

The psychedelic renaissance and the limitations of a White-dominant medical framework: A call for indigenous and ethnic minority inclusion

JAMILAH R. GEORGE^{1,2*}, TIMOTHY I. MICHAELS², JAE SEVELIUS³ and MONNICA T. WILLIAMS^{2,4}

¹Department of Psychiatry, Yale University, New Haven, CT, USA

²Department of Psychological Sciences, University of Connecticut, Storrs, CT, USA

³Department of Medicine, University of California, San Francisco, CA, USA

⁴School of Psychology, University of Ottawa, Ottawa, ON, Canada

(Received: September 5, 2018; accepted: May 26, 2019)

In recent years, the study of psychedelic science has resurfaced as scientists and therapists are again exploring its potential to treat an array of psychiatric conditions, such as depression, post-traumatic stress disorder, and addiction. The scientific progress and clinical promise of this movement owes much of its success to the history of indigenous healing practices; yet the work of indigenous people, ethnic and racial minorities, women, and other disenfranchised groups is often not supported or highlighted in the mainstream narrative of psychedelic medicine. This review addresses this issue directly: first, by highlighting the traditional role of psychedelic plants and briefly summarizing the history of psychedelic medicine; second, through exploring the historical and sociocultural factors that have contributed to unequal research participation and treatment, thereby limiting the opportunities for minorities who ought to be acknowledged for their contributions. Finally, this review provides recommendations for broadening the Western medical framework of healing to include a cultural focus and additional considerations for an inclusive approach to treatment development and dissemination for future studies.

Keywords: psychedelics, indigenous medicine, minorities, psychiatry, cultural humility

INTRODUCTION

“We can’t start history of psychedelics in the ‘60s in the Americas; that needs to stop. We [indigenous people] used this medicine before Jesus Christ walked this Earth.”

– Lisa M. Macias Red Bear, *Injustice, Intersectional Trauma, and Psychedelics*, 2017

Psychedelics as medicine

Those unfamiliar with the history of indigenous or traditional healing practices may falsely assume that psychedelic science began during the 20th century when Swiss chemist Albert Hofmann synthesized lysergic acid diethylamide (LSD). Hofmann’s work with LSD and advocacy for its psychotherapeutic ability made him popular and admirable within the psychedelic community (Hart & Ksir, 2012). Although Hofmann and others certainly deserve credit for their contributions to psychedelic science, this narrative fails to account for the histories, traditions, and ritualistic practices of indigenous people whose contributions and expertise often go unnoticed and unrewarded in Western medicine. In this article, our use of the term “indigenous” will be used to refer specifically to members of ethnic groups who are original settlers of or native to a particular country or region, as opposed to more recently settled groups who may have colonized the area.

Colonization disconnected indigenous people from their communities, land, narratives, and their medicinal and

religious practices (Carocci, 2009). Before the Europeans’ arrival, indigenous people in the Americas maintained their own holistic system of care consisting of spiritual practices, plant-based medicines, and community involvement (Sessa, 2016; Taylor, 1971). It is a testament to the strength of these communities that, despite the unspeakable injustices during colonization, many original traditions remain relatively well-preserved. Owing much to this tradition, although frequently not acknowledging such roots, modern medicine has embraced the potential of psychedelic substances for the treatment of psychological disorders. This has included the administration of a range of substances, including LSD, psilocybin, ayahuasca, methylenedioxymethamphetamine (MDMA), and ibogaine, in conjunction with psychotherapy for the treatment of depression, anxiety, addiction, and post-traumatic stress disorder (PTSD; Goldsmith, 2007; Mithoefer, Grob, & Brewerton, 2016; Winkelman, 2014a). The scientific progress and clinical promise of the modern psychedelic medicine movement owes much of its success to the history of indigenous healing practices.

While some Western researchers acknowledge the cultural origins of psychedelic medicine and some effort has been made to involve members of indigenous communities in the design and development of clinical trials, few people

* Corresponding author: Jamilah R. George; Department of Psychological Sciences, University of Connecticut, 409 Babbidge Road, Unit 1020 Storrs, CT 06269, USA; Phone: +1 313 467 6365; Fax: +1 860 486 3515; E-mail: Jamilah.george@uconn.edu

of color have benefited from participation in such research (Michaels, Purdon, Collins, & Williams, 2018). While the White-dominant culture borrows from the cultural practices and ceremonial expression of often marginalized and disenfranchised indigenous groups, members of these groups end up alienated from the practices informed by their own cultural traditions (Wallace, 1992) and in this case, the medical benefits therein. Unless the predominantly White Western mainstream field of psychedelic medicine recognizes its role in cultural appropriation (Herzberg & Butler, 2019), the perpetuation of systemic inequities, and the limitations of current treatment protocols for ethnic minority populations, it is poised to not only repeat the mistakes of the past, but is also at risk of severely limiting the dissemination of this novel treatment modality.

Overview

We provide an overview of the traditional role of psychedelic plants in indigenous spiritual practices and mental wellness, followed by a brief overview of the history of psychedelic medicine. Next, we explore the cultural issues that inhibit the development of psychedelic medicine in the Western society and the social forces that contribute to unequal research participation and treatment. We then highlight current inequities in the field, with a specific focus on unequal access to psychedelic treatment, the lack of diversity among psychedelic researchers, and the value of a cross-cultural approach to understanding psychopathology. Finally, we address these disparities and provide additional recommendations and considerations for future directions, including a community-based participatory research model.

TRADITIONAL INDIGENOUS HEALING PRACTICES

Indigenous healers

Plant-based psychedelics have been integral to the spiritual practices of indigenous communities across the world. The use of psychoactive plants can be traced to religious rituals of African (e.g., Bwiti), South American (e.g., Amazon), North American (e.g., Aztec), and Central American (e.g., Maya and Inca) indigenous cultures, to name a few. Many of the plants native to Central America, such as peyote and psilocybin, are also indigenous to North America and were similarly used in spiritual practices (Ratsch, 2005). It is important to note that while the focus of this paper relates to mental health disparities in psychedelic medicine in the United States, the indigenous use of psychedelics cannot be mapped on to modern geographic and national boundaries. Rather, its history should be considered tied to a broader community of indigenous practices across North, Central, and South Americas that were ultimately appropriated primarily by Western clinicians and scientists.

Although specific rituals, practices, and beliefs vary considerably across the aforementioned indigenous groups, there are also notable similarities; considered a sacred vehicle, psychedelics were most often administered through the guidance of a knowledgeable spiritual leader and were carefully

passed down across generations. Often, the etiology of physical sickness is considered the result of spiritual, rather than physical forces; therefore, treatment often entails psychoactive rituals that bring humans closer to the spirit world (Schultes, 1976). In this tradition, some modern researchers prefer to describe such medicines as “entheogens” (referring to one becoming inspired, often in a religious or spiritual sense; Godlaski, 2011), rather than using the term “psychedelic,” which is a Western phrase associated with predominantly White experimental drug use (Tupper, 2002). To better understand the role of psychedelics in spiritual healing practices, we describe the traditional use of four plant-based entheogens – ayahuasca, psilocybin-containing mushrooms, peyote, and ibogaine – that are currently being investigated in Western psychedelic science.

Ayahuasca

Ayahuasca is a hallucinogenic brew made from the combination of the *Banisteriopsis caapi* vine and *Psychotria viridis* that has been consumed by indigenous people of the Amazon for several hundred years, long before the arrival of the Europeans to the Americas (Labate & Cavnar, 2013). It is considered a sacrament in the Santo Daime, União do Vegetal, and Barquinha religions (Labate & Cavnar, 2013). When used medicinally, the consumption of ayahuasca aids in the identification of illness, as well as in the extraction of pathogens and the elimination of disease (Winkelman, 2014b). In certain Amazonian tribes, it is also consumed during warfare, for artistic inspiration, during storytelling, and when solving interpersonal conflicts (Riba & Bouso, 2011; Sánchez & Bouso, 2015). During Peruvian ayahuasca ceremonies, spiritual leaders drink the brew, sing songs called *icaros*, wave *chacapas* (leaf fans), and blow smoke from *mapacho* (Peruvian tobacco) in order to create a safe protected space and facilitate the healing process. Both the physical and psychological aspects of the experience play a critical role in allowing participants to enter the spirit world and be guided through the healing process (Sánchez & Bouso, 2015; Winkelman, 2014b).

Psilocybin

Fungi containing the psychoactive compound psilocybin (*teonanacatl* or “food of the gods”) were consumed by the Aztecs for medicinal, religious, and recreational purposes. Aztecs believed psilocybin allowed traditional healers to enter “the world beyond,” bestowing upon them divine knowledge that could be brought back to the community (Barceloux, 2012). For Mazatec shamans, consumption of “magic mushrooms” was essential to become a healer, as these fungi provided the ability to both diagnose and cure disease (Labate & Cavnar, 2013). Similar to ayahuasca, psilocybin ceremonies could also serve other purposes, such as asking for solutions to problems, finding lost objects, or reconnecting with lost loved ones.

Peyote

Peyote refers to the small *Lophophora williamsii* cactus native to Mexico and southwestern Texas that contains the

psychoactive alkaloid mescaline. Indigenous Americans have used peyote in their spiritual and medicinal practices for thousands of years (Halpern, Sherwood, Hudson, Yurgelun-Todd, & Pope, 2005; Tupper, 2002). It is considered a sacrament in the Huichol culture of Central-Western Mexico, and its consumption is legally permitted within the Native American Church in the United States (Tupper, 2002). Peyote can induce deep introspective experiences as well as visual and auditory hallucinations. Often referred to as “the sacred medicine,” peyote’s traditional use varies widely, ranging from curing toothaches and the common cold to rheumatism, diabetes, asthma, and blindness (Lu et al., 2009; Taylor, 1971). Evidence suggests that long before the psychedelic-assisted psychotherapy movement, indigenous communities successfully used peyote for the treatment of substance use disorders (Fickenscher, Novins, & Manson, 2006).

Ibogaine

Ibogaine is an indole alkaloid that is extracted from several naturally occurring plants of the *Tabernanthe* family; its name is derived from the *Tabernanthe iboga* plant native to Western Central Africa (Shulgin & Shulgin, 1997). Ibogaine has been used as a sacred medicine for thousands of years by practitioners of the Bwiti religion in Western Africa (Winkelman, 2014b). Ibogaine is believed to provide a pathway to *gnosis*, a direct mystical experience that provides communion with ancestors and spirits (Stafford, 1993). It can induce a dreamlike state, causing introspection, dissociation, and altered consciousness (Glick, Rossman, Steindorf, Maisonneuve, & Carlson, 1991). Iboga ceremonies (*ngoze*) are held on a weekly basis, can last several days, and involve the entire community. The ceremonies typically include offerings to nature, ritualistic bathing, and other practices reserved for *ngoze*.

BRIEF HISTORY OF PSYCHEDELIC MEDICINE

Overview of psychedelics

The psychedelic science movement has included both the plant-based medicines discussed above, as well as synthetic drugs that exert similar physiological and psychological effects and overlap significantly in their underlying neurobiological mechanisms (Carhart-Harris & Nutt, 2017; Sessa, 2016; Taylor, 1971). Although synthetic psychedelics do not possess the rich history of their organic counterparts, they have played a significant role in the initial (“first phase”) foray into psychedelic medicine and are among the most promising therapeutics under current investigation (“second phase”). Despite some disagreement over which drugs constitute “psychedelics” (Ellens & Roberts, 2015), for the purposes of this paper, psychedelics are defined as organic and synthetic substances that exert their effects predominantly through serotonergic (5-HT) agonism. This definition excludes drugs such as ketamine that acts predominantly on N-methyl-D-aspartate receptors (Krystal et al., 1994), and cannabis that acts predominantly on endocannabinoid receptors (Taylor, 1971).

Although no studies have empirically investigated how psychedelics facilitate the therapeutic process, several theories have been postulated. Early psychodynamic theories suggest that these substances weaken ego boundaries and allow easier access to the unconscious (Grob, 2000). Cognitive behavioral therapy-oriented theories suggest that hallucinogens facilitate emotional engagement during therapy (Mithoefer, Wagner, Mithoefer, Jerome, & Doblin, 2011). Exposure-based treatments require patients to experience high emotionality without overarousal (Foa, Keane, Friedman, & Cohen, 2009); psychedelics may help patients manage their emotional arousal, thereby permitting them to engage in the components necessary for effective change (Mithoefer et al., 2016). Anecdotal reports from patients comparing the experience of typical psychotherapy and psychedelic-assisted therapy emphasize that hallucinogens appear to accelerate emotional processes (Gasser, Kirchner, & Passie, 2015), perhaps facilitating a corrective emotional experience.

Early Western psychedelic research

The first wave of Western psychedelic medical research (approximately 1950–1985) is often viewed nostalgically as a period of great scientific advancement that ended not due to a lack of efficacy but rather due to poor methodological standards, unethical research practices, and political backlash (Ellens & Roberts, 2015; Grob, 2000; Sessa, 2016). When Western psychedelic research began, it was a period in the history of psychiatry in which biomedical therapeutic interventions were limited, as psychopharmacology had not yet become mainstream practice (López-Muñoz et al., 2005). Newly synthesized psychedelics were not considered controlled substances and therefore their clinical and research use was relatively unrestrained. Given that psychoanalysis was a mainstay of treatment, initial research on psychedelic medicine examined whether psychedelic drugs could facilitate the process of psychotherapy, thereby accelerating the treatment process (Johnson, Richards, & Griffiths, 2008).

Over a period of several decades, hundreds of psychedelic-assisted therapy studies were conducted that examined the effects of mescaline, LSD, psilocybin, MDMA, and other substances in the treatment of depression, anxiety, personality disorders, obsessive–compulsive disorder, addictions, and even sexual dysfunction (Vollenweider & Kometer, 2010). The vast majority of research studies during the first wave had major methodological flaws, including lack of control groups, poorly defined outcomes measures, no follow-up period, and difficulty distinguishing between drug-related versus psychotherapy effects (Strassman, 1991). As recreational psychedelic use increased in the 1960s, media coverage began to focus on the unethical practices that plagued psychedelic research, such as the administration of high doses of LSD to patients who were physically restrained (Smart, Storm, Baker, & Solursh, 1966). The sea change in public opinion resulted in decreased federal funding for research and many drugs were declared Schedule I substances in the United States. While psychedelic research continued in the 1970s and 1980s with the discovery of MDMA, a similar pattern emerged in which recreational use led to legal

restrictions, halting scientific research for several decades (Emerson, Ponté, Jerome, & Doblin, 2014; Goldsmith, 2007; Sessa, 2014).

Second wave

The revitalization of psychedelic science during the second wave (2000–present) has produced numerous studies that have purposefully addressed the concerns that plagued the first wave of psychedelic research. Initial research focused on the pharmacological and perceptual changes induced by psychedelics (Carter et al., 2004; Wittmann et al., 2007) as well as clinical safety, rather than mental health treatment. Clinical researchers established guidelines to address the safe and ethical administration of psychedelics in human participants (Johnson et al., 2008) and many studies utilized an empirical, double-blind, placebo-controlled approach. Current research has placed renewed emphasis on the role of participants' psychological state during treatment (often referred to as “set”) and the effects of the external environment (often referred to as “setting”) on treatment efficacy (Johnson et al., 2008). Current safety guidelines call for therapists to have formal training in psychology and psychotherapy and emphasize the importance of the physical environment where sessions are conducted. Although some studies are still conducted in clinical settings, a conscious effort is made to soften the sterile environment of a hospital setting; sessions are conducted in a relaxing environment with couches, a private bathroom, music, carefully chosen artwork, and pleasing decor and interior design. Overall, new guidelines have greatly improved study safety and therapeutic efficacy, thereby largely avoiding the pitfalls that ended the first wave of research (Johnson et al., 2008).

As noted, recent evidence demonstrates initial safety and efficacy for psychedelic-assisted therapy in the treatment of a range of psychological disorders. Specifically, MDMA has been shown to significantly reduce chronic, treatment-resistant PTSD symptoms when used as an adjunct to therapy (Mithoefer et al., 2011, 2013) and is currently being investigated to treat social anxiety in adults with autism (Danforth et al., 2018; Danforth, Struble, Yazar-Klosinski, & Grob, 2016) as well as anxiety associated with terminal illness (Emerson et al., 2014). Psilocybin-assisted therapy has been demonstrated to decrease symptoms of depression (Carhart-Harris, 2015; Carhart-Harris et al., 2016; Ross et al., 2016) and anxiety (Grob et al., 2011; Moreno, Wiegand, Taitano, & Delgado, 2006) and assist in the treatment of addiction (Bogenschutz et al., 2015; Garcia-Romeu, Griffiths, & Johnson, 2015). Both ibogaine (Brown & Alper, 2017; Noller, Frampton, & Yazar-Klosinski, 2017) and peyote (Fickenscher et al., 2006) are being investigated in the treatment of substance use. Recent research demonstrates the safety and preliminary efficacy of LSD-assisted therapy in the treatment of end-of-life anxiety (Carhart-Harris, 2015), depression (Gasser et al., 2015), and in treating addiction (Winkelman, 2014a). While a great deal of important scientific questions remain, and none of the above substances have received FDA approval, the current practices of psychedelic-assisted psychotherapy set it apart from its troubled past and have increased the likelihood of being able to distinguish potential therapeutic effects.

CULTURAL FORCES THAT HAVE LED TO UNEQUAL ACCESS

“When the perception of the user population is primarily of color, then the response is to demonize and punish. When it’s White, then we search for answers.”

– Marc Mauer, *How White Users Made Heroin a Public-Health Problem*, 2015

Despite the recent advancements of second-wave psychedelic science, it seems that the practitioners from indigenous and ethnic minority groups working within it are often detached from the process. The result is a misrecognition or absence of the voices of indigenous people and people of color which can be a form of imprisonment and oppression (Weaver, 2001). During a panel discussion at the 2017 Psychedelic Science conference in Oakland, California, Native American mental health specialist and community educator, Lisa M. Red Bear, reflected on this, highlighting the legacy of imprisonment and silencing of indigenous people in the United States:

“When indigenous people speak their truth, it’s recontextualized by the White dominant culture and the White dominant voice. That adds to retraumatization . . . [it] renders you, once again, to the place of the margins, of the place of being silent, of the place where your voice isn’t really important” (Sevelius, Williams, Kahn, & Red Bear, 2017)

Appropriation of voice in this way reflects a larger cultural and historical appropriation of traditional healing methodology. Cultural appropriation is primarily concerned with accessing culture and knowledge outside of one’s own, and utilizing it for capital gain without connecting back to those who first produced it (Ziff & Rao, 1997). Red Bear goes on to describe this very phenomenon in psychedelic science:

“When we [White dominant culture] come to you [indigenous people] for information, you better be happy to provide us all your sacred secrets for the almighty dollar . . . all those people who like to go to indigenous communities and gather sacred secrets, and then publish a book revealing those sacred secrets, ‘never seen before, never exposed before’” (Sevelius et al., 2017).

Red Bear is drawing attention to not only the oppressed indigenous people who are deeply wounded, but also to systemic injustices perpetuated by a White-dominant culture, which can be traumatizing (e.g., Williams & Leins, 2016). Since Western psychedelic science functions as an extension of a Western medicalized framework, it reflects all the same limitations and replicates existing power structures (Sevelius, 2017)

Cultural appropriation was prolific in the “hippie counterculture” of the 1950s and 1960s, which adopted many aspects of Black culture, including slang (i.e., the word “hep,” meaning “with it” and “fashionable”; Mailer, 1957). Psychedelic drug use played a central role among hippies, whose cultural revolution was viewed as a commitment to “transforming themselves through drugs, music, travel, and

spiritualities borrowed from other populations" (Saldanha, 2007). This approach not only ignores the roots and contribution of indigenous practices, but also precludes the inclusion of people of color in its ideals and advances the Western value of individualism over the collective good.

Despite hippies' fascination with African American and Native American people, both groups were excluded from the counterculture through the perpetuation of negative stereotypes and the movement's overly simplistic understanding of America's racist history (Lemke-Santangelo, 2010). In fact, the hippie movement itself was at odds with the "exoticism" it idolized, claiming to embrace the spiritualism afforded by psychedelics while simultaneously reifying racial stereotypes and existing power structures (Saldanha, 2007). While "psychedelics" were often demonized in the mainstream media, the hippie movement did not suffer the same consequences as did people of color for recreational drug use. Instead, the "hippie movement" is mistakenly credited as both the origin of psychedelic medicine and more broadly, as being an "innovative" force of social change that significantly altered American values (McClure, 1992). The White hippie narrative records psychedelic drug use for recreation, self-exploration, and transcendental experiential purposes (Davis & Munoz, 1968; McClure, 1992; Saldanha, 2007); however, African Americans have been stamped with the cultural reputation and false stereotype of criminal people believed to sell and abuse drugs (Williams, Gooden, & Davis, 2012).

SOCIAL FORCES THAT HAVE RESULTED IN UNEQUAL ACCESS

"[The] war on drugs has been profoundly painful to our nation with a 500 percent increase in incarceration in our country, disproportionately affecting poor and disproportionately affecting minorities."

– Corey Booker, *Meet the Press*, 2016

The racial discrepancies of the US criminal justice system can be explained by the long-held perpetuation of drug policies from which African Americans suffer much more severely than Whites. Despite the abolishment of American slavery over 150 years ago, the enslavement of Black bodies still exists in the United States under the guise of what legal scholar Alexander (2010) has termed "the New Jim Crow." The term "Jim Crow" refers to the laws that enforced legal separation of Americans by race between 1881 and 1964 (Tischauer, 2012). The New Jim Crow identifies a "new" approach to racial segregation in the 21st century and the perpetual relegation of people of color to second-class status via mass incarceration. Once a person becomes a felon, it is legal to be discriminated against and experience the denial of basic civil and human rights, including voting rights even for a minor drug crime.

African Americans are more likely to be arrested, receive harsher punishment, and face longer sentences than Whites, although they use drugs at roughly the same rate (Forman, 2012). African Americans are also incarcerated across state prisons more than 5 times the rate of Whites and at least 10 times the rate in five states: Iowa, Minnesota, New Jersey,

Vermont, and Wisconsin (Nellis, 2016). In most places in the United States, police are more likely to pull over African Americans than Whites (Alexander, 2010), and African Americans and Hispanics are more likely to be searched, arrested, and experience force used against them more than any other group (Tonry & Melewski, 2008). For reasons like these, people of color generally lack a safe space – a location and/or supportive community that excludes the threat of becoming incarcerated – to explore psychedelic healing. Despite the promising results found in some psychedelic studies, in the United States, law enforcement policies have not been influenced by these findings. As such, people of color and people with low economic status remain the target of these laws, calling for incarceration in the event of possession (Alexander, 2010, pp. 123–124).

Given the wrongful enslavement and imprisonment of African Americans in this way, psychedelic treatments such as MDMA-assisted psychotherapy and psilocybin are often unfathomable concepts for many African Americans and people of color more generally (Williams & Leins, 2016). Furthermore, oppressive social forces against people of color make it arduous for one to find a message of health embedded therein; particularly, when the historical record not only protects, but encourages White Americans in their use of drugs for self-exploration (Davis & Munoz, 1968; McClure, 1992), while failing to protect and simultaneously imprisoning African Americans for making the same attempt (Beckett, Nyrop, & Pflingst, 2006). This lack in protection is evidenced by, not only the disproportionate rates of incarceration, but by the fact that issues for people of color only seem to gain significance once White Americans experience them or are negatively affected by them.

For instance, the United States is currently experiencing an opioid epidemic in which many Americans, mostly White Americans, are becoming addicted and overdosing on the drug in recreational settings (Cohen, 2015). In late 2017, US President Donald Trump declared the opioid epidemic a "national public health emergency" (Merica, 2017). In response to this health crisis, the United States has adopted a slew of tolerant incarceration-avoidant programs for White opioid users; however, such an approach has not been considered to focus on drugs more common in communities of color (Netherland & Hansen, 2017). There were no such efforts to resolve the crack epidemic of the 1980s, which was mostly African American and poor; instead, African American crack users were imprisoned at astonishing rates (Palamar, Davies, Ompad, Cleland, & Weitzman, 2015).

In light of this, despite the growing evidence for the healing properties of psychedelics, there is great stigma surrounding them, making them primarily accessible in particular communities in the United States, namely among Whites (Krebs & Johansen, 2013). Krebs and Johansen (2013) found that participants who reported lifetime use of any psychedelic were more likely to be young, White, single men with somewhat higher income and more education. They go on to show that of the participants who reported having used a psychedelic substance, 20% are White American, whereas only 4% are African American. That being said, Black millennials may have a different perception, given the recent rise in ecstasy and other psychedelic use among African American youth (Rigg, 2017).

Although millennials of color may be more open to recreational psychedelic use, aiming for their participation in psychedelic clinical drug trials may be difficult. History highlights a long-standing record of a corrupt medical system against people of color at the hands of racist and unethical physicians and researchers. This history includes, for example, the long-term Tuskegee Syphilis experiments from 1932 to 1972 in which African American men were conned into a drug trial studying the natural progression of syphilis. Over 400 participants were convinced they were receiving free health care when they were not; in fact, when penicillin was developed as the preferred treatment, they were prevented from receiving it (Brandt, 1978; Freimuth et al., 2001).

In another example from the 1960s and 1970s, African American, Puerto Rican, and Mexican-American women experienced acts of violence via medical sterilization abuse, which continues today (Howle, 2014; Stern, 2005). Southern African American women termed the “Mississippi appendectomy” to reference such sterilization when being admitted to a hospital for a different procedure (Suite, La Bril, Primm, & Harrison-Ross, 2007). Given this unethical treatment, experimentation, and manipulation of people of color for medical trials in the United States, mistrust of the health care system remains a primary barrier to medical treatment (Scharff et al., 2010). Considering the degree to which people of color have been so devastatingly impacted by such medical injustices and enduring generational medical trauma to the body, it is not surprising that they would have serious reservations about participating in science, which involves vulnerable exposure to psychedelic substances, or any medical substance at all for that matter.

The rectification of these painful and traumatic experiences will require a holistic shift in the perception and treatment of people of color such that they are offered a quality of care and accessibility equal to that of their White counterparts. It will also require an acknowledgment of the horrendous treatment experienced by people of color and an attempt at reconciliation, not for the purpose of alleviating systemic guilt, but simply because all humans should be treated equally; no single group is deserving of any lesser quality of treatment than another.

CURRENT INEQUITIES IN PSYCHEDELIC MEDICINE

“It [psychedelic therapy] really does need to be a collective healing for all of us . . . If we’re really in the midst of a psychedelic renaissance, who are we leaving behind?”

– Jae Sevelius, *Injustice, Intersectional Trauma, and Psychedelics*, 2017

While current psychedelic research has been careful not to repeat several of the methodological and ethical mistakes of the past, there continues to be significant racial disparities in the development of and access to psychedelic medicine. Our own review of 17 psychedelic studies conducted from 2000 to 2017 found that out of a total of 274 participants, 82.5% were non-Hispanic White. Overall, rates of recruitment of people of color in psychedelic medicine were quite low;

only 2.2% of participants were Black (participants who identify as being of African descent including but not limited to African Americans, Caribbean Blacks, etc.), 2.2% were of Latino origin, 1.5% of Asian origin, and 4.7% were indigenous (Michaels et al., 2018).

In the vast majority of studies (70.6%), White participants accounted for more than 75% of all participants. Of the seven studies conducted in the United States, all but one (Bogenschutz et al., 2015) were composed of majority of White (>75%) participants (Michaels et al., 2018). Most of the studies were outside the United States; 7 of the 17 studies (41.2%) were conducted in the United States, 3 studies (17.6%) in Brazil, 2 studies each (11.8%) from New Zealand and Switzerland, and 1 study (5.9%) each from Canada, Spain, and the United Kingdom, respectively. Given that some countries do not require the disclosure of ethnicity data, these data could reflect an underestimation. Yet, even if this is the case, overall rates of inclusion for people of color were still lower than their respective national representation. These statistics are indicative of the need to make treatment more generalizable beyond the primarily White majority.

The minimal inclusion of people of color in such empirically supported studies may partially explain the lacking in understanding of trauma experienced by people of color, which is often composed of encounters unique to them such as cultural and historical trauma, everyday racism, and discrimination (Williams, Printz, Ching, & Wetterneck, 2018). Furthermore, the conventional screening methods and assessment measures used in clinical settings do not address or capture these aspects of trauma (Williams, Metzger, Leins, & DeLapp, 2018). As such, people of color are largely absent from the development of potentially helpful treatments, and do not adequately benefit from scientific advances of the field.

Psychedelic science has also neglected to consider the role of race and ethnicity in the expression and assessment of psychopathology, such as depression, anxiety, and PTSD (Chapman, DeLapp, & Williams, 2014). Given the unique manifestation of symptoms across ethnoracial groups, there is a strong need for research demonstrating the efficacy of psychedelic-assisted therapy in people of color. Until very recently, race-based trauma was not taken into account for the use of MDMA-assisted psychotherapy in the treatment of PTSD (Williams & Leins, 2016), and nearly all previous participants were White (e.g., Mithoefer et al., 2011, 2013). Thus, the degree to which MDMA-assisted psychotherapy can be helpful for race-based trauma has not yet been empirically demonstrated.

Given the high prevalence of depression, anxiety, PTSD, and substance use in communities of color, psychedelic medicine may provide a promising new avenue for treatment; yet without the inclusion of diverse participants in such studies, this remains an empirical question. Researchers will need to employ culturally specific – and sometimes extensive – strategies to ensure that people of color are included in clinical studies (Williams, Tellawi, Wetterneck, & Chapman, 2013). Such implementation can potentially alleviate stigma around seeking treatment for people of color and create a sense of belonging in an otherwise foreign environment. Such environments are often recognizably

foreign not only for study participants of color, but also women and scientists of color contributing a leadership role to the field.

Psychedelic scientists and therapists who identify as women or people of color (or both) are often not acknowledged as leaders of mainstream psychedelic medical science and practice. This was underscored in the recent bestseller by Pollan (2018), *How to Change Your Mind* – which, despite acclaim in both psychedelic communities and the mainstream public, omitted virtually all mentions of the historical and present contributions of women and people of color. This mentality is also seen to be demonstrated by the Western medical hierarchy that privileges medical doctors (Andrews & Sutphen, 2003), while indigenous people who have been studying and implementing these medicines receive little if any respect in Western scientific circles for their extensive expertise. Furthermore, underground therapists – those providing psychedelic therapy as a mechanism for healing without legal approval – are often women and people of color, putting their lives, livelihoods, and reputations on the line in the name of healing without institutional protection or recognition for their work (Andrews & Sutphen, 2003). In Western science, the men who lead the boards and the research are the ones who receive the funding, the credit, and the accolades for bringing about the current “psychedelic renaissance” (Sevelius, 2017). Yet historically, medicine is a woman’s field that men have since dominated; in indigenous communities, it was often the woman shamans who heavily influenced the development of indigenous healing practices, risking their own lives to find healing for themselves, their families, and their communities (Tedlock, 2005).

The women involved in this work have been invisible, and psychedelic science in the United States continues this trend by being represented as White and male. Indeed, the editorial board of the new *Journal of Psychedelic Studies*, published by Wolters Kluwer, is 78% male and also overwhelmingly White. To stop the perpetuation of this marginalization, the psychedelic movement must include, amplify, and highlight the voices of women and people of color who are contributing to the progression of this science. For example, the recently deceased African American activist, urban farmer, and entrepreneur, Kai Wingo, founded the Women and Entheogens Conference and started her own mushroom farm and community gardening project in Cleveland, Ohio (Szostek, Oak, Berry, & Mangini, 2017). She was an influential advocate for the power of mushrooms to encourage a healthier and more sustainable culture; yet, her work, along with many other women, has not been included in the dominant narrative of scientific change via psychedelics.

Wingo’s work is preceded by Mazatec native healer, María Sabina, who healed hundreds of sick people who with the sacred substance as she sat before her alter and chanted through the night (Halifax, 1979). Sabina introduced her psilocybin mushroom-based practice to author and ethnomycologist R. Gordon Wasson, making him the most notable Westerner to intentionally ingest psilocybin in Mexico. Wasson studied Sabina, or “Señora” as he referred to her, as she led religious ceremonies and rituals (Allen, 1997). Wasson then wrote up his experiences in a famous

Life Magazine article entitled “Seeking the Magic Mushroom” (1957) and a two-part text, *Mushrooms, Russia, and History* (1957). Wasson (2014) so greatly contributed to the rise of Western psychedelic interest and use during the 1960s counterculture that he was considered by many to be the “father of ethnomycology,” yet his successful contributions would not be possible without Sabina welcoming him into her home and sharing the sacred secrets and practices of her Mazatec healing culture. The spores that Wasson identified as *Psilocybe mexicana* were then cultivated in Europe, and psilocybin was isolated in the laboratory by Albert Hofmann in 1958.

Wingo, Sabina, and countless other female leaders of psychedelic practice must be better recognized and integrated into the movement, lest the psychedelic renaissance be doomed to repeat the exclusionary mistakes of the past. The disparity here is the ongoing division of power in society (Richardson, 2017), where women are often not credited for their contributions, which presupposes a historical account in which men receive the glory for women’s work. For example, historian Dyck (2018) found during 1950s psychedelic experiments in the United States, women would often serve as the first psychedelic guides for their scientist husbands, some of whom later reported that they were afraid and needed to do the experiment with their wives whom they trusted most. Many of these male scientists would go on to be recognized as influential in psychedelic history, but the women who guided their sessions, encouraged the experiments, and helped them to write up their experiences were not credited or mentioned whatsoever in any of the published papers or reports (Dyck, 2018).

Mainstream psychedelic research will also need to encourage and actively include researchers of color in the work and history of the movement. For example, the importance of doing so is highlighted in the historical narrative of the origins of MDMA-assisted psychotherapy. Although it is often described as having been discovered by American chemist, Alexander Shulgan in 1976 (e.g., Hutchinson & Bressi, 2018), it often goes without acknowledgment that he worked alongside Claudio Naranjo, a Chilean psychiatrist and anthropologist to examine the efficacy of methylenedioxymphetamine (MDA) in conjunction with psychotherapy (Naranjo, Shulgin, & Sargent, 1967). Shulgin is often credited for having synthesized MDMA as a more promising treatment as it was shown to be less toxic than the original formation, MDA; however, the historical record should indicate that it was their collaborative work that led to this meaningful finding.

More recently and over the past few years, the Detroit Psychedelic/Ethnogenic Conference has gathered in the inner city, inviting mostly speakers of color from around the country. The list of presenters comprised almost entirely African American scholars, clinical herbalists, metaphysicians, authors, musicians, behavioral specialists, alternative medicine healers, entrepreneurs, midwives, and urban gardeners. Yet, many of these individuals are not included in “mainstream” psychedelic conferences and research. Acknowledging the leadership of people of color in the psychedelic movement is required to broaden the conceptual framework and applicability of the therapeutic approach. Failing to do so continues a tradition of exclusion, which

stagnates the healing potential of the science. Indigenous practitioners know the substances intimately as they have come from within a particular context with lived experience and practice; without them, outsiders can only attempt to investigate these practices and may risk threatening the medicine with Western approaches to psychedelics. Therefore, finding ways to pay retribution to and honor indigenous communities with historical ties to these medicines must be prioritized.

The threat of Western approaches to psychedelics is raised by Feinberg (2018) as he recounts several observations from the 2017 Psychedelic Science conference. He described a researcher's focus on a plant's universal affects, rather than placing the plant within its specific cultural context. He suggests that doing so makes for an isolated experience removed from its social context and the communal environment. This experience is a reflection of the Westernized hyperindividualism, which perpetuates issues such as social inequality and marginalization – particularly, the marginalization of indigenous people from whom we have much to glean. Attempting to practice psychedelic healing outside of its communal environment ensures further othering and depreciation of indigenous people and serves the agenda and comfortableness of the dominant Western medical model. This results in individualistic healing experiences and, rather intentional or not, the dismissal of intercultural exchange opportunities.

DISCUSSION

In many regards, the psychedelic medicine movement exemplifies both the existing inequities and barriers to mental health care treatment inherent in modern psychiatry, while also presenting an enormous opportunity to acknowledge the efficacy and powerful contributions of indigenous medicine and rectify the injustices of the past. Lack of diverse expertise informing study designs and therapy models can result in narrow frameworks that unnecessarily limit the generalizability of our findings and reflect unfounded and outdated assumptions. We must question how we use power and privilege, not just because it is ethical to do so (although that it is clearly a stand-alone reason), but also because it advances the science. To be generalizable, we must demonstrate that these therapies are applicable to different types of people; otherwise, we are merely testing a highly specific therapy on an exclusive subpopulation under narrow conditions (Michaels et al., 2018).

In seeking to diversify the psychedelic medicine movement, we also must consider the difference between true collaboration versus tokenization. Avoiding tokenization means going beyond simply inviting women and people of color to participate in order to create demographic diversity. It means embracing a fundamental change in the framework such that diverse voices are sought with recognition of this as a necessity for the progression of the science and the inclusion of all people. The tremendous benefit of diversity on teams has been well-established scientifically, as it is a limiting factor to only have one kind of perspective represented when making important decisions and building new paradigms (Shachaf, 2008). Diverse perspectives are

critical in order to generate innovative insights (Williams et al., 2013) and are required if the psychedelic renaissance is to become accessible to historically disadvantaged populations.

One recognized means for amplifying diverse voices would be for psychedelic science to develop and invest in research–community collaborations, that is, community-based participatory research. An emerging trend across the basic and clinical sciences, these joint ventures seek to bridge the gap between “ivory tower” research and the communities they intended to serve by having non-academic, non-scientific, non-clinician members of a community serve as advisors to researchers, clinicians, and physicians (Greenhalgh, Jackson, Shaw, & Janamian, 2016). These roles can range from being included on institutional review boards, to participant recruitment, and to clinical trial management (Ross et al., 2016). Indeed, such practices have already demonstrated efficacy in several areas of applied sciences including environmental research (Lynn, 2000), public health (Mayer, Braband, & Killen, 2017), and psychological research (Paris et al., 2016). Published guidelines (Ross et al., 2010) exist for implementing such an approach, including for working with indigenous communities (Adams & Faulkhead, 2012). In the modern community psychiatry movement, this form of collaboration even extends to clinical treatment; community mental health clinics often include individuals with lived experience with mental illness as partners in helping others navigate transitions from inpatient hospitalizations to outpatient care and co-facilitate group therapies.

There are several ways in which research–community collaboration may hope to address some of the inequities raised in this review. First, community involvement may help to improve participant recruitment by decreasing the barriers for participation by people of color. Second, greater representation of historically underrepresented and disenfranchised individuals may lead to less cultural bias in study design, such as use of appropriate assessment measures and less sterile settings for psychedelic-assisted therapy settings (Johnson et al., 2008). Third, community involvement may increase the effectiveness and generalizability of findings, rather than prioritizing efficacy in a narrow sample. At a minimum, the involvement of community members will open up a richer discussion and provide much-needed perspectives that have been historically omitted but have much to contribute.

Finally, the lack of cultural humility that pervades so much of Western science is just as prevalent in psychedelic science (Sevelius, 2017). Cultural humility is the acknowledgment that we are all bound by the limitations of our socialization and are often ignorant of our own privileges (Foronda, Baptiste, Reinholdt, & Ousman, 2016). There is an urgent need for cultural humility in psychedelic science to prevent it from falling into the same limiting, and often unethical, traps that we see in Western science and medicine more generally. To achieve this potential, we need to begin to broaden our framework of healing to include a cultural focus. A genuinely accessible psychedelic therapy paradigm would be built in true community and collaboration. It would incorporate diverse voices, including the people who have been hurt by the current paradigm.

As a society, we are all socialized into a paradigm that privileges some ways of knowing over others. It will take an incredible amount of work to reexamine and challenge this cultural programming. As a field whose history is deeply rooted in non-Western traditions, the psychedelic science movement has a unique opportunity to acknowledge and resist the replication of existing structures of power, thereby improving the lives of the marginalized and setting an example that can be replicated more broadly within medicine and society.

Acknowledgements: No funding was received to support this work.

Conflict of interest: The authors declare no conflict of interest.

REFERENCES

- Adams, K., & Faulkhead, S. (2012, September). This is not a guide to indigenous research partnerships: But it could help. *Information Communication and Society*, 15(7), 1016–1036. doi:10.1080/1369118X.2012.709260
- Alexander, M. (2010). *The new Jim Crow: Mass incarceration in the age of colorblindness*. New York, NY: New Press.
- Allen, J. W. (1997). *Maria Sabina: Saint Mother of the Sacred Mushrooms* (Ethnomycological Journals, vol. 1). Seattle, WA: Psilly Publications.
- Andrews, B., & Sutphen, M. P. (Eds.). (2003). *Medicine and colonial identity*. New York, NY: Routledge.
- Barceloux, D. G. (2012). Psilocybin and hallucinogenic mushrooms. In R. B. Palmer (Ed.), *Medical toxicology of drug abuse: Synthesized chemicals and psychoactive plants* (pp. 950–960). Hoboken, NJ: John Wiley & Sons, Inc.
- Beckett, K., Nyrop, K., & Pfingst, L. (2006). Race, drugs, and policing: understanding disparities in drug delivery arrests. *Criminology*, 44(1), 105–137. doi:10.1111/j.1745-9125.2006.00044.x
- Bogenschutz, M. P., Forcehimes, A. A., Pommy, J. A., Wilcox, C. E., Barbosa, P. C. R., & Strassman, R. J. (2015). Psilocybin-assisted treatment for alcohol dependence: A proof-of-concept study. *Journal of Psychopharmacology*, 29(3), 289–299. doi:10.1177/0269881114565144
- Booker, C. (Guest). (2016, July 10). Television broadcast. In J. Reiss (Producer), *Meet the Press*. Washington, DC: NBC News.
- Brandt, A. M. (1978). Racism and research: The case of the Tuskegee syphilis study. *Hastings Center Report*, 8(6), 21–29. doi:10.2307/3561468
- Brown, T. K., & Alper, K. (2017). Treatment of opioid use disorder with ibogaine: Detoxification and drug use outcomes. *The American Journal of Drug and Alcohol Abuse*, 44(1), 1–13. doi:10.1080/00952990.2017.1320802
- Carhart-Harris, R. (2015). Results: Of a multi-modal neuroimaging study of LSD and a psilocybin for treatment-resistant depression clinical trial. *Neuropsychopharmacology*, 40, S91–S105. doi:10.1038/npp.2015.324
- Carhart-Harris, R. L., Bolstridge, M., Rucker, J., Day, C. M. J., Erritzoe, D., Kaelen, M., Bloomfield, M. A. P., Rickard, J. A., Forbes, B., Feilding, A., Taylor, D. M., Pilling, S., Curran, V. H., & Nutt, D. J. (2016). Psilocybin with psychological support for treatment-resistant depression: An open-label feasibility study. *The Lancet Psychiatry*, 3(7), 619–627. doi:10.1016/S2215-0366(16)30065-7
- Carhart-Harris, R. L., & Nutt, D. (2017). Serotonin and brain function: A tale of two receptors. *Journal of Psychopharmacology*, 31(9), 1091–1120. doi:10.1177/0269881117725915
- Carocci, M. (2009). Written out of history: Contemporary Native American narratives of enslavement. *Anthropology Today*, 25(3), 18–22. doi:10.1111/j.1467-8322.2009.00668.x
- Carter, O. L., Pettigrew, J. D., Burr, D. C., Alais, D., Hasler, F., & Vollenweider, F. X. (2004). Psilocybin impairs high-level but not low-level motion perception. *Neuroreport*, 15(21), 1947–1951. doi:10.1097/00001756-200408260-00023
- Chapman, L. K., DeLapp, R. C. T., & Williams, M. T. (2014). Impact of race, ethnicity, and culture on the expression and assessment of psychopathology. In D. Beidel, B. C. Frueh, & M. Hersen (Eds.), *Adult psychopathology and diagnosis* (7th ed., pp. 131–162). Hoboken, NJ: John Wiley & Sons, Inc.
- Cohen, A. (2015, August 12). How white users made heroin a public health problem. *The Atlantic*. Retrieved from http://www.theatlantic.com/politics/archive/2015/08/crack-heroin-and-race/401015/?utm_source=eb
- Danforth, A. L., Grob, C. S., Struble, C., Feduccia, A. A., Walker, N., Jerome, L., Yazar-Klosinski, B., & Emerson, A. (2018). Reduction in social anxiety after MDMA-assisted psychotherapy with autistic adults: A randomized, double-blind, placebo-controlled study. *Psychopharmacology*, 235(11), 3137–3148. doi:10.1007/s00213-018-5010-9
- Danforth, A. L., Struble, C. M., Yazar-Klosinski, B., & Grob, C. S. (2016). MDMA-assisted therapy: A new treatment model for social anxiety in autistic adults. *Progress in Neuropsychopharmacology and Biological Psychiatry*, 64, 237–49. doi:10.1016/j.pnpbp.2015.03.011
- Davis, F., & Munoz, L. (1968). Heads and freaks: Patterns and meanings of drug use among hippies. *Journal of Health and Social Behavior*, 9(2), 156–164. doi:10.2307/2948334
- Dyck, E. (2018, October 16). Historian explains how women have been excluded from the field of psychedelic science. *Chacruna*. Retrieved from <https://chacruna.net/historian-explains-how-women-have-been-excluded-from-the-field-of-psychedelic-science/>
- Ellens, J. H., & Roberts, T. B. (Eds.). (2015). *The psychedelic policy quagmire: Health, law, freedom, and society*. Santa Barbara, CA: Praeger.
- Emerson, A., Ponté, L., Jerome, L., & Doblin, R. (2014). History and future of the Multidisciplinary Association for Psychedelic Studies (MAPS). *Journal of Psychoactive Drugs*, 46(1), 27–36. doi:10.1080/02791072.2014.877321
- Feinberg, B. (2018). Conflict and transformation in Mazatec and outsiders' view of the therapeutic value of mushroom use in Huautla. In B. Labaate & C. Cavanar (Eds.), *Plant medicines, healing, and psychedelic science: Cultural perspectives* (pp. 35–57). Cham, Switzerland: Springer International Publishing.
- Fickenscher, A., Novins, D. K., & Manson, S. M. (2006). Illicit peyote use among American Indian adolescents in substance

- abuse treatment: A preliminary investigation. *Substance Use & Misuse*, 41(8), 1139–1154. doi:10.1080/10826080600692142
- Foa, E. B., Keane, T. M., Friedman, M. J., & Cohen, J. A. (Eds.). (2009). *Effective treatments for PTSD: Practice guidelines from the International Society for Traumatic Stress Studies* (2nd ed.). New York, NY: The Guilford Press.
- Forman, J. (2012). Racial critiques of mass incarceration: Beyond the new Jim Crow. *New York University Law Review*, 87(1), 101–146. Retrieved from https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=4599=fss_papers
- Foronda, C., Baptiste, D. L., Reinholdt, M. M., & Ousman, K. (2016). Cultural humility: A concept analysis. *Journal of Transcultural Nursing*, 27(3), 210–217. doi:10.1177/1043659615592677
- Freimuth, V. S., Quinn, S. C., Thomas, S. B., Cole, G, Zook, E., & Duncan, T. (2001). African Americans' views on research and the Tuskegee Syphilis study. *Social Science and Medicine*, 52(5), 787–808. doi:10.1016/S0277-9536(00)00178-7
- Garcia-Romeu, A., Griffiths, R., & Johnson, M. (2015). Psilocybin-occasioned mystical experiences in the treatment of tobacco addiction. *Current Drug Abuse Reviews*, 7(3), 157–164. doi:10.2174/1874473708666150107121331
- Gasser, P., Kirchner, K., & Passie, T. (2015). LSD-assisted psychotherapy for anxiety associated with a life-threatening disease: A qualitative study of acute and sustained subjective effects. *Journal of Psychopharmacology*, 29(1), 57–68. doi:10.1177/026988114555249
- Glick, S. D., Rossman, K., Steindorf, S., Maisonneuve, I. M., & Carlson, J. N. (1991). Effects and aftereffects of ibogaine on morphine self-administration in rats. *European Journal of Pharmacology*, 195(3), 341–345. doi:10.1016/0014-2999(91)90474-5
- Godlaski, T. M. (2011). The God within. *Substance Use and Misuses*, 46(10), 1217–1222. doi:10.3109/10826084.2011.561722.
- Goldsmith, N. L. (2007). The ten lessons of psychedelic psychotherapy, rediscovered. In M. Winkelman & T. Roberts (Eds.), *Psychedelic medicine: New evidence for hallucinogenic substances as treatments* (Vol. 2, pp. 107–141). Santa Barbara, CA: Praeger.
- Greenhalgh, T., Jackson, C., Shaw, S., & Janamian, T. (2016, June 1). Achieving research impact through co-creation in community-based health services: Literature review and case study. *Milbank Quarterly*, 94(2), 392–429. doi:10.1111/1468-0009.12197
- Grob, C. S. (2000). Deconstructing ecstasy: The politics of MDMA research. *Addiction Research & Theory*, 8(6), 549–588. doi:10.3109/16066350008998989
- Grob, C. S., Danforth, A. L., Chopra, G. S., Hagerty, M., McKay, C. R., Halberstadt, A. L., & Greer, G. R. (2011). Pilot study of psilocybin treatment for anxiety in patients with advanced-stage cancer. *Archives of General Psychiatry*, 68(1), 71–78. doi:10.1001/archgenpsychiatry.2010.116
- Halifax, J. (1979). *Shamanic voices: A survey of visionary narratives. Wondrous medicine* (pp. 125–135). New York, NY: The Penguin Group.
- Halpern, J. H., Sherwood, A. R., Hudson, J. I., Yurgelun-Todd, D., & Pope, H. G. (2005). Psychological and cognitive effects of long-term peyote use among Native Americans. *Biological Psychiatry*, 58(8), 624–631. doi:10.1016/j.biopsych.2005.06.038
- Hart, C. L., & Ksir, C. (2012). *Drugs, society & human behavior* (15th ed.). New York, NY: McGraw-Hill.
- Herzberg, G., & Butler, J. (2019). Blinded by the White: Addressing power and privilege in psychedelic medicine. *Chacruna*. Retrieved from <https://chacruna.net/blinded-by-the-white-addressing-power-and-privilege-in-psychedelic-medicine/#fn-10316-10>
- Howle, E. M. (2014). *Sterilization of female inmates: Some inmates were sterilized unlawfully, and safeguards designed to limit occurrences of the procedure failed*. Sacramento, CA: California State Auditor. Retrieved from <https://www.auditor.ca.gov/pdfs/reports/2013-120.pdf>
- Hutchinson, C. A., & Bressi, S. K. (2018). MDMA-Assisted psychotherapy for posttraumatic stress disorder: Implications for social work practice and research. *Clinical Social Work Journal*. 1–10. doi:10.1007/s10615-018-0676-3
- Johnson, M., Richards, W., & Griffiths, R. (2008). Human hallucinogen research: Guidelines for safety. *Journal of Psychopharmacology*, 22(6), 603–620. doi:10.1177/0269881108093587
- Krebs, T. S., & Johansen, P. (2013). Psychedelics and mental health: A population study. *PLoS One*, 8(8), 1–9. doi:10.1371/journal.pone.0063972
- Krystal, J. H., Karper, L. P., Seibyl, J. P., Freeman, G. K., Delaney, R., Bremner, J. D., Heninger, G. R., Bowers, M. B., & Charney, D. S. (1994). Subanesthetic effects of the noncompetitive NMDA agonist, ketamine, in humans. *Archives of General Psychiatry*, 51(3), 199–214. doi:10.1001/archpsyc.1994.03950030035004
- Labate, B. C., & Cavnar, C. (Eds.). (2013). *The therapeutic use of ayahuasca*. Berlin, Germany: Springer.
- Lemke-Santangelo, G. (2010). Daughters of Aquarius: Women of the sixties counterculture. *The Sixties*, 3(1), 112–115. doi:10.1080/17541328.2010.484968
- López-Muñoz, F., Alamo, C., Cuenca, E., Shen, W. W., Clervoy, P., & Rubio, G. (2005). History of the discovery and clinical introduction of chlorpromazine. *Annals of Clinical Psychiatry*, 17(3), 113–135. doi:10.1080/10401230591002002
- Lu, L., Liu, Y., Zhu, W., Shi, J., Liu, Y., Ling, W., & Kosten, T. R. (2009). Traditional medicine in the treatment of drug addiction. *The American Journal of Drug and Alcohol Abuse*, 35(1), 1–11. doi:10.1080/00952990802455469
- Lynn, F. M. (2000). Community-scientist collaboration in environmental research. *American Behavioral Scientist*, 44(4), 649–663. doi:10.1177/00027640021956305
- Mailer, N. (1957). *The White Negro: Superficial reflections on the Hipster*. San Francisco, CA: City Lights Publishing.
- Mauer, M. (2015). How White users made heroin a public-health problem/interviewer: A Cohen [Transcript]. *The Atlantic*. Retrieved from <https://www.theatlantic.com/politics/archive/2015/08/crack-heroin-and-race/401015/>
- Mayer, K., Braband, B., & Killen, T. (2017). Exploring collaboration in a community-academic partnership. *Public Health Nursing*, 34(6), 541–546. doi:10.1111/phn.12346
- McClure, A. F. (1992). The hippies and American values. *History: Reviews of New Books*, 21(1), 7. doi:10.1080/03612759.1992.9950674
- Merica, D. (2017, October 26). Trump declares opioid epidemic a national public health emergency. *CNN*. Retrieved from <https://www.cnn.com/2017/10/26/politics/donald-trump-opioid-epidemic/index.html>

- Michaels, T. I., Purdon, J., Collins, A., & Williams, M. T. (2018). Inclusion of people of color in psychedelic-assisted psychotherapy: A review of the literature. *BMC Psychiatry*, *18*(245), 1–9. doi:10.1186/s12888-018-1824-6
- Mithoefer, M. C., Grob, C. S., & Brewerton, T. D. (2016). Novel psychopharmacological therapies for psychiatric disorders: Psilocybin and MDMA. *The Lancet Psychiatry*, *3*(5), 481–488. doi:10.1016/S2215-0366(15)00576-3
- Mithoefer, M. C., Wagner, M. T., Mithoefer, A. T., Jerome, L., & Doblin, R. (2011). The safety and efficacy of \pm 3, 4-methylenedioxyamphetamine-assisted psychotherapy in subjects with chronic, treatment-resistant posttraumatic stress disorder: The first randomized controlled pilot study. *Journal of Psychopharmacology*, *25*(4), 439–452. doi:10.1177/0269881110378371
- Mithoefer, M. C., Wagner, M. T., Mithoefer, A. T., Jerome, L., Martin, S. F., Yazar-Klosinski, B., Michel, Y., Brewerton, T. D., & Doblin, R. (2013). Durability of improvement in post-traumatic stress disorder symptoms and absence of harmful effects or drug dependency after 3, 4-methylenedioxyamphetamine-assisted psychotherapy: A prospective long-term follow-up study. *Journal of Psychopharmacology*, *27*(1), 28–39. doi:10.1177/0269881112456611
- Moreno, F. A., Wiegand, C. B., Taitano, E. K., & Delgado, P. L. (2006). Safety, tolerability, and efficacy of psilocybin in 9 patients with obsessive-compulsive disorder. *The Journal of Clinical Psychiatry*, *67*(11), 1735–1740. doi:10.4088/JCP.v67n1110
- Naranjo, C., Shulgin, A. T., & Sargent, T. (1967). Evaluation of 3,4-methylenedioxyamphetamine (MDA) as an adjunct to psychotherapy. *Medicina Et Pharmacologia Experimentalis. International Journal of Experimental Medicine*, *17*(4), 359–364. doi:10.1159/000137100
- Nellis, A. (2016). *The color of justice: Racial and ethnic disparities in state prisons*. Washington, DC: The Sentencing Project. Retrieved from <https://www.sentencingproject.org/publications/color-of-justice-racial-and-ethnic-disparity-in-state-prisons/>
- Netherland, J., & Hansen, H. (2017). White opioids: Pharmaceutical race and the war on drugs that wasn't. *Biosocieties*, *12*(2), 217–238. doi:10.1057/biosoc.2015.46
- Noller, G. E., Frampton, C. M., & Yazar-Klosinski, B. (2017). Ibogaine treatment outcomes for opioid dependence from a twelve-month follow-up observational study. *American Journal of Drug and Alcohol Abuse*, *44*(1), 37–46. doi:10.1080/00952990.2017.1310218
- Palamar, J. J., Davies, S., Ompad, D. C., Cleland, C. M., & Weitzman, M. (2015). Powder cocaine and crack use in the United States: An examination of risk for arrest and socioeconomic disparities in use. *Drug and Alcohol Dependence*, *149*, 108–116. doi:10.1016/j.drugalcdep.2015.01.029
- Paris, M., Silva, M. A., Diaz, E., Bedregal, L. E., Cole, R. A., & Añez-Nava, L. M. (2016). The Connecticut Latino behavioral health system: A culturally informed community-academic collaboration. *Psychological Services*, *13*(2), 140–147. doi:10.1037/ser0000065
- Pollan, M. (2018). *How to change your mind: What the new science of psychedelics teaches us about consciousness, dying, addiction, depression, and transcendence*. New York, NY: Penguin Press.
- Ratsch, C. (2005). *The encyclopedia of psychoactive plants: Ethnopharmacology and its applications*. Library Journal. New York, NY: Media Source.
- Riba, J., & Bouso, J. C. (2011). An overview of the literature on the pharmacology and neuropsychiatric long term effects of ayahuasca. In R. Guimaraes dos Santos (Ed.), *The ethnopharmacology of ayahuasca*. Trivandrum, Kerala: Transworld Research Network.
- Richardson, K. (2017, May 10). These women are fighting sexism in psychedelic research. *Vice*. Retrieved from https://www.vice.com/en_nz/article/bmw78m/these-women-are-fighting-sexism-in-psychedelic-research
- Rigg, K. K. (2017). Motivations for using MDMA (Ecstasy/Molly) among African Americans: Implications for prevention and harm-reduction programs. *Journal of Psychoactive Drugs*, *49*(3), 192–200. doi:10.1080/02791072.2017.1305518
- Ross, L. F., Loup, A., Nelson, R. M., Botkin, J. R., Kost, R., Smith, G. R., & Gehlert, S. (2010). The challenges of collaboration for academic and community partners in a research partnership: Points to consider. *Journal of Empirical Research on Human Research Ethics*, *5*(1), 19–31. doi:10.1525/jer.2010.5.1.19
- Ross, S., Bossis, A., Guss, J., Agin-Liebes, G., Malone, T., Cohen, B., Mennenga, S. E., Belser, A., Kalliontzi, K., Babb, J., Su, Z., Corby, P., & Schmidt, B. L. (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. doi:10.1177/0269881116675512
- Saldanha, A. (2007). Psychedelic Whiteness. In A. Saldanha (Ed.), *Psychedelic White: Goa trace and the viscosity of race* (pp. 11–20). Minneapolis, MI: University of Minnesota Press.
- Sánchez, C., & Bouso, C. (2015). *Ayahuasca: From the Amazon to the Global village*. Amsterdam, Netherlands: Transnational Institute. Retrieved from https://www.tni.org/files/publication-downloads/dpb_43_eng_web_19122015.pdf
- Scharff, D. P., Mathews, K. J., Jackson, P., Hoffsuemmer, J., Martin, E., & Edwards, D. (2010). More than Tuskegee: Understanding mistrust about research participation. *Journal of Health Care for the Poor and Underserved*, *21*(3), 879–897. doi:10.1353/hpu.0.0323
- Schultes, R. E. (1976). *Hallucinogenic plants*. New York, NY: Golden Press.
- Sessa, B. (2014). Why psychiatry needs psychedelics and psychedelics need psychiatry. *Journal of Psychoactive Drugs*, *46*(1), 57–62. doi:10.1080/02791072.2014.877322
- Sessa, B. (2016). The history of psychedelics in medicine. In M. von Heyden, H. Jungaberle, & T. Majić (Eds.), *Handbuch Psychoaktive Substanzen. Springer Reference Psychologie*. Berlin, Germany: Springer.
- Sevelius, J. (2017, September 20). How psychedelic science privileges some, neglects others, and limits us all. *Chacruna*. Retrieved from <https://chacruna.net/how-psychedelic-science-privileges-some-neglects-others/>
- Sevelius, J., Williams, M. T., Kahn, P. G., Red Bear, L. M. M., & Ismaili, A. (2017, April 26). *Injustice, intersectional trauma, and psychedelics* [Video file]. Psychedelic Science 2017. Retrieved from <https://www.youtube.com/watch?v=O7tzFCn0mc>
- Shachaf, P. (2008). Cultural diversity and information and communication technology impacts on global virtual teams: An exploratory study. *Information and Management*, *45*(2), 131–142. doi:10.1016/j.im.2007.12.003
- Shulgin, A., & Shulgin, A. (1997). *Tihkal: The continuation*. Berkeley, CA: Transform Press.

- Smart, R. G., Storm, T., Baker, E. F., & Solursh, L. (1966). A controlled study of lysergide in the treatment of alcoholism: I. The effects on drinking behavior. *Quarterly Journal of Studies on Alcohol*, 27(3), 469–482. Retrieved from <https://psycnet.apa.org/record/1966-13290-001>
- Stafford, P. G. (1993). *Psychedelics encyclopedia*. Oakland, CA: Ronin Publishing, Inc.
- Stern, A. M. (2005). Sterilized in the name of public health: Race, immigration, and reproductive control in modern California. *American Journal of Public Health*, 95(7), 1128–1138. doi:10.2105/AJPH.2004.041608
- Strassman, R. J. (1991). Human hallucinogenic drug research in the United States: A present-day case history and review of the process. *Journal of Psychoactive Drugs*, 23(1), 29–28. doi:10.1080/02791072.1991.10472572
- Suite, D. H., La Bril, R., Primm, A., & Harrison-Ross, P. (2007). Beyond misdiagnosis, misunderstanding and mistrust: Relevance of the historical perspective in the medical and mental health treatment of people of color. *Journal of the National Medical Association*, 99(8), 879–878. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2574307/?tool=EBI>
- Szostek, A. T., Oak, A., Berry, D., & Mangini, M. (2017). *Women's visionary council: Psychedelic culture and community*. Paper presented at Symposium conducted at Psychedelic Science 2017 conference, Oakland, CA.
- Taylor, W. J. (1971). History and pharmacology of psychedelic drugs. *International Journal of Clinical Pharmacology, Therapy & Toxicology*, 5(1), 51–57. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/4936558>
- Tedlock, B. (2005). *The woman in the Shaman's body: Reclining the feminine in religion and medicine*. New York, NY: Bantam Dell.
- Tischauer, L. V. (2012). *Jim Crow laws: Landmarks of the American mosaic*. Santa Barbara, CA: Greenwood.
- Tonry, M., & Melewski, M. (2008). The malign effects of drug and crime control policies on Black Americans. *Crime and Justice*, 37(1), 1–44. doi:10.1086/588492
- Tupper, K. W. (2002). Entheogens and existential intelligence: The use of plant teachers as cognitive tools. *Canadian Journal of Education*, 27(4), 499–516. doi:10.2307/1602247
- Vollenweider, F. X., & Kometer, M. (2010). The neurobiology of psychedelic drugs: Implications for the treatment of mood disorders. *Nature Reviews Neuroscience*, 11(9), 642–651. doi:10.1038/nrn2884
- Wallace, M. (1992). *Black popular culture (Discussions in contemporary culture)*. Seattle, WA: Bay Press.
- Wasson, R. G. (2014). *The wondrous mushroom: Mycolatry in mesoamerica*. San Francisco, CA: City Light Publishers.
- Weaver, H. N. (2001). Indigenous identity: What is it and who really has it? *The American Quarterly*, 25(2), 240–255. doi:10.1353/aiq.2001.0030
- Williams, M. T., Gooden, A. M., & Davis, D. (2012). African Americans, European Americans, and pathological stereotypes: An African-centered perspective. In G. R. Hayes & M. H. Bryant (Eds.), *Psychology of culture*. Hauppauge, NY: Nova Science Publishers.
- Williams, M. T., & Leins, C. (2016). Race-based trauma: The challenge and promise of MDMA-assisted psychotherapy. *Multidisciplinary Association for Psychedelic Studies (MAPS) Bulletin*, 26(1), 32–27. Retrieved from <https://www.maps.org/news/bulletin/articles/407-bulletin-spring-2016/6106-race-based-trauma-the-challenge-and-promise-of-mdma-assisted-psychotherapy>
- Williams, M. T., Metzger, I., Leins, C., & DeLapp, C. (2018). Assessing racial trauma within a DSM-5 framework: The UConn racial/ethnic stress & trauma survey. *Practice Innovations*, 3(4), 242–260. doi:10.1037/pri0000076
- Williams, M. T., Printz, D., Ching, T., & Wetterneck, C. T. (2018). Assessing PTSD in ethnic and racial minorities: Trauma and racial trauma. *Directions in Psychiatry*, 38(3), 179–196. Retrieved from https://www.researchgate.net/publication/328056753_Assessing_PTSD_in_ethnic_and_racial_minorities_Trauma_and_racial_trauma
- Williams, M. T., Tellawi, G., Wetterneck, C. T., & Chapman, L. K. (2013). Recruitment of ethnoracial minorities for mental health research. *The Behavior Therapist*, 36(6), 151–156. Retrieved from http://www.drkevinchapman.com/wp-content/uploads/2017/01/Williams_MinorityRecruitment_2013.pdf
- Winkelman, M. J. (2014a). Psychedelics as medicines for substance abuse rehabilitation: Evaluating treatments with LSD, peyote, ibogaine and ayahuasca. *Current Drug Abuse Reviews*, 7(2), 101–116. doi:10.2174/1874473708666150107120011
- Winkelman, M. J. (2014b). Therapeutic applications of ayahuasca and other sacred medicines. In B. Labate & C. Cavnar (Eds.), *The therapeutic use of ayahuasca* (pp. 1–21). Berlin/Heidelberg, Germany: Springer.
- Wittmann, M., Carter, O., Hasler, F., Cahn, B. R., Grimberg, U., Spring, P., Hell, D., Flohr, H., & Vollenweider, F. X. (2007). Effects of psilocybin on time perception and temporal control of behaviour in humans. *Journal of Psychopharmacology*, 21(1), 50–64. doi:10.1177/0269881106065859
- Ziff, B., & Rao, P. V. (1997). *Borrowed power: Essays on cultural appropriation*. Brunswick, NJ: Rutgers University Press.