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EXAMINING PSILOCYBIN AND LSD CONSUMPTION THROUGH A
GEOGRAPHICAL LENS

BY

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THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Master of Science

Geography

The University of New Mexico,
Albuquerque, New Mexico

December 2021

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Abstract

In recent years, the study of psychedelic science has reemerged across a variety of fields. Psilocybin and LSD (Lysergic Acid Diethylamide) are two psychedelic substances receiving an influx of attention for their success treating issues such as depression, post-traumatic stress, and addiction. Psilocybin and LSD are still widely used despite their classification as illegal Schedule I substance. This study aims to learn more about current users with the following questions guiding this research: What are barriers limiting psilocybin and LSD consumption? What are the motivations behind use? What impacts are psilocybin and LSD having on users lives? I used Qualitative methods in the form of semi-structured interviews were used to gather information. Seventeen people were interviewed, and the resulting data was analyzed through categorization within excel spreadsheets. The reports of mental healing and positive change confirm that the healing capabilities of LSD and psilocybin are being used among the population. The narrative of psilocybin and LSD provided by users highlight many barriers to psychedelic access and use. This research also examines the social justice issues present in the psychedelic science movement.

Table of Contents

List of Figures	v
List Of Tables	vi
Chapter 1 Introduction	1
1.2 Psilocybin.....	1
1.3 LSD.....	2
1.4 Psilocybin and LSD Effects	3
1.5 Psilocybin and LSD Use Today	4
Chapter 2 Literature Review	6
2.1 Therapeutic Benefits of Psilocybin and LSD.....	6
2.1a Microdosing.....	8
2.1b Addiction.....	9
2.1c Difficult Psychedelic Experiences.....	10
2.2 Geography of Drugs.....	13
2.2a Geographies of Drugs and Psychedelics	13
2.2bThe War on Drugs.....	14
2.2c Underrepresentation in Psychedelics.....	17
Chapter 3 Research Questions	22
Chapter 4 Methods	23
Chapter 5 Results and Discussion.....	26
5.1Data Demographics.....	27
5.2 Cost.....	28
5.3 Factors Limiting consumption	30
5.4 Substance Use	33
5.5 Motivations	36
5.6 Effects	40
5.7 Microdosing	43
5.8 Positive Impacts	46
5.9 Negative Impacts	49
5.10 Gift Economy.....	50
Chapter 6 Conclusion.....	53
6.1 What’s Happening Now.....	54
6.2 Moving Forward	55
Appendices.....	57

Appendix A Semi-Structured Interview Questions 57
Bibliography 59

List of Figures

Figure i: Responses to “What is your Ethnicity?”	27
Figure ii: Responses to “ What is your Gender Identity?	27
Figure iii: Dollars Spent Monthly on Each Substance	28
Figure iv: Responses to "Have you ever lowered consumption due to cost?"	29
Figure vii: Percent of respondents that reported the following influences on consumption ..	30
Figure v: Respondent Substance Use Patterns	33
Figure vi: Responses to “ Would you consider yourself addicted to this substance?”	34
Figure viii: Responses to “ What are your motivations behind (substance) consumption?” ..	36
Figure ix: Responses to “ Would you consider your use of (substance) self-medication?” ...	36
Figure x: Therapeutic effects described when asked “What effects do you attribute to (substance)?”	40
Figure xi: Other effects described when asked “What effects do you attribute to (substance)?”	41
Figure xii: Responses to “Has this substance had positive impacts on your life?”	46
Figure xiii: Responses to “Has this substance had negative impacts on your life?”	49

List Of Tables

<i>Table i: Respondent Locations.....</i>	<i>24</i>
<i>Table ii: Number of Respondents for Each Substance.....</i>	<i>26</i>

Chapter 1 Introduction

This research aims to find out more about the motivations behind psilocybin (the compound in magic mushrooms) and LSD (*Lysergic Acid Diethylamide*) use today. Despite psychedelic substances being classified as illegal, they are still widely used across the United States. Since they were made illegal, 23 million Americans have taken a psychedelic substance and hundreds of thousands try them for the first time every year (Fadiman 2011). In recent years, the study of psychedelic science has reemerged in a variety of fields. Psilocybin, LSD, and MDMA have been successful treating an array of conditions such as depression, post-traumatic stress (PTS), and addiction (Mithoefer, Grob, and Brewerton 2016). This research investigates the populations using psilocybin and LSD illegally and explores the impacts these substances have on users lives.

1.2 Psilocybin

Psilocybin is the psychoactive alkaloid found in hallucinogenic mushrooms (Tylš, Páleníček, and Horáček 2014). Its psychedelic effects have been used for millennia for their apparent healing powers, in rituals, and for pleasure (Nichols 2004). Psilocybin has been used for over a thousand years for significant cultural purposes, but was only discovered by western science in the late 1950s (Carhart-Harris et al. 2016). In the 1960s, psilocybin was widely used in the experimental research for mental illnesses and during that time psilocybin containing mushrooms spread amongst the general public (Tylš, Páleníček, and Horáček 2014). The easiest way for humans to access psilocybin is to ingest a psilocybin producing mushroom, often referred to as magic mushrooms. These mushrooms mainly contain two hallucinogenic alkaloids, psilocin and its derivative psilocybin (Laussmann and Meier-Giebing 2010). The majority of mushrooms that contain the hallucinogenic substance

psilocybin are found in the genus *psilocybe* but can be present in several others such as *Panaeolus*, *psilocybe*, *Gymnopilus*, *Stropharia*, and *Aonocybe* (Ballesteros 2006). A recent review of all the known taxa of *Psilocybe* included around 250 species of mushrooms with 150 of those species being hallucinogenic (Guzmán 2008). The content of psilocybin in hallucinogenic mushrooms varies in the range from 0.2% to 1% of dry weight (Tylš, Páleníček, and Horáček 2014). A threshold dose for psilocybin is about 5mg, a medium dose is considered to be in the 12-20mg range and 20+ mg considered a large dose (Passie et al. 2002). Psilocybin containing mushrooms grow in the manure of a variety of mammals such as cattle, water buffalo and deer and can often be found in highly fertilized areas including lawns, fields, parks, and gardens (Ballesteros 2006). Grow kits and spores for various psilocybin producing mushrooms can also be purchased online making it possible for many consumers to grow the mushrooms themselves.

1.3 LSD

LSD is a synthetic a hallucinogenic drug discovered in 1938 and was first ingested by the chemist Albert Hofmann on April 19th, 1943 (Dyck 2006). LSD is consumed orally and is usually absorbed onto small pieces of paper but it can also be found in liquid form (Sessa 2015). LSD is extremely potent, a typical dose is between 100 and 200 micrograms which is small enough that it is essentially invisible and may make it difficult to measure (Nichols 2004). By the late 1960s LSD gained attention as a popular recreational drug and it, along with other psychedelic substances became associated with counter cultural youth, social disobedience, and anti-authoritarian attitudes (Dyck 2006). Stigmatization of LSD damaged support for its clinical status and ultimately led to LSD along with psilocybin and other psychedelic drugs being placed into the most restrictively regulated drug schedule of the

United States Controlled Substances Act (Schedule I) in 1970 (Belouin and Henningfield 2018). An article about psychedelics as therapy published in *The Week* wrote the following

During the 1950s, some psychologists thought psychedelics could revolutionize mental health treatment. But when recreational use of these powerful substances in the 1960s, it sparked a backlash with tales of bad trips and psychotic breaks. In 1965, the federal government banned psychedelic drugs, and companies stopped producing them for research. (“Psychedelics as Therapy | The Week” 2021, 11).

In the United States, substances classified as a schedule I have the following criteria: a high potential for abuse, no currently accepted medical use, and there is a lack of accepted safety for use under medical supervision (Nutt, King, and Nichols 2013). The research available on psilocybin and LSD largely contradicts this description.

1.4 Psilocybin and LSD Effects

Classic hallucinogens, including LSD, psilocybin, dimethyltryptamine (which is contained in ayahuasca) and mescaline (contained in peyote) produce their psychotropic effects by acting on serotonin 5-hydroxytryptamine-2A (5-HT_{2A}) receptors (Passie et al. 2002). These serotonin interacting hallucinogens are clinically, chemically, and pharmacologically similar to each other (Johnson et al. 2018). In two comparative studies a dose of 100mg psilocybin was reported as equivalent to 1 mg LSD and experiments have found cross-tolerance between psilocybin and LSD (Passie et al. 2002).

Acute effects include reduced negative mood, increased positive mood, and reduced amygdala response to negative affective stimuli (Barrett et al. 2020). The somatic symptoms of psilocybin can include dilated pupils, nausea, tremors, and changes in heart rate frequency,

blood pressure (Passie et al. 2002). The average LSD trip can take anywhere from 6 to 15 hours and psilocybin trips typically last 4-8 hours (Holland 2018).

In clinical studies, psilocybin led to significant increases in a variety of psychological symptoms that included disturbances of emotion, sensory perception, thought processes, reality appraisal, and ego function (Nichols 2004). In a medium dose, psilocybin and LSD produce an altered state of consciousness marked by (1) stimulation of affect, (2) enhanced ability for introspection, and (3) altered psychological functioning immediately before falling asleep and dreaming (Passie et al. 2002). The perceptual effects become manifested in an altered sense of time; as though time is standing still. They may also manifest as visual hallucinations, such as fractals and multicolored geometric objects (Holland 2018). During this time colors may appear sharper, moving objects may leave trails, and flat surfaces may appear to “breathe” (Schmid and Liechti 2018). Some physiological symptoms may occur during hallucinogen action, such as dizziness, weakness, tremors, nausea, drowsiness, paresthesia, blurred vision, dilated pupils, and increased tendon reflexes (Nichols 2004).

1.5 Psilocybin and LSD Use Today

The danger of psilocybin and LSD are much lower than their current classification would suggest. Psilocybin and LSD a low level of abuse potential and risk profile that would then qualify for CSA scheduling if approved as medicine (Johnson et al. 2018).. It should be no more restricted than a Schedule IV drug. Rates of abuse, emergency department reports, and treatment seeking in youth and adults are substantially lower than are evident for many Schedule IV drugs such as Xanax, Valium, Ativan, Talwin, Ambien, and Tramadol (Johnson et al. 2018).

Psilocybin and LSD did not disappear from the United States after they were classified illegal, schedule I substance and are still widely consumed. According to the Substance Abuse and Mental Health Services Administration's National Survey on Drug Use and Health, about 22.9 million people or 8.7 percent of Americans reported having used psilocybin at some prior point (“2019 Methodological Summary and Definitions | CBHSQ Data” n.d.). The goal for this research is to learn more about these users and investigate if the mental health benefits were being utilized among the population.

Chapter 2 Literature Review

This research utilizes and contributes to the literature surrounding geographies of drugs and the growing body of research on the therapeutic properties of psilocybin and LSD . I explore the motivations behind psychedelic use and the impacts these substances have on users lives. I also investigate the factors limiting substance use. The research exploring therapeutic effects of psilocybin and LSD were relevant throughout this project. Geographies of drugs highlights the social issues present across psychedelic research and literature as well as barriers to substance use various populations face today.

2.1 Therapeutic Benefits of Psilocybin and LSD

Psilocybin and LSD have received growing interest from various communities due to their potential therapeutic effects. Due to psychedelics unique abilities, psilocybin treatment has been groundbreaking for several different ailments and illnesses but there have been some difficulties with exploring these substances (George et al. 2019). Strong stigmas surrounding psychedelics remain in many of the fields that deal with mental health treatment, which is worsened by their classification as an illegal substance. The dominance of western culture and religion are two barriers to psychedelic therapy that have led to the mindset that psychedelic substances are dangerous and evil (Marks 2018). Despite their ban as a Schedule I substance, research on these substances has still been possible. The law does not outright ban research on Schedule I substances, but it includes restrictions and significant barriers and requirements that discourage scientists and clinicians from attempting to conduct research with these substances or even applying for funding for such research (Johnson et al. 2018). Research institutions along with independent organizations have contributed to the growing body of literature and research. The Multidisciplinary Association for Psychedelic

Studies (MAPS), one such organization, is a 501(c) (3) non-profit research and educational organization whose goal it is to develop medical, legal, and cultural contexts that people can utilize to benefit from the careful uses of psychedelics and marijuana (“MAPS Mission” n.d.). Studies have found success using psilocybin and LSD as treatment for obsessive-compulsive illness, cancer anxiety, depression and treatment resistant depression, addiction, and trauma-based issues (Mithoefer, Grob, and Brewerton 2016). One form of trauma that has been underrepresented in the empirical literature is racial trauma, also called race-based trauma, which may include symptoms of traumatic stress, anxiety, and depression (Williams et al. 2021). According to the US Department of Justice , Black Americans (63%), Latinx Americans (47%), Asian Americans (6%), American Indians or Alaska Natives (5%), and multiracial individuals (4%) have experienced some form of racially charged trauma in their lifetime. Williams et al. (2020) conducted a cross-sectional online survey of 313 Black, Indigenous, and People of Color in North America, and found that use of classic psychedelics or MDMA was associated with significant reductions in traumatic stress, depression, and anxiety symptoms related to experiences of racism. Populations utilizing psychedelic substances on their own outside of clinical trials have also contributed to the knowledge of potential medical uses. A published case series of 53 self-medicating patients suggested that psilocybin-containing mushrooms may be effective in preventing the regular occurrence of cluster headache and in some cases, complete eradication of cluster headaches (Johnson and Griffiths 2017).

The potential therapeutic benefits of psilocybin and LSD are not solely relevant for populations suffering from various illnesses, there are also benefits for healthy individuals. Psilocybin has been shown to induce persisting positive changes in attitudes, social effects,

mood, life satisfaction, behavior, and trait openness in healthy volunteers up to 14 months after administration (MacLean et al. 2012). A study done at Johns Hopkins University showed that screened healthy volunteers treated under optimal conditions with high-dose psilocybin reliably experienced profound mystical experiences infused with a renewed sense of purpose and meaning, and a year later retained their personal value (Mithoefer, Grob, and Brewerton 2016). Lasting positive effects of hallucinogens have been linked to their ability to acutely induce profound insights and mystical-type experiences (Schmid and Liechti 2018). Having ever used any classic psychedelic substance such dimethyltryptamine (DMT), ayahuasca, lysergic acid diethylamide (LSD), mescaline, peyote, or psilocybin significantly reduced the likelihood of past month psychological distress. Multiple other findings have found that psilocybin may have the most favorable safety profile of all the classic psychedelic substances studied (Hendricks, Johnson, and Griffiths 2015).

2.1a Microdosing

Microdosing involves routinely self-administering very low doses of usually psilocybin or LSD to enhance productivity and creativity at work, and improve mental health and wellbeing (Lea, Amada, and Jungaberle 2020). This typically involves taking between 5–10% of a standard psychedelic dose on a fixed schedule for a period of time, without the intention of experiencing noticeable drug effects (Fadiman 2011). There have not been published empirical studies of micro dosing because the current legal status makes direct empirical investigation of regular psychedelic use difficult. The research that exists on micro dosing has involved collecting information from users that have micro dosed on their own. One study explored the benefits and challenges experienced by microdosers through an anonymous online survey that received 278 responses. The benefits and challenges of micro

dosing with either psilocybin or LSD were explored through open-ended questions. Improved mood, energy and focus, and reduced anxiety were the most common micro dosing benefits and the most common challenges were illegality and physiological discomfort (Anderson et al. 2019).

2.1b Addiction

In contrast to many other abused drugs, hallucinogens do not engender drug dependence or addiction and are not considered to be reinforcing substances (Nichols 2004). Even though significant tolerance is known to occur with repeated use of psilocybin, the development of physical dependence does not occur (Passie et al. 2002). Classical psychedelics have been shown to be relatively safe in the context of clinical trials, with notable side effects being mild headaches, small elevations in blood pressure, and acute anxiety, none of which commonly require medical intervention (Bahi 2020). There are some potential harmful effects such as dangerous behavior in unprepared, unsupervised users, and exacerbation of mental illness in those with or predisposed to psychotic illnesses (Johnson et al. 2018).

Overdose is not a concern when it comes to psychedelics. Hallucinogens are powerful in producing altered states of consciousness, but they generally possess low physiological toxicity, and have not been shown to cause organ damage or neuropsychological deficits (Johnson, Richards, and Griffiths 2008). There is no evidence that any of the hallucinogens, even the very powerful semisynthetic LSD, cause damage to any human body organ (Nichols 2004). Most harmful instances of use tended to involve the combination of other drugs such as alcohol (Johnson et al. 2018). A lethal dose of psilocybin in humans has been theoretically estimated at approximately 1000 times an effective dose, which is an amount that is likely

not possible for an individual to consume when in the form of psilocybin-containing mushrooms (Gable 2004). The risk with higher doses is that altered perceptions, intensified emotion and hallucinations can cause dangerous behavior, which can be significantly reduced by educating the individual, creating a safe environment (Tylš, Páleníček, and Horáček 2014).

2.1c Difficult Psychedelic Experiences

Despite stories about people having psychotic breaks or other mental health problems after taking psychedelics, recent large-scale studies suggest people who have used psychedelics may be less likely to have serious mental health problems or be suicidal than those who have not. One paper, published in 2015 by a team of researchers from Johns Hopkins and the University of Alabama, analyzed data collected from more than 191,382 people between 2008 and 2012 during the annual National Survey on Drug Use and Health (Carbonaro et al. 2016). Around 13 percent of those surveyed had used “classic psychedelics which the researchers defined as DMT, ayahuasca, LSD, mescaline, peyote or psilocybin at some point in their life. The respondents who had used a classic psychedelic were 19 percent less likely to have been in psychological distress during the previous month, 14 percent less likely to have had suicidal thoughts over the last year, 29 percent less likely to have made plans for suicide and 36 percent less likely to have attempted suicide in the past year than the survey respondents who had never used psychedelics (Carbonaro et al. 2016). The safety of psychedelic consumption use is given mainly by personal expectations (set) and the nature of the environment (setting), which is the cause of the great variability of the subjective effects. (Nichols 2004). The most common adverse reaction to psychedelics is an unpleasant trip, which can involve feelings of fear, anxiety, dysphoria and/or paranoia.

Johnson et al write: Distressing effects may can include frightening illusions and troubling thoughts or feelings concerning one's life or ultimate evil forces (Johnson, Richards, and Griffiths 2008). In 2016, researchers at Johns Hopkins University carried out a study to learn more about bad trip experiences on psilocybin containing mushrooms. Individuals were asked about their absolute worst psilocybin trips. Information was collected through a survey that received 1,993 responses. Many of the survey respondents still found even these bad trips to be meaningful and spiritually important and felt like their experience had positive aspects. Thirty-four percent of participants, their most challenging trip on psilocybin was ranked among the top five most meaningful experiences of their life and thirty-one percent said it was among the top five most spiritually significant experiences of their life. Eighty-four percent of the respondents said they had benefitted from the challenging parts of their trip and forty-six percent said they would repeat that session if they could, despite the challenges. Six people reported that their suicidal thoughts disappeared after their experience on their worst bad trip (McMains 2017).

Psilocybin and LSD are serotonin interacting hallucinogens which enables them to induce profound alterations of consciousness and mystical-type experiences, with reportedly long-lasting effects on subjective well-being and personality (Schmid and Liechti 2018). It is a combination of psilocybin and other psychedelic substances effects that give them their unique therapeutic abilities (Tylš, Páleníček, and Horáček 2014). A sentence from *Psychedelic Psychotherapy: a User-Friendly Guide for Psychedelic Drug-Assisted Psychotherapy* captures this ability well

They (psychedelics) allow healing at the root cause of our ailment, be it physical, emotional, cognitive, spiritual, or a combination of these. They work in places the

intellect is afraid, or unable to go. Psychedelics quickly zero in on the blocks, constriction, dysfunctions, and mental distortions that accumulate over a lifetime....

They provide a clarity and openness that lead to integration, making it possible for people to reclaim their whole, functional selves and realize their highest potential.

(Coleman 2017, 57)

Psychedelic substances can help fill the inadequacies of current medication option (Marks 2018). Treatments utilizing psychedelic substances have reached success rates higher than those achieved using currently available medicines (Belouin and Henningfield 2018).

However, psychedelics as medicine need to be available through a system that provides equal access to healthcare across gender, race, and class. An article discussing the whitewashing that has taken place across psychedelic-assisted mental health research and treatment stated this

The research community has a responsibility to make sure that promising psychedelic therapies are equally effective and accessible to communities of color. Research institutions must work on building trust with BIPOC communities and address systemic and institutional racism. Although psychedelics can potentially make a contribution to reducing racial trauma, systemic interventions will be needed to improve the lives of communities of color in the U.S. (Thrul and Garcia-Romeu 2021, 212)

Inequality in healthcare access is currently a serious issue and mental healthcare is something many do not have access to. A publication examining diversity, equity, and access in psychedelic medicine states “The current models of psychedelic psychotherapy being utilized in clinical trials are resource intensive and therefore likely to remain out of reach for the

socioeconomically disadvantaged once approved as medical treatments” (Williams and Labate 2020, 1). This same article later states “people of color are largely absent from the development of potentially helpful treatments, and do not adequately benefit from scientific advances of the field”(3). Psychedelic therapy services only being available to the privileged or wealthy is needs to be addressed. Change need to happen to create a system where all people living in the United States have equal and affordable access to all types of mental health care, including psychedelic therapy.

2.2 Geography of Drugs

2.2a Geographies of Drugs and Psychedelics

Geographers have conducted research on various illegal drugs, but it has been done minimally and in a scattered fashion. Geographies of drug consumption and their relationship to popular culture, social practices, and local and national economies are lacking; and focus is needed on drug-consuming communities or sub-cultures (Taylor, Jasparro, and Mattson 2013). There is an especially large gap within geography and psychedelic substances. In *Geographers And Drugs: A Survey Of The Literature*. Taylor et al state:

With the partial exception of methamphetamine, synthetic drugs are missing from the geographical literature despite their global popularity, as are hallucinogenic or psychedelic drugs and gray-market substances and “legal highs.” It is also worth noting that ethnobotanical studies of psychoactive plants, or studies that discuss subjective accounts of non-ordinary states of drug-induced consciousness are frequently found in anthropology but rarely in the geographic literature. (27)

Geographies of intoxicants include the myriad ways in which the production, consumption/ prevalence, regulation and treatment of intoxicants are both shaped by and reflected in the

structure of the social environment at multiple scales (DeVerteuil and Wilton 2009).”

Geography’s review of the intoxicant literature must, however, extend beyond medical or moral matters to encompass the personal, the cultural, and the economic (DeVerteuil and Wilton 2009). This research project expands the geographic literature on psilocybin and LSD. Information was collected about access, motivations, limitations, and impacts of consumption.

2.2b The War on Drugs

Geographers have addressed the political geographies and geopolitics of drugs, but there is a lack of serious and comprehensive studies on the war on drugs as a vital aspect of State power and policing (Taylor, Jasparro, and Mattson 2013).

The escalation of the US ‘war on drugs’ has directly contributed to skyrocketing rates of arrests, and incarceration, impacting Black Americans in particular (Tonry and Melewski, 2008). Between 1980 and 2000, the US drug arrest rate for black population increased from 6.5 to 29.1 per 1000 persons, while the rate for populations solely increased from 3.5 to 4.6 (Beckett et al., 2006). An article investigating the racialized geography of drug law enforcement stated the following: “The drug war has catalyzed particularly aggressive forms of policing. Local police agencies have inflicted a range of intrusions, indignities, and harms disproportionately on poorer communities of color that touch many more than just those who are formally arrested and charged (Lynch et al. 2013, 27).” Police now routinely use invasive, coercive tactics against those residing in officially defined ‘problem’ areas, all in furtherance of the war on drugs (Capers 2009). African Americans and Hispanics are more likely to be searched, arrested, and experience force used against them more than any other group (George et al. 2019).

Several case studies have explored the geographies of Cannabis drug law policing and the results highlight the racism that is still present and needs to be addressed. An article investigating selective drug law enforcement practices in a single municipality in San Francisco found that a black person convicted of drug felonies in was three times more likely than a white person to be sent to prison for their offense (Lynch et al. 2013). A 2020 analysis by the American Civil Liberties Union, concluded, “Black people are 3.64 times more likely than white people to be arrested for marijuana possession, despite comparable usage rates (“Racial Disparity In Marijuana Arrests” n.d.). In every single state, black people were more likely to be arrested for marijuana possession, and in some states, black people were up to six, eight, or almost ten times more likely to be arrested. In 31 states, racial disparities were larger in 2018 than they were in 2010 (American Civil Liberties Union: Racially Targeted Arrests in the Era of Marijuana Reform, 2020). People of color are much more likely to be legally punished for drug use and this issue is not improving. The geography of illegal drugs is now especially important as politicians and the public are increasingly questioning the efficiency of the war on drugs (Taylor, Jasparro, and Mattson 2013).

These practices, together with the direct impact of formal criminal prosecution and punishment of huge numbers of suspected drug offenders, have transformed community life in selected neighborhoods of many US cities (Capers, 2009). An article called Race as a component of set and setting: How experiences of race can influence psychedelic experiences provides the following insights that are relevant here.

Although psychedelics are not typically associated with African Americans, the stigma historically attached to minority drug use may be confronted when using a

psychedelic drug. Therefore, it is reasonable to hypothesize that insofar as processes of racial formation impact an individual's set and setting, differential experiences, and interpretations, and even therapeutic outcomes of psychedelic use will be observed by race. (Neitzke-Spruill 202, 53)

He later states "Regarding setting, the history of race relations in the United States and stigma toward minority drug users may contribute to broader concerns about drug use among African Americans. Furthermore, lack of representation in psychedelic using subcultures may limit the extent to which African American users share in harm-reducing sanctions and rituals"(54). BIPOC voices are problematically non-existent in the discourse surrounding psychedelics.

With the advancement of psychedelic science into the forefront of global consciousness, research continues to affirm the promise of psychedelic medicines to aid in the healing of those suffering from trauma, addiction, depression, anxiety related illnesses, and a host of other conditions... Yet, despite these developments, and an impressive spate of progressive and well-intentioned international investigators, the science as a whole remains severely lacking in diversity and inclusion. (Williams and Labate 2020, p. 1)

Women have also been unevenly impacted, "the war on drugs, which disproportionately impacted women and low-income communities, as evidence of a political bias that continues to deprive these demographics of access to safe and effective plant medicines due to restrictive regulations" (Aitcheson 2021, 3). Largely as a result of the War on Drugs, the number of women in prison increased by 800 percent from 1997 to 2007, this rate is far faster than that for men, and women" (Curley 2016). According to the Center for Behavioral Health

Statistics and Quality Men are more likely than women to use almost all types of illicit drugs (“Center for Behavioral Health Statistics and Quality | SAMHSA” n.d.). Women feeling more unsafe during drug consumption is one contributing factor to lower drug use among women. Psychedelic experiences can be a vulnerable time and feeling safe is a necessary part of a positive trip. YouGov RealTime research found that 61% of women in the United States say they regularly take steps to avoid being sexually assaulted (“Most Women Say They Regularly Take Steps to Avoid Being Sexually Assaulted | YouGov” n.d.). Violence towards women is a common issue and inebriated women are especially targeted. On average, at least 50% of college students’ sexual assaults are associated with alcohol use (Abbey 2002). Women experiencing sexual assault at psychedelic retreat centers in various countries is already a big issue. In January of 2020 BBC News published a woman’s story of sexual assault at a popular ayahuasca retreat and was laying in the dark while under the influence of the drug (Maybin and Casserly 2020). This woman told her story and received over 300 responses were left by women who had felt violated at ayahuasca and other psychedelic retreats. She shared, “Many stories shared on the blog revealed that many women had tried to come forward and report retreat centers to popular booking websites and were turned away” (Maybin and Casserly 2020, 62).

2.2c Underrepresentation in Psychedelics

Women and Black, Indigenous, and People of Color (BIPOC) are vastly represented in the current discourse surrounding psychedelics. In an article Author and cultural historian Mike Jay writes “A recent study of users of novel psychedelic substances found, probably to

no-one's surprise, that they are more likely than average to be male, white and college-educated. This has been the public face of psychedelic culture ever since it emerged more than half a century ago" (Jay 2019,3). The healing properties of plant medicines and their derivatives were originally brought to Western consciousness by indigenous cultures from all over the world" (Williams and Labate 2020, 3). However, it is difficult to find literature about non-western use of psychedelics that was not written by western outsiders. A publication highlighting the limitations of the White-dominant medical framework currently present across the psychedelic renaissance states "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" (George et al. 2019, 1).

Women and BIPOC are also absent from current psychedelic research taking place. As one article states "Although it is exciting to witness the culmination of decades of drug policy advocacy and clinical research, the psychedelic science movement struggles with many of the same social issues that plague healthcare in general" (Williams and Labate 2020,5). Not all psychedelic studies report the trial demographics, but the studies do show that white males are significantly over-represented in the clinical psilocybin and LSD trials that have been carried out. "The psychedelic medicine as a movement struggles from similar social issues plaguing other fields of healthcare, resulting in disparities in inclusion and limiting our understanding of how to best help many groups that comprise our multicultural societies" (Williams and Labate 2020). A study analyzing racial equity psychedelic-assisted mental health research and treatment reported. Pooled analyses of contemporary clinical

trials on psychedelics have found that white individuals comprise large majorities (>80%) of study participants, substantially underrepresenting BIPOC, and calling into question the generalizability of findings to non-white populations and equity of access to such trials (Thrul and Garcia-Romeu 2021). In 2000, the John Hopkins University research group became the first in the United States to obtain regulatory approval to reinstate psychedelic research with healthy volunteers. Johns Hopkins reports that its Center for Psychedelic and Consciousness Research is the leading psychedelic research institution in the U.S., and among the few leading groups worldwide (Jefferson 2019). John's Hopkins University research makes up a large portion of the recent psychedelic research and the demographics of their studies are much worse than the already problematic average. A Johns Hopkins trial investigating psilocybin for depression and anxiety in cancer patients with life threatening cancer included 51 participants (Griffiths et al. 2016). The demographics for that trial were 94 % White 4% African American and 2% Asian. Another Johns Hopkins study explored bad psilocybin trip experiences through surveys. Out of 1,993 surveys 78 percent of respondents were male and 89 percent of respondents were white (McMains 2017). A trial done investigating psilocybin for treatment-resistant depression mentioned "another limitation of the present trial is that the final eight patients were all male" (Carhart-Harris et al. 2018).

It is especially problematic to exclude the populations that could benefit from psychedelic services the most. "Twice as many women suffer depression as men, and twice as many women are likely to experience anxiety or PTSD— conditions which psychedelics are most commonly used to treat" (Aitcheson 2021, 7). Thrul and Garcia-Romeu state

The disparities in substance use patterns and clinical trial enrollment, coupled with Williams et al. (2020) findings on psychedelics' impact on race-based trauma, raise important questions regarding the sociocultural status of psychedelics, systemic reasons for the underrepresentation of BIPOC in this research, and the potential role of psychedelic-assisted treatments in ameliorating mental health disparities among diverse populations. (2021, 211)

Lack of time and money may be one aspect of lower LSD and psilocybin use among women and BIPOC. 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 state “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 (p.3)”. Nationally representative data on past-year lysergic acid diethylamide (LSD) use from 2015 to 2018 in the US suggest 71–74% of individuals who are using identify as non-Hispanic white, while only 13–16% identify as Hispanic, and 4–5% as Black” (Yockey, Vidourek, and King 2020, 211).

Time, money, and safety are all requirements of a good psychedelic experience, and all things that come with privilege. A Gender Pay Gap Report for 2021 released by PayScale reported the following conclusions.

COVID-19 has had profound and unprecedented effects on the U.S. economy, which have disproportionately impacted women and people of color, highlighting the vulnerabilities and systemic injustices they have historically faced in the U.S. Observations of the racial wage gap show women of all races and ethnic groups earn

less than white men. Men of color generally earn less than white men, but all men out earn the women within their racial ethnic group.

Geographies of drugs highlights the intense racism and systematic oppression that makes it more dangerous and difficult for people of color to interact with and talk about drug substances. Although my participant demographics are significantly better than those of current studies, white males are still over-represented in my research. I expect lower psychedelic use among women and minorities and greater caution among BIPOC to report drug use both contribute to this.

Chapter 3 Research Questions

My interest in sustainability led me to study geography and I became interested in studying psychedelics substances after my my own mental health journey. I have turned to anti-depressants, as a last resort, to help my struggles with trauma, anxiety, and depression. It generally takes 3-6 weeks for them to take effect. Several that I have tried made things worse, and it can take another few weeks for the negative effects to go away. I knew there were more effective substances like psilocybin and LSD that could help. Psychedelic substances are far more successful than antidepressants and can help after just one dose. They also lead to permanent positive change rather than treat the symptoms like antidepressants. After learning more about the mental healing and other benefits of psilocybin and LSD I was curious about the populations seeking them these reasons. Through my interviews I wanted to learn about psilocybin and LSD user's motivations for use and the impact these substances had on their lives. I also wanted to find out if their classification as illegal substances had led to any issues. As I completed interviews I realized that white males made up the majority of my respondents. I utilized my literature review to investigate the barriers to drug use and specifically psychedelic use facing other populations.

The following are my research questions. What are barriers limiting psilocybin and LSD consumption? What are the motivations behind use? What impacts are psilocybin and LSD having on users lives?

Chapter 4 Methods

I used qualitative methods to gather information about substance use. I interviewed 17 people that had used psilocybin or LSD since March of 2020. The qualitative research collected and analyzed consists of 17 interviews. My goal was to gather more information about the motivations behind LSD and psilocybin use and the impacts these substances have on users lives. Surveys and interviews were both considered. I chose interviews so I could gather more detailed information. Interviews resulted in a lower number of respondents but allowed me to gather in depth material about substance use. The interview format was semi-structured. Semi-structured in-depth interviews are the most widely used interviewing format for qualitative research and are generally organized around a set of predetermined open-ended questions, with other questions emerging from the dialogue between interviewer and interviewee/s (DiCicco-Bloom and Crabtree 2006). The inclusion criteria required participants to be 18 years of age or older and have used either psilocybin or LSD since March of 2020. Interviews were done virtually due to the COVID-19 pandemic.

Initially the goal was to find psilocybin and LSD users in New Mexico and the surrounding states, however the pandemic struck before I began recruiting for interviews. I moved to virtual interviews and widened my study area to the Unites States. It was difficult to find users willing to participate even with the wider search area. Opening up my study area allowed me to reach more people but made my results less geographically focused. Seeking out regular psychedelic users likely resulted in data that is skewed positive.

Through informal discussions of my research interest over the past two to three years I encountered several individuals that expressed and maintained their willingness to be interviewed. I began here in September and completed eight interviews. I posted my research

information and request for participants on the Portland Psychedelic Society and a Psychedelic Research Facebook page and found six more participants. Some participants shared my contact information with others that they knew might be interested in participating in the study. This resulted in three more interviews, bringing the total number of interviews completed to seventeen.

Table i: Respondent Locations

State	Number of Respondents
Oregon	6
New Mexico	3
Texas	2
Oklahoma	3
North Carolina	1
Colorado	1
New York	1

Below is an overview of my interview questions topics. A complete list of questions is provided at the end. I asked the same set of interview questions for LSD, psilocybin cannabis, nicotine, and alcohol. I included cannabis, nicotine, and alcohol to provide comparisons. These comparisons highlight some the similarities and differences in substance use display the need for unique psilocybin and LSD policy and regulation

1. General Information: Age, gender identity, ethnicity, income
2. Impacts experienced due to Covid

3. Cost
4. Frequency of Use
5. Access
6. Factors limiting consumption
7. Motivations
8. Context
9. Substance effects
10. Positive Impacts
11. Negative Impacts

Grounded theory provided the most appropriate approach to this topic and research question. I began data collection without having a theory of what the data would show and developed a theory from the interview data. Grounded theory is defined as, “a general methodology for developing theory that is grounded in data systematically gathered and analyzed. Theory evolves during actual research, and it does this through continuous interplay between analysis and data collection” (Strauss & Corbin 1994). The assumption that drove this research was that psilocybin and LSD were being sought out for their mental health benefits. I expected to find recreation as just one of many motivation behind use and I was curious about other driving forces.

The following results show data from seventeen interviews. Values were generated through open-ended responses. Participants were only asked about the substances they had consumed since March of 2020. This resulted in a different number of interviews for each substance.

Chapter 5 Results and Discussion

I found that the therapeutic benefits of psilocybin and LSD are common motivations behind consumption. These benefits had profound, positive impacts on users lives. The effects and impacts psilocybin and LSD interviewees describe highlight several of the ways these psychedelics provide lasting therapeutic effects. The differences between psilocybin, LSD, cannabis, nicotine, and alcohol use display the need for unique policies and practices surround psilocybin and LSD. The barriers to consumption respondents reported highlight several challenges to psilocybin and LSD use that can be addressed with and help guide policy changes.

Table ii: Number of Respondents for Each Substance

LSD	13
Psilocybin	11
Cannabis	15
Nicotine	5
Alcohol	9

5.1 Data Demographics

Figure i: Responses to “What is your Ethnicity?”

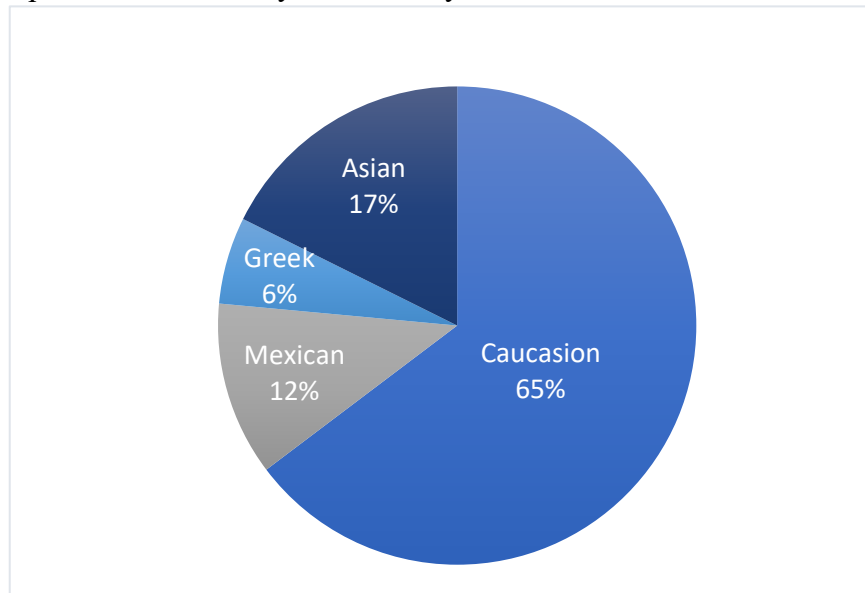
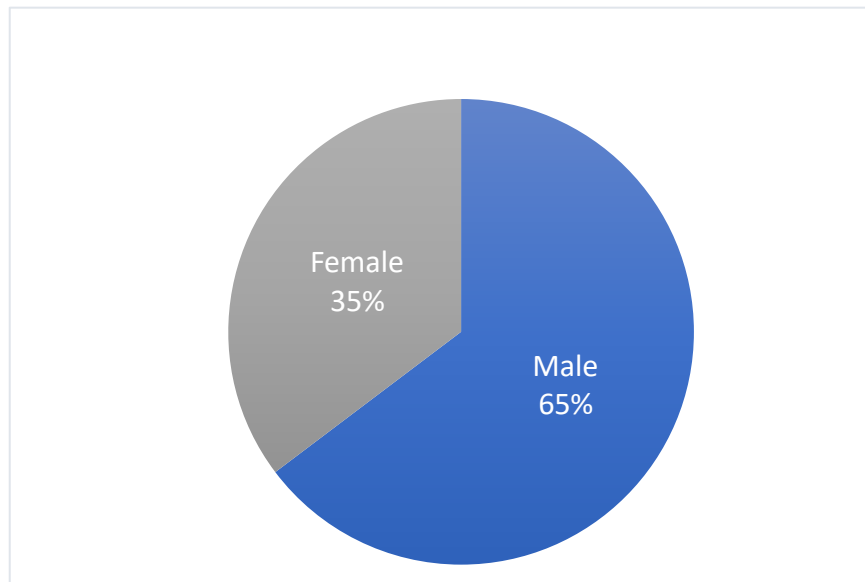


Figure ii: Responses to “What is your Gender Identity?”



5.2 Cost

Figure iii: Dollars Spent Monthly on Each Substance

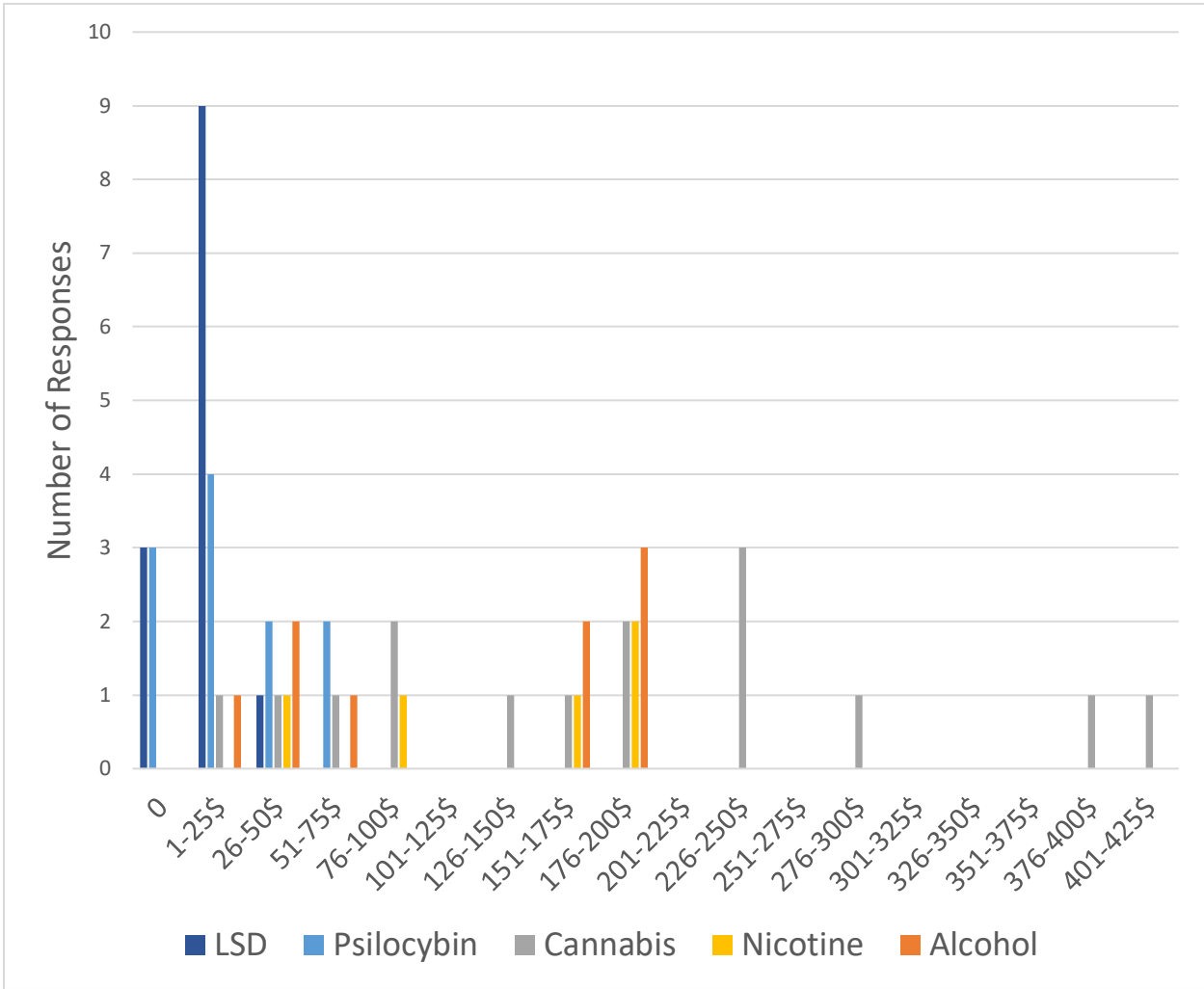
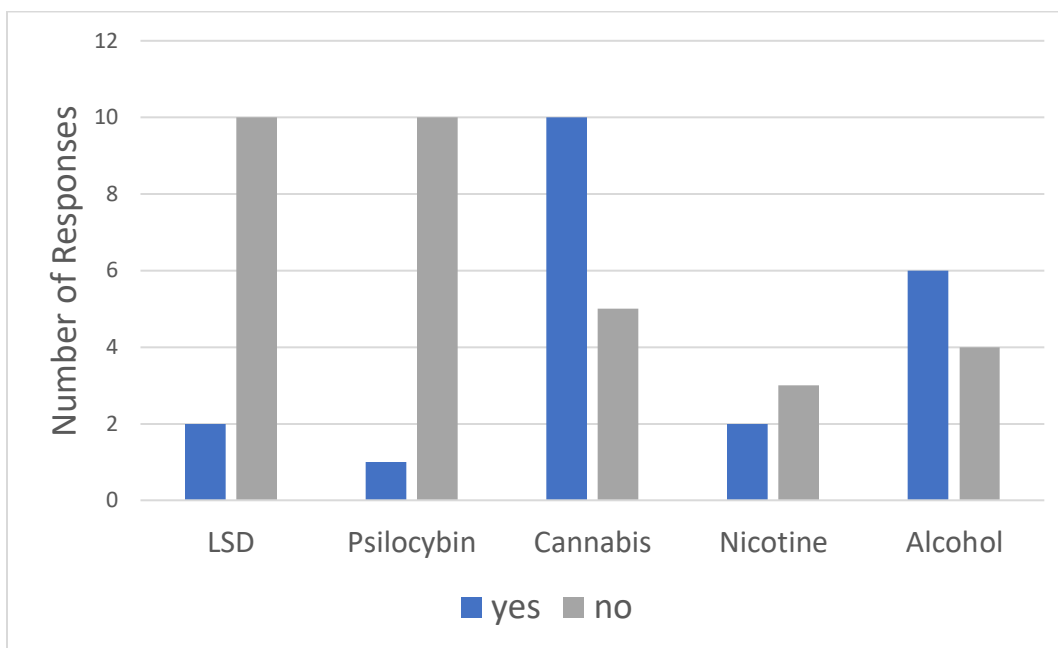


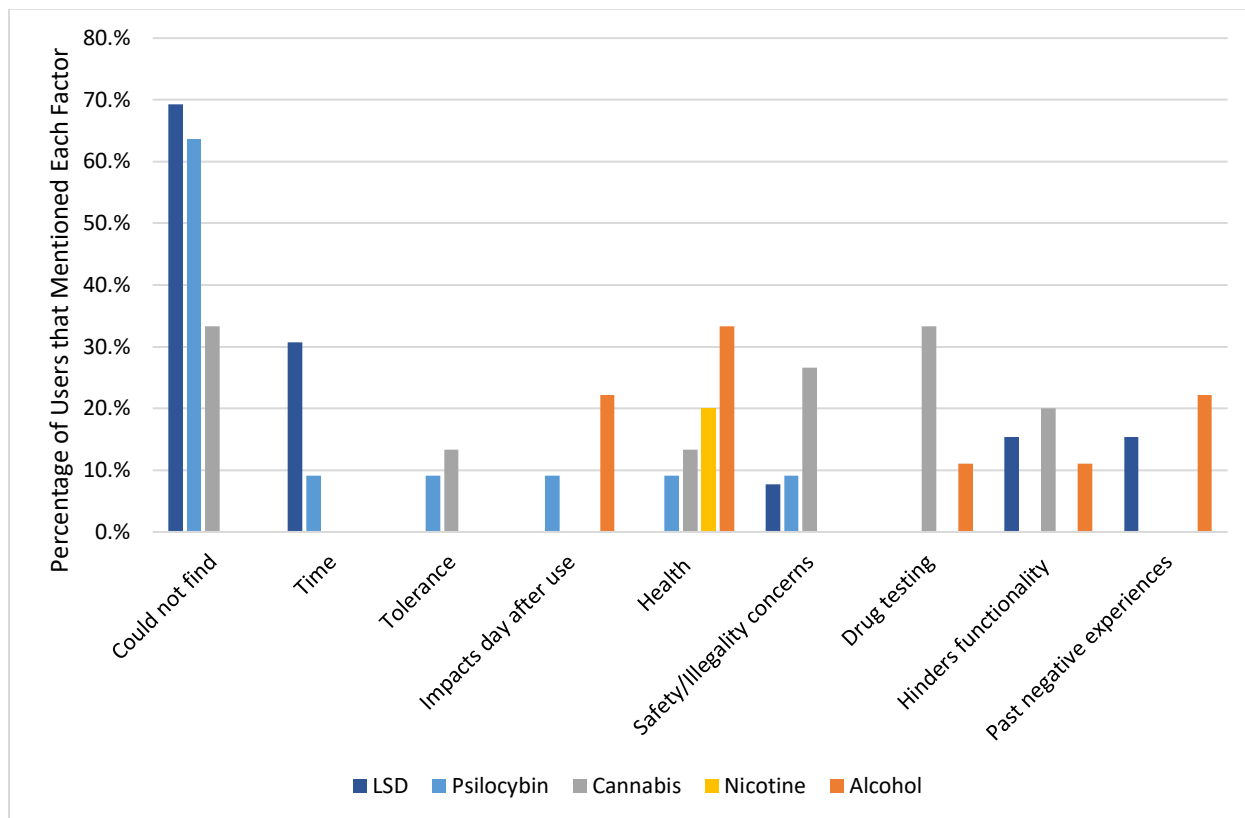
Figure iv: Responses to "Have you ever lowered consumption due to cost?"



Overall users spent the least on Psilocybin and LSD compared to the other substances they consumed. When participants were asked if cost had ever limited consumption only 1/11 psilocybin and 2/13 LSD users said yes, one of whom would micro dose if cost were not an issue. While cost was not a common issue for participants, there were several barriers to consumption users reported.

5.3 Factors Limiting consumption

Figure v: Percent of respondents that reported the following influences on consumption



Earlier I provided several barriers to drug use women may face, one being women feeling unsafe consuming intoxicants. Currently the reality is that women under the influence are especially targeted. Lower drug use among women may be occurring due to the patriarchy refusing to acknowledge men's guilt and responsibility to change. Several women I interviewed mentioned abstaining from certain substances due to feeling unsafe in their environment. One female user rarely drinks alcohol because of a sexual assault experience that happened while she had been drinking. Another female user did not take acid for a year after she was almost taken against her will by a man she did not know. When asked about factors limiting LSD consumption she stated

As a woman there's more of a risk being in that state of mind and being out in public. It has almost happened to me once before and I didn't do acid for a year after that. I wasn't okay and this guy was taking me to his car and I couldn't communicate what was being done to me. (Interviewee 4, ZIP Code 88316)

The substances or these women were not to blame for these instances in any way, women should not have to be sober and vigilant to avoid harm. When asked if there was anything further to add at the end of the interview, one female mentioned other barriers to psychedelic use women face

Women have to be more cautious about being in a different mental state. Psychedelics make you feel vulnerable and you need to feel safe. (Interviewee 3, ZIP Code 80903)

Illegality concerns, time, and drug testing were among the things mentioned by participants that limited consumption of certain substances. Four cannabis users and 1 psilocybin user mentioned illegality concerns as something limiting consumption. One user said the following

I'm brown and live in a white area. Don't want to get caught, I have a daughter. (Interviewee 10, ZIP Code 34236)

Another user had avoided cannabis due to the strict military penalties

I was in the military for 8 years and couldn't smoke. Some did but you could lose rank. They gave me a ton of medications to help and then my goal was to get off all of those. I'm only on one and Cannabis has helped me with a lot of those symptoms. (Interviewee 7, ZIP Code 87105)

Four users, all Caucasian, had faced legal ramifications of various degrees due to Cannabis. One user was caught with cannabis by law enforcement but not charged. In her words

I've been caught and nothing happened but I attribute it to white privilege. I was with friends of color that got charged but they let me go. (Interviewee 4, ZIP Code 88316)

No one I interviewed faced legal penalties for psilocybin or LSD but one user (Interviewee 12, ZIP Code 97201) in Oregon mentioned "an incident has come close" when asked about psilocybin ramifications.

The most common factor that limited psilocybin and LSD consumption at some point was being unable to find it. 9/13 LSD users and 7/11 psilocybin users mentioned having struggled to find it at some point. One user mentioned how their access to mushrooms was disrupted

My source has been arrested for drugs before. Also moving to a new place and having to find a new source can be difficult. (Interviewee 9, ZIP Code 97201)

One person mentioned the following about LSD

I know a lot more people that would use it if they could find it and even more would take it if they could use it in a therapeutic setting. (Interviewee 17, ZIP Code 97404)

Another said this when asked if there was anything they would like to add at the end of the interview

When I talk to people I know a lot of people that say they would do mushrooms if they could and I want it to help them. There's a ton of people that want this medicine. (Interviewee 14, ZIP Code 74112)

These responses highlight several factors limiting participants psilocybin and LSD consumption. Several of these barriers to LSD and psilocybin use as well as negative impacts could be eliminated and avoided with policy changes surrounding these substances. The development of psychedelic assisted therapies along with legalization of psilocybin and

LSD would reduce concerns of legal consequences and issues finding these substances. This could also eliminate dosage issues and allow users to interact with measured, regulated doses. Reported motivations show that the therapeutic benefits of these substances are being sought out and access to these substances is widely needed.

5.4 Substance Use

Figure vi: Respondent Substance Use Patterns

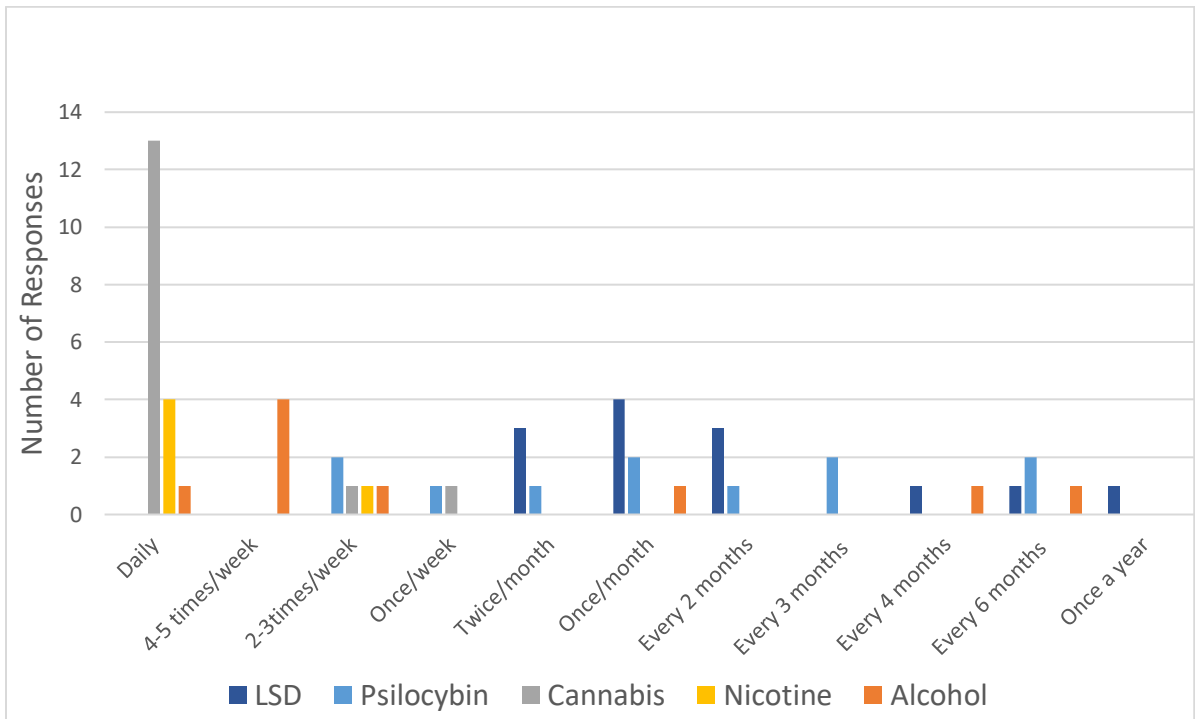
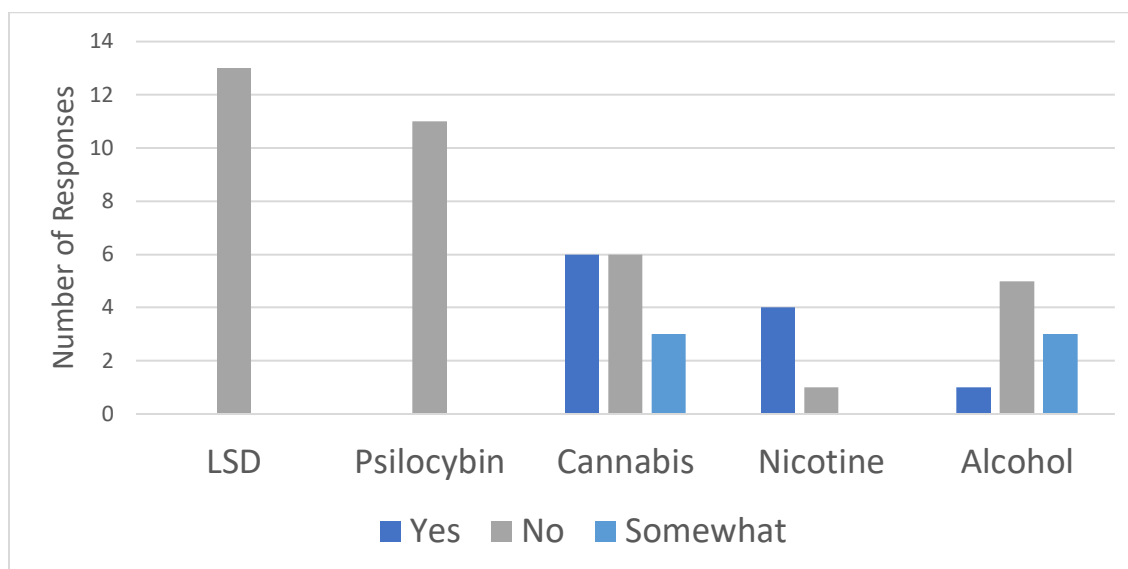


Figure vii: Responses to “ Would you consider yourself addicted to this substance?”



LSD and Psilocybin were the only substances with no daily or close to daily users. Not a single user of LSD or psilocybin claimed to be addicted to either psilocybin or LSD and all participants self-reported use supported this answer. The most common reported LSD use was twice a month and the three most frequent mushroom users were taking them to micro dose. The most common reported use among the other psilocybin participants was twice a month. These use patterns attest to their more permanent impacts mental health benefits. Many users felt that interacting with psilocybin or LSD 1-3 times a year was enough. One trip alone can be enough to drastically lead to change for the better. One interviewee stated

-The psilocybin trip I took a year ago was a catalyst and changed my life. I've become a death doula although it has slowed a bit. I started practicing withcraft and I hired a coach to help. (Interviewee 13, ZIP Code 97215)

Others would consume mushrooms a few times a month for a couple months, and take a break for the rest of the year. Several reached a point where they were content to take a break from psychedelic use which further supports the claim that psychedelics do more than treat symptoms. One user took LSD and mushrooms twice a month from March to mid-May had not consumed them since at the time of our interview in August. In their words

-I go through patterns of heavy use because I've gotten what I needed out of the experience. Generally, don't use it recreationally more for mental health.

(Interviewee 1, ZIP Code 74105)

When asked about motivations for psilocybin use they stated

They help me when I need to think things through or I want to reflect on things I'm going through in my life. I feel connected to others when we're on it. They've helped me deal with a recent breakup. (Interviewee 12, ZIP Code 97201)

Many users reported reaching a point where they achieved their goal with psilocybin use and were content to take a break for a period of time. This speaks to the efficacy of psychedelics ability to help issues in a more permanent way.

5.5 Motivations

Figure viii: Responses to “ What are your motivations behind (substance) consumption?”

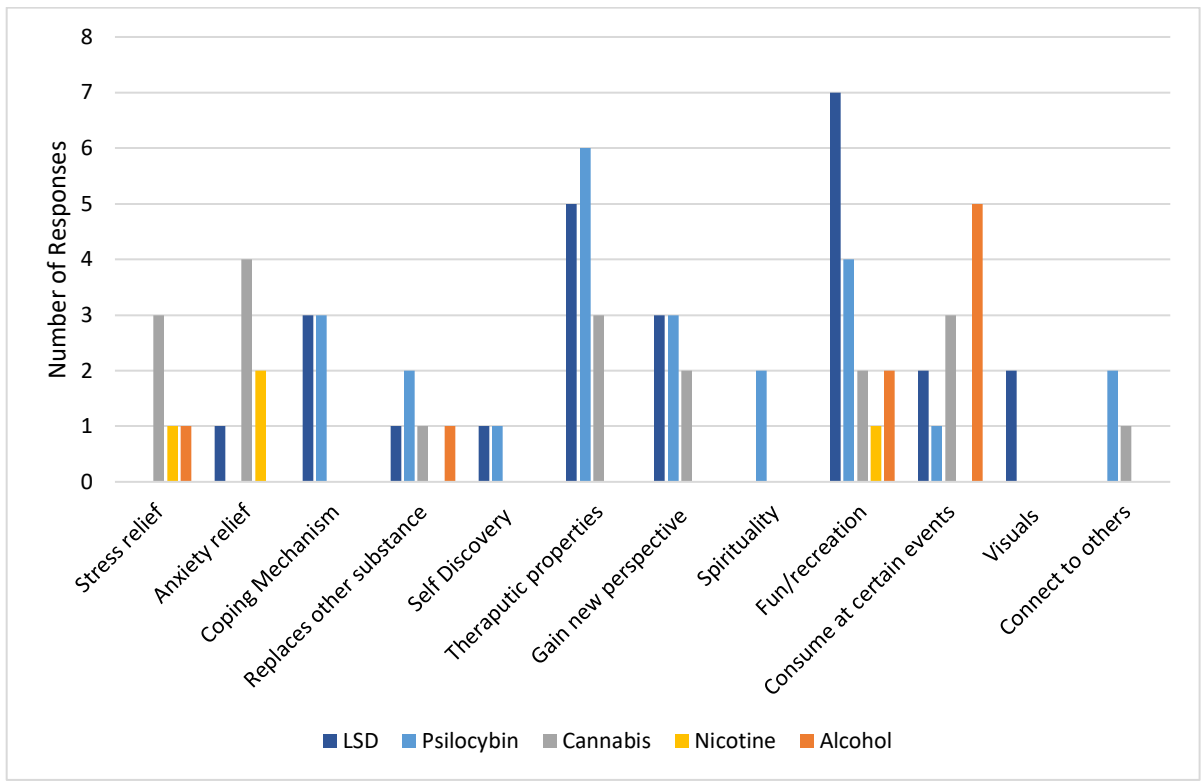
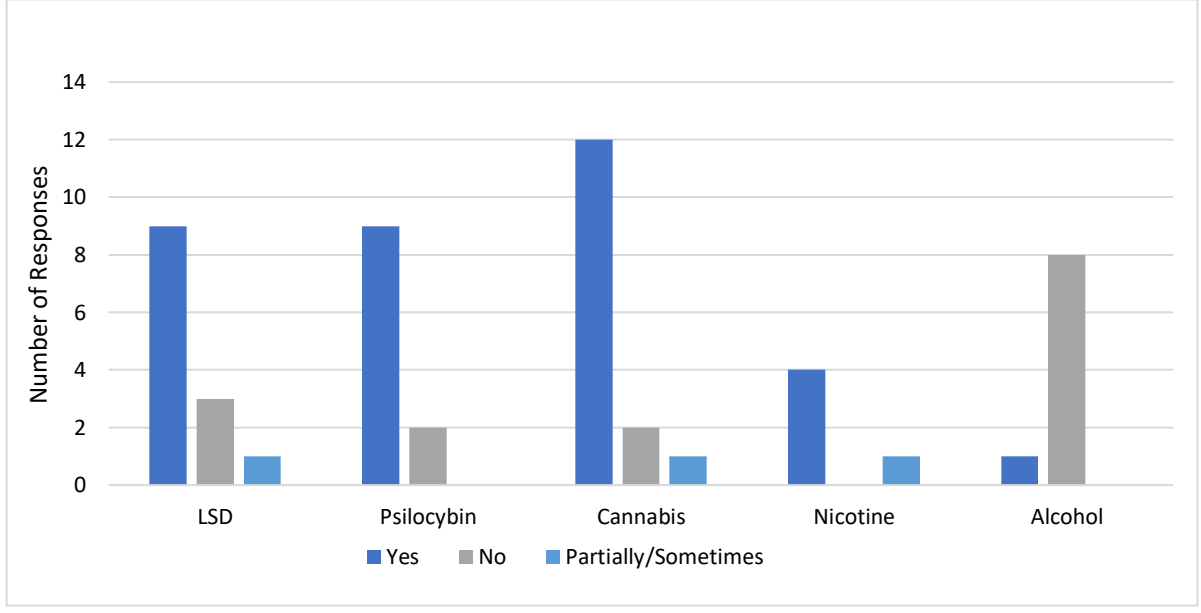


Figure ix: Responses to “ Would you consider your use of (substance) self-medication?”



The majority of participants considered their use of Psilocybin, LSD, Cannabis, and nicotine self-medication and the motivations users reported supported this. Consuming LSD and psilocybin for recreation and for their therapeutic properties were the most common motivations mentioned. Twelve out of thirteen LSD users and ten out of eleven psilocybin users mentioned some sort of mental growth benefit when asked about motivations behind consumption. Several users motivations highlight the ability of psilocybin and LSD trips to enable permanent change and healing. As one user stated

Mushrooms are a symbiotic relationship, the more they help you the more capable you become to help yourself. I've struggled with depression, trauma, and cognitive pain, but I've been experiencing relief from that from psilocybin. You can stop taking mushrooms and there's not a comedown or addiction issues. If you stop antidepressants, they can make you go all emotional devastating. Mushrooms have also regulated my gut. Also seem to make healthier food sound better and junk food starts to make me sick. (Interviewee 17, ZIP Code 97404)

Several users specifically mentioned being able to gain new perspectives and insights during psilocybin and LSD. Users felt that these insights stayed with them after use and showed them how to make positive changes. One users stated the following motivations behind mushroom consumption

They (mushrooms) help me to know myself and help me understand my subconscious. Everyone needs that to see what drives your actions and decisions and thought processes, they make all of that more clear and easy to reflect on.
(Interviewee 3, ZIP Code 80903)

Another user said this about their motivations for LSD use

I've never had a bad time on LSD, everyone I've taken it with had a positive influence on life. You see things from a different perspective. LSD helped battle anxiety and ease my way out of it. Can change outlook on life, always for the better. Helps to confront past trauma, it can be constructive and healing and it helps you hit them head on and figure out why your struggling and what are you holding back.

(Interviewee 11, ZIP Code 11961)

As one participant said

Feeling connected, enjoy ego lifting, helped me work through a lot of personal history. It helped me become aware of irrational thoughts and beliefs I believe are behind my mental illness. (Interviewee 7, ZIP Code 87105)

Several people mentioned that psilocybin helped them cope with certain situations. One interviewee said this when asked about motivations behind use

In the past just to have a trippy experience with my friends in cool places but more recently in the past its more for mediation purposes to help with when I am struggling with something. (Interviewee 4, ZIP Code 88316)

Now I feel like they're necessary to cope with certain situation. I need them to help me. Before it was more for personal development. I really feel like psychedelics saved me from alcoholism. It's one of the driving forces in my life. I intend to be a psychedelic therapist once I can legally do so, I'm going to school now. A psychedelic taking society would completely change how we view things.

(Interviewee 10, ZIP Code 34236)

Other participants felt that LSD helped them with issues in other ways. As one user stated

It's stronger than mushrooms antidepressant effect, helped me sleep long term, LSD restarted my brain, it feels like a trip fixed my head. Don't think I could have had this conversation with you two years ago. (Interviewee 17, ZIP Code 97404)

Several interviewees mentioned that even when psychedelics are consumed for recreation, they still experience mental benefits. One user said the following when asked if they considered their use of LSD self-medication

Sometimes, more often than not is recreational but even in those cases my thoughts still grow for the better. When it is done primarily for recreation there is still healing that goes on. (Interviewee 11, ZIP Code 11961)

Another interviewee stated

Psilocybin, LSD, and other psychedelics feel good in the moment but also show you what changes or path you need to take to help you reach internal fulfillment.

(Interviewee 4, ZIP Code 88316)

These results show that the therapeutic benefits are commonly motivating psilocybin and LSD use. Even users motivated by recreational use mentioned the mental health benefits that were a part of their trip experiences. Several respondents mentioned the ability of psychedelics ability to reflect on various aspects of their life.

These motivations behind psilocybin and LSD highlight the variety of therapeutic benefits motivating substance use. These accounts also display some of the attributes of psilocybin and LSD that can enable permanent, positive change and healing. The effects participants reported give more insight into how psilocybin and LSD can have these powerful impacts.

5.6 Effects

Figure x: Therapeutic effects described when asked “What effects do you attribute to (substance)?”

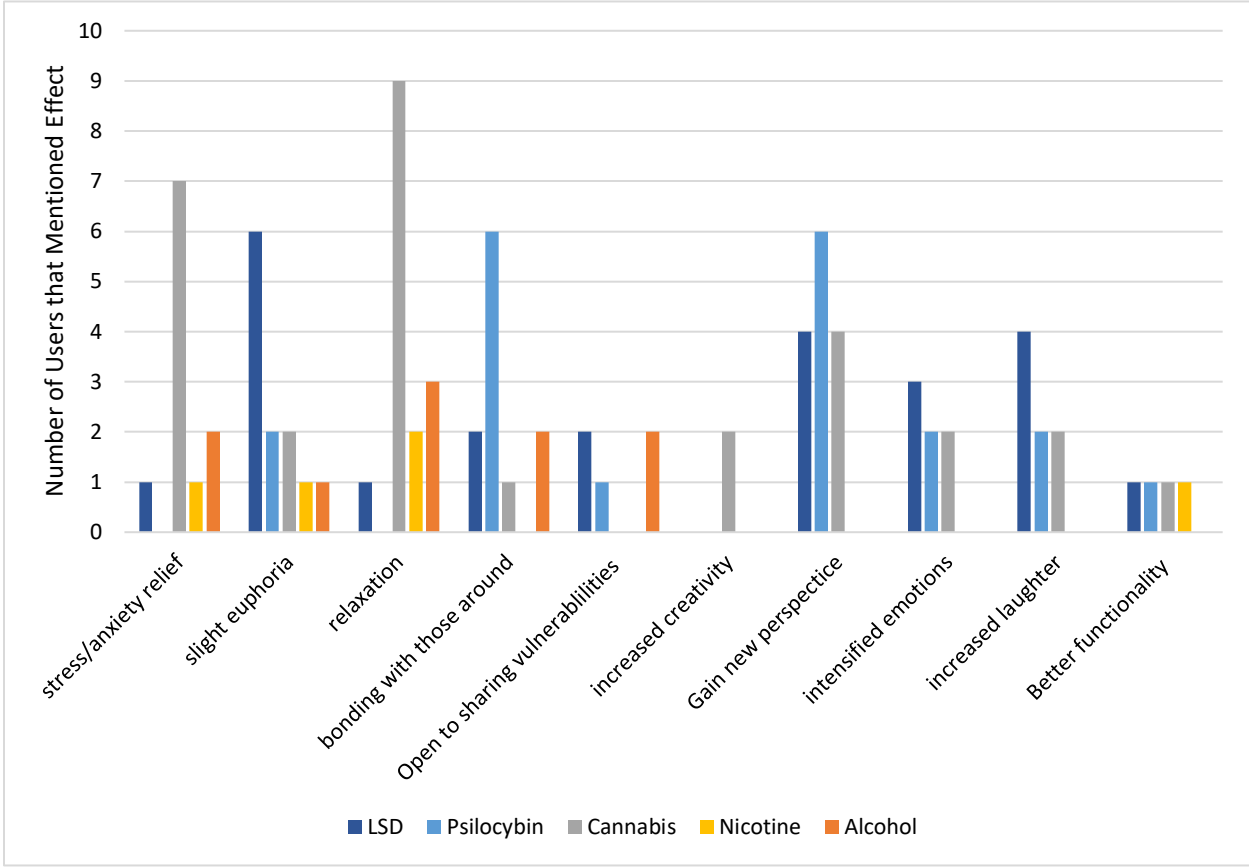
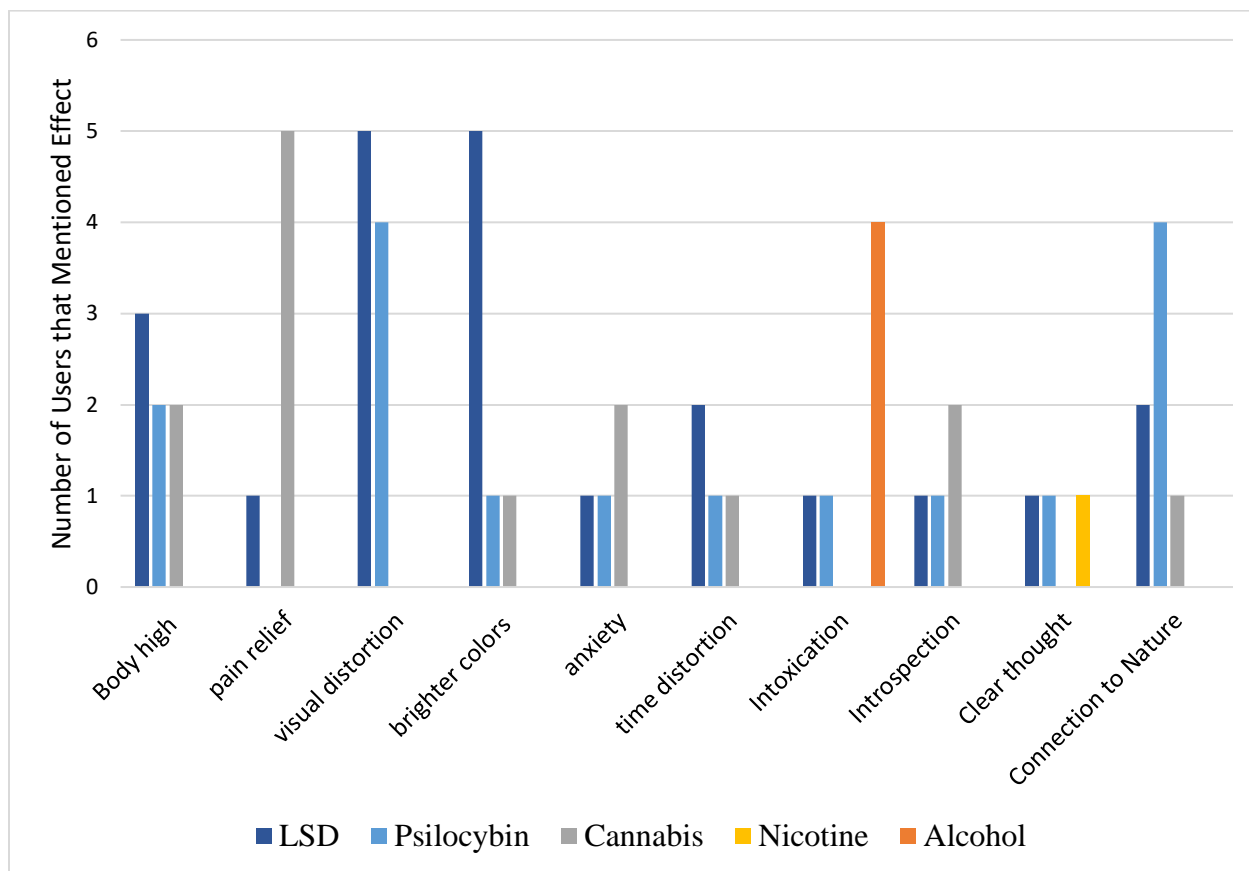


Figure xi: Other effects described when asked “What effects do you attribute to (substance)?”



Feeling deeper connections to those around was a commonly mentioned effects. Six psilocybin users and two LSD users mentioned feeling closer to those around them while tripping. Two users described mushrooms effects as follows:

Euphoria, introspection, visual effects, good conversation, facilitates a space for people to be comfortable enough to share vulnerabilities, makes you feel safe to talk about things. Both therapeutic and fun. (Interviewee 10, ZIP Code 34236)

It's a strong bonding substance with who you are with. Things get funnier, you notice new details in everything. (Interviewee 10, ZIP Code 34236)

One user attributed the following effects to LSD

Everything is funny and awe-inspiring, childlike wonder, surroundings wave, senses are heightened, colors and lights are brighter, touch feels more sensitive, sweets are better, loss of time and sometimes memory can be lost during peak, don't remember unless reminded, feel more attachment to people around you. (Interviewee 3, ZIP Code 80903)

Gaining new perspective was the effect mentioned the most after visuals with six psilocybin users and two LSD mentioning looking at things in different ways while tripping. Two users stated that mushrooms made them feel the following,

Mental-changing perspective It allows you to see different looks on things, break out of rigid thought patterns, different insights, looking at problem from a different angle. (Interviewee 2, ZIP Code 78229)

I get visuals, trails and geometric shapes,. It make me think clearer, I'm able to look at problems in new ways, gives me insight and perspective, makes me laugh. (Interviewee 9, ZIP Code 97201)

One users described that LSD expanded their thinking in the following ways

I'd describe it as neurogenesis, the ability to form new thought patterns and new fields of awareness and new states of minds that during the dosage and integration I try to amplify the things I've chosen to keep and activate and integrate those pathways. (Interviewee 13, ZIP Code 97215).

This description provided by one user is an example of the benefits an LSD trip can have.

Similar to getting really high on weed but crystal clear in thought, you know everything you're doing, sharpened senses, you perceive things that you couldn't,

beauty that you otherwise would ignore or feel unimportant. Hit a big reset button and you're doing things for the first time but you know what you're doing.

I feel mental euphoria, I can dive deeper into thoughts, unpacks them in ways I normally couldn't. (Interviewee 2, ZIP Code 78229)

Several of these results show the variety and of therapeutic benefits of psychedelics and display their ability to enable mental healing and growth. Stress and anxiety are common everyday mental stresses. No psilocybin users and solely one LSD user mentioned stress/anxiety relief and relaxation as an effect. Several users mentioned how beneficial psilocybin and LSD have been to their overall mental health. Participants reported motivations and effects show that psychedelics do not help mental health by treating the symptoms of every-day struggles such as stress or anxiety. They help mental struggles in a more permanent way by allowing users to reflect in new and critical ways to get to root of these issues. New thought patterns, bonding with those around, feeling more open to sharing vulnerabilities, and slight euphoria were all effects mention that contribute to therapeutic potential of psilocybin and LSD. It is a combination of these along with other attributes that allow meaningful healing and change to happen during psychedelic experiences.

5.7 Microdosing

Three users were using mushrooms to micro-dose for various reasons. There is not a standard micro dosing schedule and all three users had different schedules and doses. One user took 1-2 grams of mushrooms once a week. She had never consumed mushrooms or psychedelics of any kind until she began micro dosing at the beginning of 2020. In her words

I did psychotherapy for many years. It was productive but it was super slow. With psychedelics you can go much deeper for mental health problems. You will get results better and faster. I've tried many things but nothing was as effective.

Later in the interview this same user stated.

I think it is a really powerful tool for psychotherapy. I've tried many things but nothing was as effective. (Interviewee 5, ZIP Code 28202)

Another micro doser took an 1/8th of gram 4 times weekly 2 days on 3 days off, a 1/2 to 1 gram dose once a month to foster creativity, and a 5- 7 gram dose twice a year. In their words

I've had a lifelong relationship with suboptimal neurology and depressive tendencies my whole life. One reason I take them. Large doses are for creative depth the micro dosing is an experiment at overcoming depressive states.

The effects this user attributed to psilocybin were as follows

Neurogenesis, the ability to form new thought patterns and new fields of awareness and new states of mind. During the dosage and integration, I try to amplify the things I've chosen to keep and activate and integrate those pathways. (Interviewee 15, ZIP Code 97201)

The third user took a 1/16th gram mushrooms for a few days in a row every other week.

When asked about motivations for psilocybin use they stated

I was brain damaged for a bit 2 years ago and couldn't do basic math. Some connections that should be easy were broke. I started doing it recreationally and noticed so many positive turns. Slowly my facilities returned and the brain fog has lifted. After years and years of not being able to go into rem sleep. I was going off of

hour naps. After LSD and mushrooms regularly and MDA I started getting 8 hours of uninterrupted sleep and my brains was able to start resting so I stuck with it.

(Interviewee 17, ZIP Code 97404)

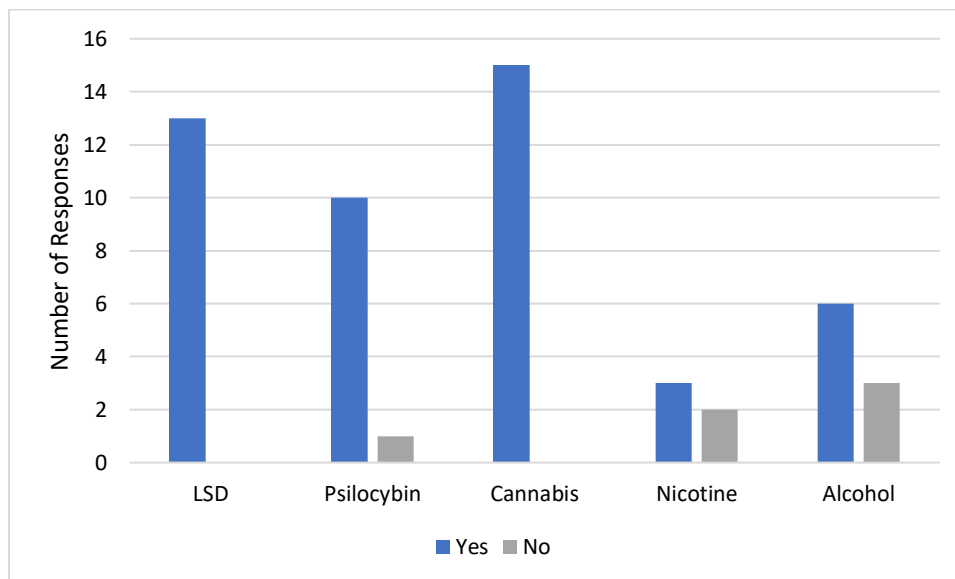
I did not interview anyone that was micro dosing with LSD, although one interviewee said they would consider micro dosing with LSD if cost were not an issue. Micro dosing with LSD appears to be less common for a few reasons. Obtaining substances illegally means it is impossible to guarantee Quality, quantity, and purity. This makes dosage difficult, which is especially dealing with substances that are already potent in small doses such as LSD which has a threshold dose of about 20 micrograms. A participant micro dosing with psilocybin stated the following when asked about factors limiting LSD consumption

It's more difficult to take a sub active dose of LSD. Even small doses have a psychotropic effect on me. If I'm expecting a miserable dose of depression a small dose of mushrooms can lift me out of that. There is a small chance that a low dose of LSD can make it worse. (Interviewee 17, ZIP Code 97404)

These micro dosing accounts show how powerful psychedelic medicine can be even in small, sub active doses. This shows that the hallucinogenic effects of psychedelics are not necessary to undergo in order to achieve psychedelics healing ability. With psychedelic assisted therapy or changes in policy/legalization that could allow micro dosing people that do not want to experience the hallucinogenic effects of psilocybin or LSD can still receive and benefit from psychedelic treatment. The development of psychedelic assisted therapies along with legalization of psilocybin and LSD would allow dosage regulation and could eliminate concerns of taking too much or too little.

5.8 Positive Impacts

Figure xii: Responses to “Has this substance had positive impacts on your life?”



Every LSD and cannabis user and all but one psilocybin uses felt that these substances had positive impacts on their life. Several participants mention that new thought patterns and insights during psychedelic use lead to lasting, positive impacts. Two users said the following when asked if LSD use had positive impacts on their lives

-Yes, absolutely, it allows me to be more openminded, feels like a mental reset after.

(Interviewee 2, ZIP Code 78229)

-Yes, I have different thoughts that I wouldn't have otherwise have. It helps me have an open mind and those thoughts stick with me after the acid has worn off.

(Interviewee 8, ZIP Code 87112)

Two interviewees stated the following when asked about psilocybin,

-Yes, definitely, helps build stronger bonds and relationships. (Interviewee 12, ZIP Code 97201)

-Yes I think its added a lot of clarity and cohesiveness. I did three tours in IRAQ. A lot are of the others emotionally stuck, alcoholics, or divorced. It's helped me avoid that and it's a good teacher and helps me believe in my intuition. It's really gentle.

(Interviewee 7, ZIP Code 87105)

Psilocybin and LSD appear to help users change their lives for the better.

- Yes, I used to be part of a cuddle group and I miss touch and emotional closeness and mushrooms have allowed me to keep my priorities straight, get good perspective, see what benefits I can get from this experience. (Interviewee 7, ZIP Code 87105)

Several participant reported that psilocybin and LSD helped them feel more fulfilled and content in their current situation.

Participants were asked if the substances they used has helped them cope with pandemic impacts in any way. Two users reported psilocybin had helped them in the following ways

-Yeah I'd say they have helped, I think when we're isolated like this our mental health can spiral into something that's not exactly real and I feel like mushrooms can help us recalibrate how we view reality. (Interviewee 15, ZIP Code 97201)

-It helps the trips I had in the beginning of the quarantine to deal with the shock of losing my job and having to leave my home. It helped comfort me. Also had a nice trip in September that was hard and made me cry a lot but I felt so much better afterword's.

-It lets me not think about COVID, taking acid is a break from the world, it takes you to a soothing and relaxing place. (Interviewee 8, ZIP Code 87112)

Several LSD users felt that their trips helped them become at peace with things they could control. When asked if LSD had positive impacts on their lives their responses were

-Yes definitely, I feel like I find my place in the universe when I'm on it. (Interviewee 9 ZIP, Code 97201)

-The way it operates helps at any time period. There's only so much you can do in life and anything beyond that is out of our control. LSD helps you let go of what is out of your hands, LSD helps you come to peace with it and learn what you can.

-Yes definitely, helps me not take myself so seriously, ego death, im just a speck in the universe. (Interviewee 9, ZIP Code 97201)

One interviewee reported that LSD helped him avoid alcohol

-Yes, it got me to stop drinking. (Interviewee 10, ZIP Code 34236)

These are lessons that stayed with psilocybin and LSD users after the trip was completed. As one interview reported

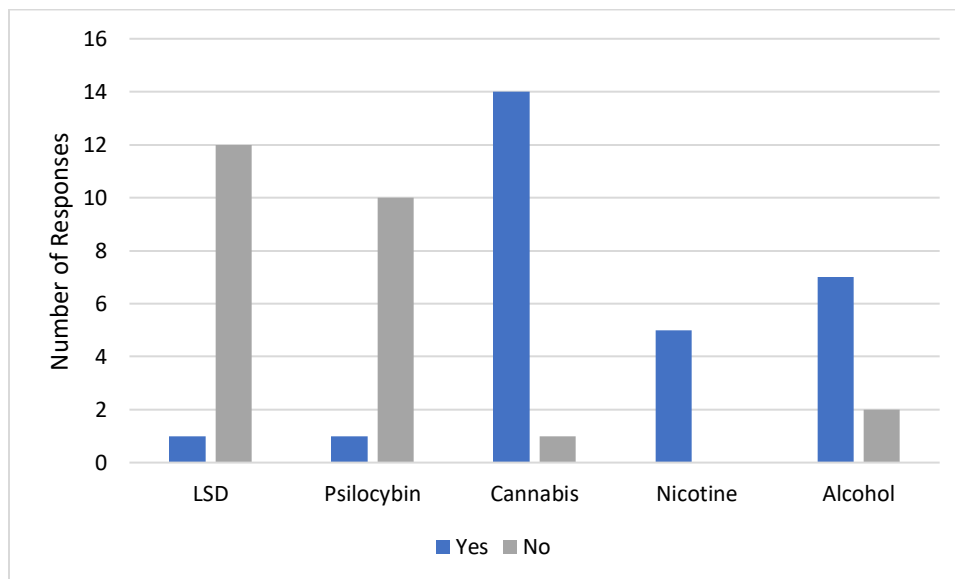
I sought out a therapist and mushrooms have been far more helpful, the whole trip experience helped me be more at peace with things. (Interviewee 12, ZIP Code 97201)

These accounts display the variety of applications and benefits of psilocybin and LSD.

Psilocybin and LSD were able to provide these profound impacts on users lives with irregular, often infrequent use. This supports the argument that psilocybin and LSD provide permanent healing and benefits and do more than treat the symptoms.

5.9 Negative Impacts

Figure xiii: Responses to “Has this substance had negative impacts on your life?”



Solely one LSD and one psilocybin user claimed the substance had resulted in negative impacts on their lives. These two users said the following

Yes, instance of friend going overboard on LSD and lost some friends. But I don't blame the substance I blame the person. (Interviewee 9, ZIP Code 97201)

-Yes, I'm at the end of a 22 year career and psilocybin is disinterested in what I do for a living. It has loosened my attachment to my living job but I was already there. It's not harmful but negative. (Interviewee 13, ZIP Code 97215)

Several users had experienced difficult psilocybin and LSD trips but did not always feel like the trip was a negative experienced. In some cases users felt that difficult trip experiences were some of the most valuable experiences. Two users said the following when asked if LSD use had negative impacts on their lives,

-No, Sometimes it doesn't give you to option to confront things in your head. It forces you to examine, process, and deal with it. It frees you from it. Never a negative end result. (Interviewee 11, ZIP Code 11961)

-Maybe not negative but negative at the time. It was therapeutic once I addressed it (Interviewee 4, ZIP Code 88316)

When asked about the positive impacts one psilocybin user stated.

-Definitely, even when trips are harder they are necessary and good still comes from those trips. You learn the most from those trips and you have a better understanding of mortality and more appreciation for your normal brain

Overwhelmingly psilocybin and LSD interactions were positive experiences. Negative or difficult experiences that result in overall positive impacts were not reported with other substances and seem unique to psychedelics.

5.10 Gift Economy

I found that a gift economy was common among Psilocybin and LSD users. I interviewed several respondents that shared with others often and several that only interacted with psilocybin or LSD when others provided it. Three LSD and three psilocybin users did not purchased what they all consume on multiple occasions and did not reimburse the friend that shared with them. The three participants that spent the most on Psilocybin containing mushrooms regularly shared them with others. One user that only taken psychedelics when others provided it stated one user mentioned

-I'd be open to taking mushrooms more if they were accessible and I could find them. I like to plan them out a couple of weeks in advance. I don't think of them as something I take regularly. (Interviewee 8, ZIP Code 87112)

The bonding effects of psychedelics also contributed to users being happy to share with others. Group situations where one person provided the LSD or mushrooms for a group to take together were common. Many users felt tripping with others were very valuable experiences. One participant had a family member that grew mushrooms are regularly shared with them. They described their experience tripping as a family,

One time I tripped with family with the intention of revisiting some family trauma and wounds. This was the most powerful experience I've had. 3 generations of family did a ceremony at my moms. We let a lot of stuff go. (Interviewee 7, ZIP Code 87105)

One user that spent around 950 dollars a year on psilocybin commonly provided mushrooms for a group of usually four or five friends to take together. When asked about contexts this user stated that they always took mushrooms with friends and attributes the following as one effect of mushrooms

You can feel the energy of those around you, I'm not going through anything alone. (Interviewee 12, ZIP Code 97201)

One interviewee that commonly shared mushrooms with friends stated enjoyed sharing psychedelics positive impacts with others. As they stated

These are experiences I think people should have and I would like to share that. I like to experience it with others who haven't done it. It connects you with nature, can make you think differently about the world around you. It connects you to people around you and where you're at. (Interviewee 15, ZIP Code 97201)

One user first took LSD when one person provided it for a group of coworkers to take together. They said the following about their experience

I took LSD with friends and laughed and felt fantastic. All of us had felt like shit in life but we had a truly great time after years of frustration. It was really great to have that experience. We were kids again. Since that first time we trip together a couple times a year. (Interviewee 17, ZIP Code 97404)

In cases such as this story, LSD and psilocybin can lead to powerful, positive impacts after a single use. The bonding impacts of the shared experiences is another aspect of psilocybin and LSD that remain after the psychical drug effects where off.

Chapter 6 Conclusion

These results confirm that the therapeutic benefits of LSD and psilocybin are common motivations behind use. These benefits resulted in psilocybin and LSD having profound positive impacts on users lives. Psilocybin and LSD produced therapeutic and positive change from recreational use and even from difficult experiences. Categorizing these substances as illegal has discouraged and prevented people from accessing substances that can help them in profound, positive ways. These results highlight psilocybin and LSD's powerful effects, and the stories are overwhelmingly positive. Low frequency of use, reported effects, and long-term impacts display the ability of psilocybin and LSD to produce meaningful and long-term mental healing benefits. Many users reported reaching a point where they got what they were seeking out of psilocybin or LSD and were content to take a break. These substance use patterns support the argument that psychedelics can lead to permanent positive change. Several users felt that psilocybin or LSD had been more effective than current treatment options such as anti-depressants or other anti-psychotics and psychotherapy. Not a single participant reported an addiction to psilocybin or LSD and their use supported these answers. The lack of negative impacts reported speaks to the efficacy and overall safety of psychedelics.

The differences between psilocybin, LSD, cannabis, nicotine, and alcohol use display the need for unique policies and practices surround psilocybin and LSD. Surroundings during psychedelic consumption are important determinants of psychedelic experiences and feelings of safety are crucial. Greater awareness and harm reduction knowledge can further eliminate negative or dangerous trips. Several of the barriers to LSD and psilocybin use as well as negative impacts could be eliminated and avoided with policy changes surrounding these

substances. Legalization of psilocybin and LSD would eliminate concerns of legal consequences and could eliminate several common causes of negative psychedelic experiences such as substance purity and dosage issues. The micro dosing accounts show people that do not want to experience the hallucinogenic effects of psilocybin or LSD can still receive and benefit from psychedelic treatment. Available and affordable psychedelic assisted therapy would allow those seeking the mental health benefits of psychedelics to do so under guided conditions and facilitate maximum therapeutic potential.

6.1 What's Happening Now

Progress has been made toward decriminalizing certain psychedelic substance and allowing various psychedelic assisted therapy. In 2020 Oregon became the first state to legalize psilocybin and the District of Columbia elected to decriminalize the use of magic mushrooms and other psychedelic substances, similar legislation has been proposed in Vermont and Iowa (Feuer 2020). *On* June 1, 2021, California Senate Bill 519 passed which decriminalizes the personal use and possession of psychedelic substance, the most expansive psychedelic policy reform to pass through a state chamber (“MAPS Celebrates California Senate Passage of Groundbreaking Psychedelic Reform Bill” n.d.). An article in the *New York Times* reports “It is only a matter of time before the Food and Drug Administration grants approval for psychoactive compounds to be used therapeutically — for MDMA (the pure form of ecstasy) as soon as 2023, followed by psilocybin a year or two later (Jacobs 2021).” Massachusetts General Hospital has begun a new Center for the Neuroscience of Psychedelics to better understand the psychedelics effects on the brain, their mechanisms, and potential for therapeutic purposes. During an interview Jerrold Rosenbaum, the psychiatrist heading the new center said the following

It's quite clear from the neuroimaging, that we are profoundly, at least temporarily, disrupting brain and connectivity. And that many who have undergone this experience in a controlled setting experience a meaningful change in emotional state...There's even a hope that we'll be able to do precision psychedelics, that we'll be able to know which substance might be better for which person. (Powell 2021)

Interest in psychedelics is growing along with the body of research surrounding their therapeutic potential. This research shows there is a demand for psychedelic assisted therapy and other psychedelic service.

6.2 Moving Forward

Improving Equity and inclusion across psychedelic literature, research, and leadership are just one of the many issues that need to be improved. Thrul and Garcia-Romeu summarize some of the changes that need to happen as well

“Research institutions must work on building trust with BIPOC communities and address systemic and institutional racism. Although psychedelics can potentially make a contribution to reducing racial trauma, systemic interventions will be needed to improve the lives of communities of color in the U.S. Additionally, with increasing use of psychedelics among bisexual individuals and severe health disparities among sexual and gender minority groups, the issues raised here will have to be expanded to include all people across the spectrum of underrepresented backgrounds. Considering the importance of the sense of unity or oneness that classic psychedelics can evoke in mediating their long-term benefits, the field should take this to heart in applying psychedelics constructively towards ensuring equity of access and reducing health disparities, and make this an urgent priority. (2021, 213)”

Work needs to be vigilantly done to address the inequalities in healthcare access and ensure all people have equal access to psychedelic medicines and services.

While various types of psychedelic therapies can successfully treat widespread issues such as anxiety, depression, addiction, and PTSD, they are only part of the solution to the mental health crisis. Many of these mental illnesses are often the symptoms of much bigger issues. Rather than try and treat mental health issues as they arise, the goal should be to prevent their causes in the first place. Childhood trauma and emotional traumas increases the risk of depression, anxiety, and overall dysfunctional emotion regulation (Heim et al. 2008), (Fernandes and Osório 2015). Poverty, debt, inequality, racism, war, violence towards women, police violence, childhood abuse, ableism, homophobia, and homelessness are all sources of trauma. Working to eliminate these issues is how we can address and hopefully cure the cause of the mental health crises. Social justice issues are critically relevant in both physical and mental health outcomes.

Appendices

Appendix A Semi-Structured Interview Questions

1. What is your age and gender Identity?
2. Current Zipcode?
3. What is your current job title?
4. What is your income range?
5. Have you experienced changes in employment, income, or insurance due to factors related to COVID-19?
6. Are there other significant ways the pandemic has impacted your life?
7. Does your job involve drug testing of any sort? If so, has this prevented you from interacting with certain substances?
8. Since March 1st of 2020 which of the following substances have you consumed:
Psilocybin, LSD, alcohol, prescription drugs, cannabis, Nicotine?
9. Why do you not consume ..._Substances individual has not consumed?
Questions repeated for each substance consumed
10. How often to you consume _____ ?
11. When did you start using ?
12. What is your mode of consumption?
13. Do you have to travel more than 1 mile to purchase _____ ?
14. Do you have a consistent supply of _____ ?
15. Has the pandemic interrupted supply
16. Were you using _____ during this same time period in 2019?
17. What was your rate of consumption for this time period in 2019?

18. Has your use of _____ increased, decreased, or stayed the same since the March of 2020?
19. How much have do you spend on _____ weekly or monthly?
20. What contexts have you consume _____ in? i.e Time of day, place, work, social setting
21. Do your friends and family consume _____ ?
22. What contexts have you consume _____ in 2019?
23. Have you lowered consumption due to cost?
24. Are there other factors limiting to your _____ consumption?
25. Has your access to _____ been disrupted? If so due to what factors?
26. What effects do you attribute to _____ ?
27. What are the motivations behind _____ consumption?
28. Does taking _____ help in any way to address issues related to or worsened by the COVID-19 pandemic?
29. Would you consider your use of _____ self-medication?
30. If you couldn't use _____ for any reason, would you use another substance instead?
31. Has this substance had positive impacts on your life?
32. Has this substance had negative impacts on your life?
33. Have you faced ramifications related to _____ use (i.e such as medical or legal)?
34. Would you consider yourself addicted to this substance?
35. Do you or have you ever have a medical marijuana card?
36. Do you have any additional comments on anything that you'd like to say?

Bibliography

- Abbey, Antonia. 2002. "Alcohol-Related Sexual Assault: A Common Problem among College Students." *Journal of Studies on Alcohol. Supplement*, no. 14 (March): 118–28.
- Aitcheson, Julie. 2021. "Women More Likely To Use Psychedelics Than Men." Green Market Report. March 22, 2021. <https://www.greenmarketreport.com/women-more-likely-to-use-psychedelics-than-men/>.
- "A Tale of Two Countries: Racially Targeted Arrests in the Era of Marijuana Reform." n.d. American Civil Liberties Union. Accessed May 19, 2021. <https://www.aclu.org/news/criminal-law-reform/a-tale-of-two-countries-racially-targeted-arrests-in-the-era-of-marijuana-reform/>.
- Anderson, Thomas, Rotem Petranker, Adam Christopher, Daniel Rosenbaum, Cory Weissman, Le-Anh Dinh-Williams, Katrina Hui, and Emma Hapke. 2019. "Psychedelic Microdosing Benefits and Challenges: An Empirical Codebook." *Harm Reduction Journal* 16 (1): 43. <https://doi.org/10.1186/s12954-019-0308-4>.
- Bahi, Camile. 2020. "The MIND Blog | Psychedelics & Antidepressants." MIND Foundation. September 11, 2020. <https://mind-foundation.org/psychedelic-antidepressant-interactions/>.
- Bailey, Rahn Kennedy, Josephine Mokonogho, and Alok Kumar. 2019. "Racial and Ethnic Differences in Depression: Current Perspectives." *Neuropsychiatric Disease and Treatment* 15 (February): 603–9. <https://doi.org/10.2147/NDT.S128584>.
- Baker, David W., Joseph J. Sudano, Jeffrey M. Albert, Elaine A. Borawski, and Avi Dor. 2001. "Lack of Health Insurance and Decline in Overall Health in Late Middle Age." *New England Journal of Medicine* 345 (15): 1106–12. <https://doi.org/10.1056/NEJMsa002887>.
- Ballesteros, Salomé. 2006. "Natural Sources of Drugs of Abuse: Magic Mushrooms." *New Research on Street Drugs*, 167–86.
- Barroso, Amanda, and Anna Brown. n.d. "Gender Pay Gap in U.S. Held Steady in 2020." *Pew Research Center* (blog). Accessed June 1, 2021. <https://www.pewresearch.org/fact-tank/2021/05/25/gender-pay-gap-facts/>.
- Beckett, Katherine, and Steve Herbert. 2008. "Dealing with Disorder: Social Control in the Post-Industrial City." *Theoretical Criminology* 12 (1): 5–30. <https://doi.org/10.1177/1362480607085792>.
- Bowlin, Nick and 2020 From the print edition Like Tweet Email Print Subscribe Donate Now. 2020. "Psychedelics on a Trip to Western Ballots." February 25, 2020. <https://www.hcn.org/issues/52.3/south-public-health-psychedelics-on-a-trip-to-western-ballots>.

- Bragazzi, Nicola Luigi, Hicham Khabbache, Ignazio Vecchio, Mariano Martini, Marco Perduca, Riccardo Zerbetto, and Tania Simona Re. 2018. "Ancient Shamanism and Modern Psychotherapy: From Anthropology to Evidence-Based Psychedelic Medicine." *Cosmos & History* 14 (1): 142–52
- BV, Synthesis Institute. n.d. "Can You Take Shrooms on Antidepressants? — SYNTHESIS." Accessed January 12, 2021. <https://www.synthesisretreat.com/psilocybin-and-ssri-snri-interactions>.
- Capers, I. Bennett. 2009. "Policing, Race, and Place." *Harvard Civil Rights-Civil Liberties Law Review* 44 (1): 43–78.
- Carbonaro, Theresa M, Matthew P Bradstreet, Frederick S Barrett, Katherine A MacLean, Robert Jesse, Matthew W Johnson, and Roland R Griffiths. 2016. "Survey Study of Challenging Experiences after Ingesting Psilocybin Mushrooms: Acute and Enduring Positive and Negative Consequences." *Journal of Psychopharmacology* 30 (12): 1268–78. <https://doi.org/10.1177/0269881116662634>.
- Carfagno, Jack. 2020. "Healthcare Worker Shortage Due to COVID-19 Pandemic." *Docwire News* (blog). March 26, 2020. <https://www.docwirenews.com/docwire-pick/healthcare-worker-shortage-due-to-covid-19-pandemic/>.
- Carhart-Harris, Robin L, Mark Bolstridge, James Rucker, Camilla M J Day, David Erritzoe, Mendel Kaelen, Michael Bloomfield, et al. 2016. "Psilocybin with Psychological Support for Treatment-Resistant Depression: An Open-Label Feasibility Study." *The Lancet Psychiatry* 3 (7): 619–27. [https://doi.org/10.1016/S2215-0366\(16\)30065-7](https://doi.org/10.1016/S2215-0366(16)30065-7).
- "Center for Behavioral Health Statistics and Quality | SAMHSA." n.d. Accessed June 24, 2021. <https://www.samhsa.gov/about-us/who-we-are/offices-centers/cbhsq>.
- Cloke, Paul. 2002. "Envisioning Human Geographies | Taylor & Francis Group." Taylor & Francis. January 30, 2002. <https://www.taylorfrancis.com/https://www.taylorfrancis.com/books/edit/10.4324/9780203784495/envisioning-human-geographies-paul-cloke-philip-crang-mark-goodwin>.
- Coleman, R. *Psychedelic Psychotherapy: a User-Friendly Guide for Psychedelic Drug-Assisted Psychotherapy*. Berkeley, CA: Transform Press, 2017.
- "Controlled Substance Schedules." n.d. U.S. Department of Justice: Drug Enforcement Administration. Accessed May 14, 2020. <https://www.deadiversion.usdoj.gov/schedules/>.
- Curley, Caitlin. 2016. "How Women May Be the Biggest Victims of the War on Drugs - GenBiz." April 29, 2016. <https://genbiz.com/women-may-biggest-victims-war-drugs>.
- Department of Justice. (2014). *Hate crime statistics*. Department of Justice. Accessed June 2, 2020, from <https://ucr.fbi.gov/hate-crime/2014>

- DeVerteuil, Geoffrey, and Robert D. Wilton. 2009. "The Geographies of Intoxicants: From Production and Consumption to Regulation, Treatment and Prevention." *Geography Compass* 3 (1): 478–94. <https://doi.org/10.1111/j.1749-8198.2008.00204.x>.
- DiCicco-Bloom, Barbara, and Benjamin F. Crabtree. 2006. "The Qualitative Research Interview." *Medical Education* 40 (4): 314–21. <https://doi.org/10.1111/j.1365-2929.2006.02418.x>.
- Dong, Lu, and Jennifer Bouey. 2020. "Public Mental Health Crisis during COVID-19 Pandemic, China." *Emerging Infectious Diseases* 26 (7). <https://doi.org/10.3201/eid2607.200407>.
- Dyck, Erika. 2006. "'Hitting Highs at Rock Bottom': LSD Treatment for Alcoholism, 1950–1970." *Social History of Medicine* 19 (2): 313–29. <https://doi.org/10.1093/shm/hk1039>.
- Engl, Deborah C. n.d. "Possession of LSD: Defenses and Impact of Conviction." www.Criminaldefenselawyer.Com. Accessed May 13, 2020. <https://www.criminaldefenselawyer.com/resources/criminal-defense/drug-charges/possession-bsd-conviction.htm>.
- Erritzoe, D., L. Roseman, M. M. Nour, K. MacLean, M. Kaelen, D. J. Nutt, and R. L. Carhart-Harris. 2018. "Effects of Psilocybin Therapy on Personality Structure." *Acta Psychiatrica Scandinavica* 138 (5): 368–78. <https://doi.org/10.1111/acps.12904>.
- Fadiman, James. *The Psychedelic Explorers Guide Safe, Therapeutic, and Sacred Journeys*. Rochester, Vt: Park Street Press, 2011.
- Fergusson, Dean, Steve Doucette, Kathleen Cranley Glass, Stan Shapiro, David Healy, Paul Hebert, and Brian Hutton. 2005. "Association between Suicide Attempts and Selective Serotonin Reuptake Inhibitors: Systematic Review of Randomised Controlled Trials." *BMJ* 330 (7488): 396. <https://doi.org/10.1136/bmj.330.7488.396>.
- Fernandes, V., and F. L. Osório. 2015. "Are There Associations Between Early Emotional Trauma and Anxiety Disorders? Evidence from a Systematic Literature Review and Meta-Analysis." *European Psychiatry* 30 (6): 756–64. <https://doi.org/10.1016/j.eurpsy.2015.06.004>.
- Feuer, Will. 2020. "Oregon Becomes First State to Legalize Magic Mushrooms as More States Ease Drug Laws in 'Psychedelic Renaissance.'" CNBC. November 4, 2020. <https://www.cnbc.com/2020/11/04/oregon-becomes-first-state-to-legalize-magic-mushrooms-as-more-states-ease-drug-laws.html>.
- Friederich, Brandon. 2020. "Alcohol and Marijuana Sales Have Surged During Coronavirus Crisis." Maxim. April 1, 2020. <https://www.maxim.com/news/alcohol-sales-surge-during-coronavirus-pandemic>.

- Gable, Robert S. 2004. "Comparison of Acute Lethal Toxicity of Commonly Abused Psychoactive Substances." *Addiction* 99 (6): 686–96. <https://doi.org/10.1111/j.1360-0443.2004.00744.x>.
- George, Jamilah, Timothy Michaels, Jae Sevelius, and Monnica Williams. 2019. "The Psychedelic Renaissance and the Limitations of a White-Dominant Medical Framework: A Call for Indigenous and Ethnic Minority Inclusion." *Journal of Psychedelic Studies* 4 (July): 1–12. <https://doi.org/10.1556/2054.2019.015>.
- "Global State of Smoking Poll 2019 - Foundation for a Smoke-Free World." n.d. Accessed May 15, 2020. <https://www.smokefreeworld.org/global-state-of-smoking-poll-2019/>.
- Graves, Lucia. 2020. "Women's Domestic Burden Just Got Heavier with the Coronavirus." *The Guardian*. March 16, 2020. <http://www.theguardian.com/us-news/2020/mar/16/womens-coronavirus-domestic-burden>.
- Griffiths, Roland R, Matthew W Johnson, Michael A Carducci, Annie Umbricht, William A Richards, Brian D Richards, Mary P Cosimano, and Margaret A Klinedinst. 2016. "Psilocybin Produces Substantial and Sustained Decreases in Depression and Anxiety in Patients with Life-Threatening Cancer: A Randomized Double-Blind Trial." *Journal of Psychopharmacology (Oxford, England)* 30 (12): 1181–97. <https://doi.org/10.1177/0269881116675513>.
- Guzmán, Gastón. 2008. "Hallucinogenic Mushrooms in Mexico: An Overview." *Economic Botany* 62 (3): 404–12. <https://doi.org/10.1007/s12231-008-9033-8>.
- Hanrahan, Kelsey B., and Christine E. Smith. 2020. "Interstices of Care: Re-Imagining the Geographies of Care." *Area* 52 (2): 230–34. <https://doi.org/10.1111/area.12502>.
- Hari, J. (2015). *Chasing the scream: The first and last days of the war on drugs*. New York, NY: Bloomsbury USA.
- Hartman, Shelby, and Shelby Hartman. 2019. "Why Decriminalizing Magic Mushrooms in Denver Matters to the Rest of the Country." *Rolling Stone* (blog). May 11, 2019. <https://www.rollingstone.com/culture/culture-news/denver-decriminalizes-magic-mushrooms-psilocybin-834249/>.
- Heim, Christine, D. Jeffrey Newport, Tanja Mletzko, Andrew H. Miller, and Charles B. Nemeroff. 2008. "The Link between Childhood Trauma and Depression: Insights from HPA Axis Studies in Humans." *Psychoneuroendocrinology* 33 (6): 693–710. <https://doi.org/10.1016/j.psyneuen.2008.03.008>.
- Holland, Kimberly. 2018. "How Long Does Acid Last? What to Expect." *Healthline*. April 12, 2018. <https://www.healthline.com/health/how-long-does-acid-last>.

- Huber, Bridget. 2018. "What Do We Know about the Risks of Psychedelics? | Michael Pollan." May 22, 2018. <https://michaelpollan.com/psychedelics-risk-today/>.
- Hubbard, Linda. 2020. "Tame Anxiety during the COVID 19 Pandemic." April 7, 2020. <https://www.mayoclinichealthsystem.org/hometown-health/speaking-of-health/9-ways-to-tame-anxiety-during-the-covid-19-pandemic>.
- Hudson, Hayley. n.d. "Sexual Assault At Ayahuasca Retreats Is Prevalent." Addiction Center. Accessed May 24, 2021. <https://www.addictioncenter.com/news/2020/01/sexual-assault-ayahuasca-retreats/>.
- Hyman, Scott M., and Rajita Sinha. 2009. "Stress-Related Factors in Cannabis Use and Misuse: Implications for Prevention and Treatment." *Journal of Substance Abuse Treatment* 36 (4): 400–413. <https://doi.org/10.1016/j.jsat.2008.08.005>.
- Isobel, Sophie, Brenda Gladstone, Melinda Goodyear, Trentham Furness, and Kim Foster. 2020. "A Qualitative Inquiry into Psychiatrists' Perspectives on the Relationship of Psychological Trauma to Mental Illness and Treatment: Implications for Trauma-Informed Care." *Journal of Mental Health* 0 (0): 1–7. <https://doi.org/10.1080/09638237.2020.1714012>.
- Jackson, Chazeman S., and J. Nadine Gracia. 2014. "Addressing Health and Health-Care Disparities: The Role of a Diverse Workforce and the Social Determinants of Health." *Public Health Reports* 129 (1_suppl2): 57–61. <https://doi.org/10.1177/00333549141291S211>.
- Jacobs, Andrew. 2021. "The Psychedelic Revolution Is Coming. Psychiatry May Never Be the Same." *The New York Times*, May 9, 2021, sec. Health. <https://www.nytimes.com/2021/05/09/health/psychedelics-mdma-psilocybin-molly-mental-health.html>.
- Jay, Mike. 2019. "Why Is Psychedelic Culture Dominated by Privileged White Men? – Mike Jay | Aeon Ideas." Aeon. June 26, 2019. <https://aeon.co/ideas/why-is-psychedelic-culture-dominated-by-privileged-white-men>.
- Jefferson, Robin Seaton. 2019. "Magic Mushrooms As Medicine? Johns Hopkins Scientists Launch Center For Psychedelic Research. Say Psychedelics Could Treat Alzheimer's, Depression And Addiction." Forbes. September 12, 2019. <https://www.forbes.com/sites/robinseatonjefferson/2019/09/12/magic-mushrooms-as-medicine-johns-hopkins-scientists-launch-center-for-psychedelic-research-say-psychedelics-could-treat-alzheimers-depression-and-addiction/>.
- Johnson, Matthew W., and Roland R. Griffiths. 2017. "Potential Therapeutic Effects of Psilocybin." *Neurotherapeutics* 14 (3): 734–40. <https://doi.org/10.1007/s13311-017-0542-y>.
- Johnson, MW, WA Richards, and RR Griffiths. 2008. "Human Hallucinogen Research: Guidelines for Safety." *Journal of Psychopharmacology* 22 (6): 603–20. <https://doi.org/10.1177/0269881108093587>.

- Koslow, Tyler. 2020. "Why Taking Psychedelics While on Antidepressants Could Make Treatment Ineffective | DoubleBlind." *DoubleBlind Mag* (blog). May 8, 2020. <https://doubleblindmag.com/how-psychedelics-contraindicate-with-ssris/>.
- Krebs, Teri S., and Pål-Ørjan Johansen. 2013. "Psychedelics and Mental Health: A Population Study." *PLOS ONE* 8 (8): e63972. <https://doi.org/10.1371/journal.pone.0063972>.
- Laussmann, Tim, and Sigrid Meier-Giebing. 2010. "Forensic Analysis of Hallucinogenic Mushrooms and Khat (*Catha Edulis* Forsk) Using Cation-Exchange Liquid Chromatography." *Forensic Science International* 195 (1): 160–64. <https://doi.org/10.1016/j.forsciint.2009.12.013>.
- Lawson, Victoria. 2007. "Geographies of Care and Responsibility." *Annals of the Association of American Geographers* 97 (1): 1–11. <https://doi.org/10.1111/j.1467-8306.2007.00520.x>.
- Lea, Toby, Nicole Amada, and Henrik Jungaberle. 2020. "Psychedelic Microdosing: A Subreddit Analysis." *Journal of Psychoactive Drugs* 52 (2): 101–12. <https://doi.org/10.1080/02791072.2019.1683260>.
- Leonhardt, Megan. 2020. "Americans Are Skipping Medically Necessary Prescriptions Because of the Cost." CNBC. February 27, 2020. <https://www.cnbc.com/2020/02/26/people-skipping-medically-necessary-drugs-because-they-cost-too-much.html>.
- LeWine, Howard M.D. 2015. "Millions of Adults Skip Medications Due to Their High Cost." Harvard Health Blog. January 30, 2015. <https://www.health.harvard.edu/blog/millions-skip-medications-due-to-their-high-cost-201501307673>.
- Lynch, Mona, Marisa Omori, Aaron Roussell, and Matthew Valasik. 2013. "Policing the 'Progressive' City: The Racialized Geography of Drug Law Enforcement." *Theoretical Criminology* 17 (3): 335–57. <https://doi.org/10.1177/1362480613476986>.
- MacLean, Katherine A., Jeannie-Marie S. Leoutsakos, Matthew W. Johnson, and Roland R. Griffiths. 2012. "Factor Analysis of the Mystical Experience Questionnaire: A Study of Experiences Occasioned by the Hallucinogen Psilocybin." *Journal for the Scientific Study of Religion* 51 (4): 721–37. <https://doi.org/10.1111/j.1468-5906.2012.01685.x>.
- Marks, Mason. 2018. "Psychedelic Medicine for Mental Illness and Substance Use Disorders: Overcoming Social and Legal Obstacles." *New York University Journal of Legislation and Public Policy* 21 (1): 69–140.
- Marks, Mason. 2020. "As Cities Decriminalize Psychedelics, Law Enforcement Should Step Back." Bill of Health, Examining The Intersection of Health, Law, Biotechnology, and Bioethics. August 5, 2020. <http://blog.petrieflom.law.harvard.edu/2020/08/05/psychedelics-psilocybin-war-on-drugs-decriminalization/>.

- “MAPSMission.” n.d. MAPS. Accessed March 11, 2020. <https://maps.org/about/mission>.
- McMains, Vanessa. 2017. “Study Explores the Enduring Positive, Negative Consequences of Ingesting ‘Magic Mushrooms.’” *The Hub*. January 4, 2017. <https://hub.jhu.edu/2017/01/04/bad-trips-mushrooms/>.
- Milligan, Christine. 2014. “Geographies of Care and Care-Giving, in *The Wiley-Blackwell Encyclopaedia of Health, Illness, Behaviour and Society*.”
- Mithoefer, Michael C., Charles S. Grob, and Timothy D. Brewerton. 2016. “Novel Psychopharmacological Therapies for Psychiatric Disorders: Psilocybin and MDMA.” *The Lancet. Psychiatry* 3 (5): 481–88. [https://doi.org/10.1016/S2215-0366\(15\)00576-3](https://doi.org/10.1016/S2215-0366(15)00576-3).
- “Most Women Say They Regularly Take Steps to Avoid Being Sexually Assaulted | YouGov.” n.d. Accessed June 24, 2021. <https://today.yougov.com/topics/lifestyle/articles-reports/2019/03/28/women-safety-sexual-assault-awareness>.
- Murray, Patty. 2020. “Cannabis Finds Its Moment amid Coronavirus Outbreak.” *POLITICO*. March 27, 2020. <https://www.politico.com/news/2020/03/27/cannabis-coronavirus-151209>.
- Neitzke-Spruill, Logan. 2020. “Race as a Component of Set and Setting: How Experiences of Race Can Influence Psychedelic Experiences in: *Journal of Psychedelic Studies* Volume 4 Issue 1 (2020).” March 1, 2020. <https://akjournals.com/view/journals/2054/4/1/article-p51.xml>.
- Nichols, David E. 2004. “Hallucinogens.” *Pharmacology & Therapeutics* 101 (2): 131–81. <https://doi.org/10.1016/j.pharmthera.2003.11.002>.
- Nichols, David E. 2016. “Psychedelics.” *Pharmacological Reviews* 68 (2): 264–355. <https://doi.org/10.1124/pr.115.011478>.
- Nutt, David J., Leslie A. King, and David E. Nichols. 2013. “Effects of Schedule I Drug Laws on Neuroscience Research and Treatment Innovation.” *Nature Reviews Neuroscience*, no. 7: 1. <https://doi.org/10.1038/nrn3530>.
- Panchal, Nirmita, Rabah Kamal, Kendal Orgera, Cailey Muñana, Priya Chidambaram Published: Apr 21, and 2020. 2020. “The Implications of COVID-19 for Mental Health and Substance Use.” *The Henry J. Kaiser Family Foundation* (blog). April 21, 2020. <https://www.kff.org/health-reform/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/>.
- Passie, Torsten, Juergen Seifert, Udo Schneider, and Hinderk M. Emrich. 2002. “The Pharmacology of Psilocybin.” *Addiction Biology* 7 (4): 357–64. <https://doi.org/10.1080/1355621021000005937>.

- Pollan, Michael. 2015. "The Trip Treatment." *The New Yorker*. February 2, 2015. <https://www.newyorker.com/magazine/2015/02/09/trip-treatment>.
- Power, Kate. 2020. "The COVID-19 Pandemic Has Increased the Care Burden of Women and Families." *Sustainability: Science, Practice and Policy* 16 (1): 67–73. <https://doi.org/10.1080/15487733.2020.1776561>.
- "Psychedelics as Therapy | The Week." 2021. January 29, 2021. <https://theweek.com/articles/962360/psychedelics-therapy>.
- "Racial Disparity In Marijuana Arrests." n.d. NORML. Accessed June 22, 2021. <https://norml.org/marijuana/fact-sheets/racial-disparity-in-marijuana-arrests/>.
- Robbins, Paul. 2011. *Political Ecology: A Critical Introduction*. John Wiley & Sons.
- Roberts, A. L., S. E. Gilman, J. Breslau, N. Breslau, and K. C. Koenen. 2011. "Race/Ethnic Differences in Exposure to Traumatic Events, Development of Post-Traumatic Stress Disorder, and Treatment-Seeking for Post-Traumatic Stress Disorder in the United States." *Psychological Medicine* 41 (1): 71–83. <https://doi.org/10.1017/S0033291710000401>.
- Ross, Stephen, Anthony Bossis, Jeffrey Guss, Gabrielle Agin-Liebes, Tara Malone, Barry Cohen, Sarah E Mennenga, et al. 2016. "Rapid and Sustained Symptom Reduction Following Psilocybin Treatment for Anxiety and Depression in Patients with Life-Threatening Cancer: A Randomized Controlled Trial." *Journal of Psychopharmacology* 30 (12): 1165–80. <https://doi.org/10.1177/0269881116675512>.
- Schmid, Yasmin, and Matthias E. Liechti. 2018. "Long-Lasting Subjective Effects of LSD in Normal Subjects." *Psychopharmacology* 235 (2): 535–45. <https://doi.org/10.1007/s00213-017-4733-3>.
- Strauss, A., & Corbin, J. (1994). Grounded theory methodology. *Handbook of qualitative research*, 17, 273-85.
- Strauss, Valerie. 2016. "Think Teachers Aren't Paid Enough? It's Worse than You Think." *Washington Post*, August 16, 2016. <https://www.washingtonpost.com/news/answer-sheet/wp/2016/08/16/think-teachers-arent-paid-enough-its-worse-than-you-think/>.
- Taylor, Jonathan, Kevin Mattson, Christopher Jasparro, and Cr Jasparro. 2019. "GEOGRAPHERS AND DRUGS: A SURVEY OF THE LITERATURE." *Geographical Review* 103 (December).
- Taylor, Jonathan S., Christopher Jasparro, and Kevin Mattson. 2013. "Geographers And Drugs: A Survey Of The Literature." *Geographical Review* 103 (3): 415–30. <https://doi.org/10.1111/j.1931-0846.2013.00007.x>.

- Thrul, Johannes, and Albert Garcia-Romeu. 2021. "Whitewashing Psychedelics: Racial Equity in the Emerging Field of Psychedelic-Assisted Mental Health Research and Treatment." *Drugs: Education, Prevention and Policy* 28 (3): 211–14.
<https://doi.org/10.1080/09687637.2021.1897331>.
- Tonry, Michael, and Matthew Melewski. n.d. "The Malign Effects of Drug and Crime Control Policies on Black Americans: Crime and Justice: Vol 37." *Crime and Justice*. Accessed June 7, 2021. <http://www.journals.uchicago.edu/doi/abs/10.1086/588492>.
- Tronto, Joan C. 2014. "Care Ethics." In *The Encyclopedia of Political Thought*, 442–43. American Cancer Society. <https://doi.org/10.1002/9781118474396.wbept0124>.
- Turner, Wayne, and Abigail Coursolle. 2020. "Ensuring People Have Access to Prescription Drugs During the COVID-19 Pandemic." National Health Law Program. March 18, 2020. <https://healthlaw.org/ensuring-people-have-access-to-prescription-drugs-during-the-covid-19-pandemic/>.
- Tylš, Filip, Tomáš Páleníček, and Jiří Horáček. 2014. "Psilocybin--Summary of Knowledge and New Perspectives." *European Neuropsychopharmacology: The Journal of the European College of Neuropsychopharmacology* 24 (3): 342–56.
<https://doi.org/10.1016/j.euroneuro.2013.12.006>.
- Watts, Michael. 2008. "Political Ecology." In *A Companion to Economic Geography*, 257–74. John Wiley & Sons, Ltd. <https://doi.org/10.1002/9780470693445.ch16>.
- Wilkins, Lucas. 2019. "From LSD to Diametrically Opposite to Something Entirely Different: A Critical Consideration of Contrasted-Altered States of Consciousness."
- Williams, Monnica T., Alan K. Davis, Yitong Xin, Nathan D. Sepeda, Pamela Colón Grigas, Sinead Sinnott, and Angela M. Haeny. 2021. "People of Color in North America Report Improvements in Racial Trauma and Mental Health Symptoms Following Psychedelic Experiences." *Drugs: Education, Prevention and Policy* 28 (3): 215–26.
<https://doi.org/10.1080/09687637.2020.1854688>.
- Williams, Monnica T., and Beatriz C. Labate. 2020. "Diversity, Equity, and Access in Psychedelic Medicine." *Journal of Psychedelic Studies* 4 (1): 1–3. <https://doi.org/10.1556/2054.2019.032>.
- Writer, Alvin Powell Harvard Staff. 2021. "Harvard Medical School Professor Discusses Future of Psychedelics." *Harvard Gazette* (blog). June 10, 2021.
<https://news.harvard.edu/gazette/story/2021/06/harvard-medical-school-professor-discusses-future-of-psychedelics/>.
- Yockey, R. Andrew, Rebecca A. Vidourek, and Keith A. King. 2020. "Trends in LSD Use among US Adults: 2015–2018." *Drug and Alcohol Dependence* 212 (July): 108071.
<https://doi.org/10.1016/j.drugalcdep.2020.108071>.

Zarrol, Jim. 2020. "Jobs Carnage Mounts: 17 Million File For Unemployment In 3 Weeks." NPR.Org. April 9, 2020. <https://www.npr.org/sections/coronavirus-live-updates/2020/04/09/830216099/6-6-million-more-file-for-unemployment-as-coronavirus-keeps-economy-shut>.

"2020 Racial Wage Gap - Compensation Research from PayScale." n.d. *PayScale* (blog). Accessed June 1, 2021. <https://www.payscale.com/data/racial-wage-gap>.

"2019 Methodological Summary and Definitions | CBHSQ Data." n.d. Accessed June 25, 2021. <https://www.samhsa.gov/data/report/2019-methodological-summary-and-definitions>.