on behavioral markers of ED recovery. Participants also spoke to experiencing more effective, efficient, and deeper healing experiences under the effects of ayahuasca. This was perhaps most evident when considering the findings relating to the healing of trauma. Historical trauma can be a risk factor for the development of an ED (Brewerton 2007). The majority of participants in our study experienced one or more significant episodes of trauma in the years prior to ED onset. Following their ayahuasca experiences, participants not only conceptualized historical trauma as being a root factor in the development and maintenance of their ED, they also expressed improved abilities to tolerate, regulate, and process challenging memories and emotions as a result of ayahuasca

drinking. As such, it is possible that increased emotional regulation moderated participants' abilities to revisit and process root traumas. We also hypothesize that the temporary non-ordinary states of consciousness while under the effects of ayahuasca assisted participants in overriding psychological defense mechanisms that may have prevented access to this material in conventional ED treatment contexts, no matter the proficiency or expertise of the supporting clinician. As a result of the processing of root trauma and associated emotions, it is possible that individuals no longer had the same level of need for emotional regulation and avoidance strategies in the form of ED symptoms.

Given that etiological and maintenance factors of EDs are a complex interplay of biological, psychological, and social variables, our results suggest that recovery from an ED may be better achieved by an integrative treatment approach that focuses on a biopsychosocial-spiritual perspective. Our results also suggest that there may be therapeutic value for conventional treatment programs to integrate alternative healing modalities, including ceremonial ayahuasca use. Likewise, half of the participants recommended that ceremonial ayahuasca drinking for EDs should also be complemented with aspects of conventional ED treatment approaches, and, in particular, the focus on re-nourishment and psychotherapy support for integration, in order to facilitate a more comprehensive healing process. As such, we firmly believe in the bridging of conventional treatment methods (e.g., re-nourishment, psychotherapeutic support) with ceremonial ayahuasca use in order to capitalize on the strengths associated with each of the modalities in order to optimize the healing experiences of individuals with EDs.

In summary, ayahuasca appears to facilitate an integrative approach to healing an ED that encompasses simultaneous and integrative changes within the whole person: the physical, psychological, social, and spiritual. Moreover, ayahuasca may engage the innate healing resources of the self, promoting the embodiment of the healthy self. As EDs are notoriously difficult to treat, the positive outcomes expressed by our participants point to a need for the continued exploration and future development of progressive and integrative treatment approaches.

Challenges and Risks of Ayahuasca Drinking

Although the preliminary findings of this study show promise for the use of ceremonial ayahuasca along the continuum of healing from an ED, it is important to delineate the challenges and risks associated with ayahuasca drinking as well. A recent study found that disordered eating is equally prevalent across levels of income (Mulders-Jones et al. 2017). As some participants indicated that personal finances restricted their ability both to travel as well as participate in the number of ayahuasca ceremonies they would have liked, individuals of lower socioeconomic status (SES) are likely to experience barriers to accessibility. This suggests that individuals of lower SES may not have equitable opportunity to potentially benefit from this therapeutic modality.

In this study, some participants also described feeling intense and painful emotions during ayahuasca ceremonies. Although participants ultimately felt that they were an important cathartic component of the healing process, it is possible that, in the absence of appropriate therapeutic support, those who are regarded as most psychologically fragile or vulnerable could suffer unnecessarily. For those participants whose experiences were overwhelming or were perceived as threatening to their psychological well-being, this may have been a result of inadequately trained facilitators unable to contain these experiences appropriately or that comprehensive integration support for such deep emotional processes was not always provided. For this reason, at least for participants from communities where ayahuasca drinking is not an integral practice within the culture, we believe that it is important to offer support before and during ayahuasca retreats and establish therapeutic aftercare in order to ensure the psychological well-being of individuals with EDs participating in ayahuasca ceremonies. It may also be important to consider therapeutic support prior to the ayahuasca session to support the setting of intentions and to process possible challenges with the preparatory diet.

In terms of safety, it is well-known that ayahuasca tourism has contributed to the spread of pseudo-shamans who engage in inappropriate and even dangerous and harmful practices (Bauer 2018; Tupper 2009). These may include the admixture of other, sometimes dangerous, plants in the preparation of the ayahuasca brew, inappropriate dosing, and insufficiently trained and unethical practitioners. Some participants acknowledged their fears with respect to their personal safety associated with participating in ceremony with pseudo-shamans. Regrettably, one participant spoke about a traumatic experience in which a ceremonial facilitator made inappropriate sexual advances immediately following an ayahuasca ceremony (Lafrance et al. 2017). This speaks to the importance of not only being aware of the potential risks but also carefully researching the reputation of the retreats, shamans, and ceremonial facilitators. Thankfully, leaders in the field have developed a resource and set of guidelines for the awareness of sexual abuse in ayahuasca settings (Peluso et al. 2020).

Similarly, we believe that individuals with ED must obtain medical clearance from their primary physician in order to identify possible contraindications, such as electrolyte imbalance, cardiac arrhythmias, low blood pressure, gastrointestinal lesions, contraindicated medications, etc., in order to ensure that their body can handle the potential physiological stress sometimes associated with ceremonial ayahuasca drinking. In those instances where the individual is deemed too medically fragile for travel or for participation in an ayahuasca retreat, we are beginning to explore the potential for healing by proxy, where close others, such as parents or spouses, engage in ceremonial ayahuasca drinking with the intention of learning how best to support their loved one.

Study Limitations

The findings of this study should be regarded in the context of several limitations. Our study is not ethnically or gender diverse, mainly represented by Caucasian, North American women. A broader sample including a larger male population and a more ethnically diverse group of individuals could yield different perspectives. Also, given that the participants were a self-selected sample, it is possible that those who did not choose to participate may have experienced neutral or less than favorable outcomes related to their experiences with ceremonial ayahuasca. Furthermore, it is in the nature of our sampling procedure that we cannot definitively determine the generalizability of our findings to all individuals with an ED, as individuals who actively sought out ayahuasca were not compared to those that did not. With respect to the comparisons made between ayahuasca drinking and conventional treatment, it is also possible that participants' previous experiences with ED interventions may have initiated or deepened the process of healing experienced in the context of ceremonial ayahuasca and, therefore, colored these findings. Furthermore, while all participants reported ceremonial ayahuasca use, there can be great variability in practices across different communities and retreat centers, and therefore, it is possible that the data collected reflect different contexts of ayahuasca drinking. Future research should also explore further the perceived impact of the various ceremonial practices such as icaros (e.g., type, language, and method of delivery), rituals (e.g., the use of tobacco and perfumes), the number of practitioners in ceremony, etc. Despite these limitations, this exploratory study may provide hope for individuals struggling with an ED, especially if conventional methods have been less effective and opens a new line of scientific research into the therapeutic potential of ayahuasca.

Additional Considerations for Future Research

Studying the potential safety and efficacy of any new medical technology for eating disorders, including plant medicines, brings forth a number of philosophical issues to consider. This is especially relevant in the context of ayahuasca, given its deep cultural roots, and where plant can be separated from spirit, depending on the methodology used. As such, depending on one's field of study and conceptualization of illness, we first urge scientists to engage in a process of self-exploration to uncover potential biases and perhaps broaden their lens of inquiry.

There also continues to be stigma associated with the exploration of psychedelic substances within the field of mental health, and the subfield of eating disorders is not immune. The degree to which researchers internalize this stigma may therefore influence how they focus their efforts, which raises additional questions: Should early-career scientists potentially risk their reputation by publicly exploring this uncharted and sometimes controversial territory? Or should their mid- or late-career

colleagues leverage their experience and perhaps even their status in order to clear the path forward?

When prospective studies are in development, it will also be important to ensure a robust process of screening and consent, especially given the consciousness-altering effects of ayahuasca. People struggling with eating disorders can be quite vulnerable, and those who have been struggling for years may feel desperate for relief. Therefore, it is possible that some individuals will be unable to weigh the risks and benefits of participation without additional support from family members, existing clinical supports, and the research team. Finally, until these studies are in progress and safety parameters have been more fully determined, we believe it is important to caution those suffering from an eating disorder about seeking out ayahuasca experiences on their own. Our research findings suggest that, though there are ceremonial ayahuasca settings conducive to healing from an eating disorder, the unique nutritional, emotional, and medical needs of many individuals may be overlooked or insufficiently addressed due to a lack of understanding on the part of the community or retreat staff.

References

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author.

Arcelus, J., Mitchell, A. J., Wales, J., & Nielsen, S. (2011). Mortality rates in patients with anorexia nervosa and other eating disorders: A meta-analysis of 36 studies. *Archives of General Psychiatry, 68*(7), 724–731.

Bauer, I. L. (2018). Ayahuasca: A risk for travelers? *Travel Medicine and Infectious Disease, 21*, 74–76. https://doi.org/10.1016/j.tmaid.2018.01.002.

Blinder, B. J., Cumella, E. J., & Sanathara, V. A. (2006). Psychiatric comorbidities of female inpatients with eating disorders. *Psychosomatic Medicine, 68*(3), 454–462.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa.

Brewerton, T. D. (2007). Eating disorders, trauma, and comorbidity: Focus on PTSD. *Eating Disorders, 15*(4), 285–304.

Carhart-Harris, R. L., Erritzoe, D., Haijen, E., Kaelen, M., & Watts, R. (2017). Psychedelics and connectedness. *Psychopharmacology, 235*(2), 547–550. https://doi.org/10.1007/s00213-017-4701-y.

dos Santos, R. G., Osório, F. L., Crippa, J. A. S., Riba, J., Zuardi, A. W., & Hallak, J. E. (2016). Antidepressive, anxiolytic, and antiaddictive effects of ayahuasca, psilocybin and lysergic acid diethylamide (LSD): A systematic review of clinical trials published in the last 25 years. *Therapeutic Advances in Psychopharmacology, 6*(3), 193–213.

Fassino, S., Pierò, A., Tomba, E., & Abbate-Daga, G. (2009). Factors associated with dropout from treatment for eating disorders: A comprehensive literature review. *BMC Psychiatry, 9*(1), 67.

Fotiou, E. (2016). The globalization of ayahuasca shamanism and the erasure of indigenous shamanism. *Anthropology of Consciousness, 27*(2), 151–179.

Hartmann, A., Zeeck, A., & Barrett, M. S. (2010). Interpersonal problems in eating disorders. *International Journal of Eating Disorders, 43*(7), 619–627.

Labate, B. C., Cavnar, C., & Gearin, A. K. (Eds.). (2016). *The world ayahuasca diaspora: Reinventions and controversies*. Abingdon: Routledge.

Lafrance, A., Loizaga-Velder, A., Fletcher, J., Files, N., Renelli, M., & Tupper, K. (2017). Nourishing the spirit: Exploratory research on ayahuasca experiences along the continuum of recovery from eating disorders. *Journal of Psychoactive Drugs, 49*(5), 427–435. https://doi.org/10.1080/02791072.2017.1361559.

Loizaga-Velder, A., & Verres, R. (2014). Therapeutic effects of ritual ayahuasca use in the treatment of substance dependence – Qualitative results. *Journal of Psychoactive Drugs, 46*(1), 63–72.

Löwe, B., Zipfel, S., Buchholz, C., Dupont, Y., Reas, D. L., & Herzog, W. (2001). Long-term outcome of anorexia nervosa in a prospective 21-year follow-up study. *Psychological Medicine, 31*(5), 881–890.

Mehler, P. S., Birmingham, L. C., Crow, S. J., & Jahraus, J. P. (2010). Medical complications of eating disorders. In C. M. Grilo & J. E. Mitchell (Eds.), *The treatment of eating disorders: A clinical handbook* (pp. 66–80). New York: Guilford Press.

Mithoefer, M. C. (2013). *A manual for MDMA-assisted psychotherapy in the treatment of posttraumatic stress disorder*. Santa Cruz: Multidisciplinary Association for Psychedelic Studies.

Mulders-Jones, B., Mitchison, D., Girosi, F., & Hay, P. (2017). Socioeconomic correlates of eating disorder symptoms in an Australian population-based sample. *PLoS One, 12*(1), e0170603.

Osório, F. L., Sanches, R. F., Macedo, L. R., Santos, R. G., Maia-de-Oliveira, J. P., Wichert-Ana, L., Araujo, D. B., Riba, J., Crippa, J. A., & Hallak, J. E. (2015). Antidepressant effects of a single dose of ayahuasca in patients with recurrent depression: A preliminary report. *Revista Brasileira de Psiquiatria, 37*(1), 13–20.

Peluso, D., Sinclair, E., Labate, B. C., & Cavnar, C. (2020). Reflections on crafting an ayahuasca community guide for the awareness of sexual abuse. *Journal of Psychedelic Studies, 4*(1), 24–33.

Renelli, M., Fletcher, J., Loizaga-Velder, A., Files, N., Tupper, K., & Lafrance, A. (2018). Ayahuasca and the healing of eating disorders. In H. L. McBride & J. L. Kwee (Eds.), *Embodiment and eating disorders* (pp. 214–230). Abingdon: Routledge.

Renelli, M., Fletcher, J., Tupper, K. W., Files, N., Loizaga-Velder, A., & Lafrance, A. (2020). An exploratory study of experiences with conventional eating disorder treatment and ceremonial ayahuasca for the healing of eating disorders. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity, 25*(2), 437–444.

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing and Health, 23*(4), 334–340.

Shanon, B. (2002). *The antipodes of the mind: Charting the phenomenology of the ayahuasca experience*. New York: Oxford University Press.

Stephan, V. (2010). Singing to the plants: A guide to mestizo shamanism in the upper Amazon. UNM Press.

Thomas, G., Lucas, P., Capler, N. R., Tupper, K. W., & Martin, G. (2013). Ayahuasca-assisted therapy for addiction: Results from a preliminary observational study in Canada. *Current Drug Abuse Reviews, 6*(1), 30–42.

Tupper, K. W. (2008). The globalization of ayahuasca: Harm reduction or benefit maximization? *International Journal of Drug Policy, 9*(4), 297–303.

Tupper, K. W. (2009). Ayahuasca healing beyond the Amazon: The globalization of a traditional indigenous entheogenic practice. *Global Networks, 9*(1), 117–136.

Tupper, K. W., & Labate, B. C. (2014). Ayahuasca, psychedelic studies and health sciences: The politics of knowledge and inquiry into an Amazonian plant brew. *Current Drug Abuse Reviews, 7*(2), 71–80.

Tupper, K. W., Wood, E., Yensen, R., & Johnson, M. W. (2015). Psychedelic medicine: A re-emerging therapeutic paradigm. *Canadian Medical Association Journal, 187*(14), 1054–1059.

Waller, G. (2016). *Recent advances in psychological therapies for eating disorders*. F1000Research, 5, F1000 Faculty Rev-702. https://doi.org/10.12688/f1000research.7618.1.