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Intrinsic Motivations and Perceived Benefits of U.S. Males for Taking Dimethyltryptamine

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MA, American Military University, 2012

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Dissertation Submitted in Partial Fulfillment

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Abstract

Dimethyltryptamine (DMT) is a psychedelic drug which has a rapidly increasing user rate, giving rise to concern amongst law enforcement and public health officials around the world. While previous researchers have primarily focused their examinations of motivations for DMT use internationally with diverse populations, this study was an investigation of DMT use in the United States among its most prevalent user demographic, adult men. The purpose of this study was to bridge the gap between knowledge of motivations for DMT use internationally and lack of knowledge domestically. The theoretical foundation for this study was comprised of the self-efficacy theory and the self-determination theory. The research questions for this study were designed to examine the intrinsic motivations for both first-time and continued experimentation with DMT, and how expectations of use align with perceived benefits of use. Using a qualitative phenomenological design, face to face semi-structured interviews were conducted with 13 participants who were U.S. males between the ages of 18-50. Transcripts from the interviews were analyzed using a 6-step coding process which developed codes into 8 categories and 3 main themes. Study results indicated that (a) curiosity and convenience were the main contributors to motivations for initial use of DMT, (b) motivations for continued use became far more diverse, and (c) user's expectations of use did not typically align with perceived benefits of use. Implications for social change include informing legislators, law enforcement officials, and mental health professionals of the motivations for DMT use in the U.S. adult male population to better formulate policies and practices related to this rapidly growing drug use phenomenon.

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Dedication

To my daughter Avery and my son Joseph: that I might provide you both with a suitable academic example, and that you might come to appreciate the power and the joy inherent in the pursuit of knowledge. And to my beautiful bride of thirteen years now: thank you for your unwavering support. I love you.

Acknowledgments

For his dutiful and generous assistance in this work, I would like to acknowledge my very good friend Dr. Shawn Krause, who was essential to the conceptualization and fruition of this scientific research. To my ‘cohort’ in crime, police officer Dr. Brittany Gerrald, thank you for letting me be your academic ride-along. And to my committee chair, Dr. Mary Brown, for her consistent support throughout, I am grateful.

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Chapter 1: Introduction to the Study

Use of dimethyltryptamine (DMT) is an emergent entheogenic/pharmacological phenomenon and was the most rapidly growing illicit drug use trend in the United States in 2017 (Brown, Shao, Ayub, Chong, & Cornelius, 2017). The most common population demographic set of users is adult males (Brown et al., 2017). While motivations for illicit drug use can often be generalized and even predicted with relative accuracy based upon simple demographic categories such as gender, age, orientation, or socioeconomic factors, the motivations for DMT use world-wide has proven to be far more nuanced and complex, and very often ill-reconciled with traditional motivations for illicit drug use (Sutherland et al., 2017).

Unlike the epidemiological research on the rapid spread of previous U.S. drug use phenomena (i.e., opium in the 1920s and cocaine in the 1970s), motivations for DMT use have proven to be less hedonistic and more therapeutic in nature (Tófoli & de Araujo, 2016). User's therapeutic motivations often result in attempts to self-medicate to address substance abuse and chemical dependency problems, and/or concerns related to a mental health diagnosis. Additional motivations have been recognized as enticements to develop 'spiritual health' and increase user 'self-awareness,' although these motivations can be particularly difficult to quantify or qualify (Nunes et al., 2016). Both of these primary motivations are made more convoluted still by the traditional motivations of pleasurability that remains inextricably linked to the use of all tryptamines (Johnstad, 2018).

DMT use further delineates from previous drug epidemiological motivation models because its manifestation is occurring and spreading through the digital age of the internet, including social media and other instant information access platforms. Internet platforms have facilitated a new and robust form of popular subculture for users of DMT. Additionally, these platforms have provided thousands of novice chemists with instant access to ingredients and recipes for creating synthetic versions of DMT (Arbo et al., 2016).

Because DMT use is increasing at a significant rate in the United States, intrinsic motivations which perpetuate this illicit drug use phenomena are important to explore. Potential social implications of the study include providing members of law enforcement, clinicians in the substance abuse and mental health fields, and litigators an increased awareness of why adult U.S. men are choosing to engage in this illicit behavior. I examined the intrinsic motivations and perceived benefits of U.S. adult males, ages 18-50, who choose to participate in this drug-use phenomenon.

Background

There is inadequate research exploring DMT and DMT use in general (Kuypers et al., 2016; Loizaga-Velder & Verres, 2014; Talin & Sanabria, 2017). However, it is known that DMT is a chemical compound that exists naturally in most plants and animals, including humans, and is most commonly associated with the brain's penial gland (St John, 2016). Though its natural biological purpose in human physiology yet remains unclear, it is suspected that it has an impact on human dream states and circadian rhythms (Bragazzi et al., 2018). While enzyme inhibitors in the stomach prevent naturally

occurring DMT from altering states of human consciousness, when the enzymes are suppressed, DMT consumed in larger doses becomes a hallucinogen, and is commonly associated with other hallucinogens, such as lysergic acid diethylamide (LSD) and psilocybin (Cameron & Olson, 2018). While DMT has its entheogenic roots in Brazilian shamanism (Smith, 2016), the chemical compound has found a modern synthetic manifestation (Rodrigues, Almeida, & Vieira-Coelho, 2019) and is now considered to be prominent and prevalent amongst Novel (or New) Psychoactive Substances (NPS; Schifano, Orsolini, Duccio-Papanti, & Corkery, 2015). DMT is growing rapidly in popularity around the world, particularly in the United States (Zawilska & Wojcieszak, 2018).

There is an existing gap in the literature addressing the motivations for DMT use in adult U.S. males. Most of the research done thus far into the motivations of DMT use has been done internationally, and much of that research has been centered in South America where DMT through the ingestion of ayahuasca (AYA) is legal when taken in ritualistic religious contexts and settings (dos Santos, Osório, Crippa, & Hallak, 2016; Kavenská & Simonová, 2015; Winstock, Kaar, & Borschmann, 2014). What little has been done in the United States to examine the reasons for participating in this emergent drug use trend has been conducted using cross-sectional sample populations. None of which have been gender or age specific.

This phenomenological study into the motivations of DMT use in U.S. adult males was important because an illicit drug use phenomenon which grows and spreads quickly and outpaces understandings specific to its epidemiology and chemical

composition, can hinder law enforcement agencies, mental health and substance abuse clinicians, and legislators, in formulating well-informed responses to its use.

Problem Statement

DMT is a hallucinogen which has its entheogenic roots in Amazonian shamanism and was initially used for the purposes creating conscious-altering states during ritualistic religious ceremonies through the consumption of AYA (Smith, 2016). However, since the popularized development of synthetic versions of DMT in the United States nearly a decade ago (Rodrigues, Almeida, & Vieira-Coelho, 2019), it is considered to be the most prevalent amongst the NPS (Schifano et al., 2015). Further, its use has continued to increase approximately 25% greater than any other illicit drug (Winstock et al., 2014). Since its popularization, epidemiological trends consistently show its most common U.S. user demographic to be adult males with an average age of 35 years (Davis, Barsuglia, Lancelotta, Grant, & Renn, 2018). The potential physiological consequences of its use remain largely unknown (Lanaro et al., 2015). Though the United States has banned DMT to deter its use, it continues to grow rapidly in popularity nonetheless (Zawilska & Wojcieszak, 2018).

DMT use poses a potential physical and mental health risk to a large U.S. demographic (Davis et al., 2018). There are many possible factors contributing to the spread of DMT use, which include international reports suggesting that DMT has the potential to treat mental health and substance abuse disorders (Loizaga-Velder & Verres, 2014). However, researchers do not know which motivations are causing DMT use to

spread so quickly in the United States. Therefore, this study attempted to close the gap to identify the intrinsic motivations for DMT use amongst U.S. males ages 18-50.

Literature reviewed for this study identified that other researchers have investigated this problem by focusing on motivations for increased DMT use internationally (Kuypers et al., 2016; Loizaga-Velder & Verres, 2014; Talin, & Sanabria, 2017). However, none of the literature reviewed examined possible intrinsic motivations of U.S. adult males for their increased use of DMT. This qualitative study attempted to fill this gap by providing relevant information to law enforcement, mental health and substance abuse clinicians, and legislators on this social problem, to formulate well-informed policies related to DMT use.

Purpose of the Study

The purpose of this qualitative phenomenological study was to explore the intrinsic motivations of U.S. men ages 18-50 for experimenting with and sustaining their use of DMT. Further study of the United States' most common DMT user demographic was needed to increase understanding of the epidemiology of this illicit drug-related phenomenon and prevent any potential negative consequences of its use.

Research Questions

Using a phenomenological approach, I posed the primary research question: What are the primary intrinsic motivations and perceived benefits of adult U.S. men for using DMT? Current international and eclectic, cross-sectional sample populations have suggested that there are several varying types of intrinsic motivations for the rapidly

increasing use of DMT around the world, but none are specific to the fastest growing demographic of U.S. users. My research included the following subquestions:

Subquestion 1: What are the primary intrinsic motivations of U.S. men ages 18-50 for experimenting with DMT for the first time?

Subquestion 2: What are the primary intrinsic motivations of U.S. men ages 18-50 for sustaining their use of DMT?

Subquestion 3: How do the intrinsic motivational expectations of U.S. men ages 18-50 align with their experiences of DMT use?

Theoretical Foundation

The theoretical base for this phenomenological qualitative study was the self-determination theory (SDT) and the self-efficacy (SE) theory. The SDT posits that there exists a connection between inherent growth tendencies and innate psychological desires which causes personality development, motivational exploration, and behavioral self-regulation. It examines the dynamics between an individual's personality, motivation, and their optimal modes of functioning (Ryan & Deci, 2000). While the SDT acknowledges the impacts of extrinsic motivations upon an individual's behavior, and the relationship between extrinsic and intrinsic motivations, the SDT's primary concern relates to intrinsic motivations; those made without external influence (Deci & Ryan, 2004). Using organismic metatheory and employing traditional empirical methods, the SDT claims that, while extrinsic motivations often possess a greater influence over the decision maker's behavior, and external (social or individual) stimuli can severely impact

a person's intrinsic motivations, their decision making will ultimately be based upon intrinsic perceptions, values, and motivations (Deci & Ryan, 2008).

The second theory applied to this study was the SE theory. It contends that people's belief in their ability to alter and influence the course of their life and well-being is the foundation of human motivation. It suggests that people possess an innate or inherent ability to accomplish desirable goals or make positive changes in their lives (Bandura, 2010). This ability is derived from a sense of competency, which is obtained through four specific types of experiences. These experiences can include a mastery experience, vicarious experience, an emotional state, and social persuasion (Bandura, 1992).

These four experiences create a belief concept that empowers the individual to seek influence over events and outcomes in their life. This belief concept enables the individual by convincing them that they can face and overcome challenges, and is very often associated with motivational concepts related to health, mental health, and well-being (Bandura, Freeman, & Lightsey, 1999). The SE theory can be used as a reliable predictor regarding behavioral improvements (Bandura & Adams, 1977).

Nature of the Study

For this study, I utilized a qualitative approach and a phenomenological design to examine the intrinsic motivations that create an impetus for DMT use amongst U.S. adult males. The data for my dissertation was collected using an in-depth, semistructured, face-to-face (FTF) interview technique.

A qualitative approach was used because my study sought to examine nonnumerical understandings related to participants' intrinsic motivations and perceptions as they relate to the phenomenon under examination (see Patton, 2015). A phenomenological approach was employed, as it is the purpose of phenomenological research to examine and explore the essence of the participant's lived experience, while still defining and ascertaining the phenomenon under investigation (see Cilesiz, 2010; Creswell, 2007). The phenomenological approach was also employed because it is rooted in the discipline of philosophy and relies heavily on personal interviews that seek the meaning and essence of lived experiences, individually and collectively (see Patton, 2015). Creswell (2016) suggests that phenomenological research should seek to describe experiences according to their meaning and essence as the respondent interprets them. A phenomenological study approach should also encompass, from its inception to its completion, a focus on meaningful lived experiences related to the phenomenon (Moustakas, 1994; van Manen, 1990). This study examined lived experiences related to the phenomenon of DMT use, and as such, a phenomenological approach is appropriate.

Finally, the use of FTF in-depth interviews was employed to explore and ascertain the participants' perceptions of their lived experiences related to the phenomenon. According to Ravitch and Carl (2016), qualitative interviews are designed to gain insight into the participant's lived experiences and examine how they construct their reality in relationship to the phenomenon being investigated. These designs and traditions created a synergistic alignment within my study.

The phenomenon of interest was the rapidly spreading popularity of DMT use amongst U.S. adult males ages 18-50. Data was collected from individual research participants who self-identified as male United States residents, ages 18-50, who also self-report having used DMT at least twice within the 12 months prior to their interview, and these respondents were recruited through an exponential discriminative chain-sampling technique. Because there is no formal agency which is comprised exclusively of DMT users, a local shaman who conducts guided entheogenic therapy sessions was contacted to initiate the chain-sample and recruit initial participants. Initial expectations for the sample population were set at 12-15 participants. Thirteen interviews were conducted before saturation was reached. Initial communication with participants was initiated by the participants and conducted by phone to determine that they met the specified inclusion criteria and address the logistical considerations for conducting the interviews.

I collected participant data exclusively using in-depth, FTF, semistructured interviews. Expected duration for interviews were estimated at approximately 25-35 minutes. The audio from each interview was recorded. The participants were provided a consent form prior to each interview (where implied consent was accepted to maintain the anonymous nature of the study) and were also debriefed after the interview was completed, which included a review of confidentiality and anonymity parameters. The research was entirely anonymous, and the data collected was stored on a password encrypted laptop and an encrypted back-up external hard drive. No compensation was provided in exchange for any of the interviews. Interviewees were made aware that a

two-page summary of the final study findings would be made available to them after the dissertation was complete.

Audio recordings of the interviews were hand-transcribed into text manuscripts. The manuscripts were then examined for codes, or reoccurring words, phrases or ideas. These were then sifted into subcodes, creating appropriate ranges of the codes for further analysis. These subcodes were then regulated into separate concepts and divided ideas into recognizable categories and subcategories, which then, when examined, provided additional context by which to develop themes and concepts. The themes and concepts were then used to develop a narrative regarding the research topic, based upon the completion of the coding process (Saldaña, 2016).

Definitions

Ayahuasca (AYA): A powerful psychoactive brew developed in the northern Amazonian rain forests centuries ago. Its effects are the result of combining β-carbolines (harmine, harmaline, and tetrahydroarmine) contained in Banisteriopsis caapi stalks and Banisteriopsis caapi stalks combined with the N,N-dimethyltryptamine (DMT) from Psychotria viridis leaves (Lobao-Soares et al., 2018). Traditional or indigenous names for AYA include, but are not limited to, ‘the vine of the dead’, ‘the vine of the soul’, and ‘Daime’. The brew, often taken in the form of a tea and traditionally taken in a religious or ritualistic setting or environment, is associated with concepts surrounding healing, divination, self-awareness, and spiritual enlightenment (Labate & MacRae, 2016). It is also closely associated with shamanism and entheogenic rituals. Its legalization in Brazil opened the door to a burgeoning tourist industry where thousands of people come to

Brazil every year, from all over the world, to participate in AYA retreats, where the drug is administered by local indigenous shamans (Prayag, Mura, Hall, & Fontaine, 2016).

Dimethyltryptamine: A naturally occurring chemical compound found in all humans and in most plants and animals as well. While its naturally occurring effects on the human brain remains, as of yet, undetermined, it is strongly suspected that it resides within the penial gland and is connected to dream states (Bragazzi et al., 2018). Its use is closely associated with LSD and psilocybin, as it has the potential, when taken at higher doses, to create waking dream states, visual and audible hallucinations, and altered perceptions of time and space, even leading some users to experience perceptions of other dimensions and independent interactions with sentient consciousnesses (St John, 2018).

Ego-dissolution: A term very commonly associated with the use of psychedelics (Milliere, 2017), it is considered a state of experiential transcendence where the user loses their sense of subjective identity or experiences the removal of self-identification (Grof, 1998). The terms ‘ego-death’ and ‘psychic-death’ are sometimes used interchangeably with ego-dissolution (Kay, 2017). Essentially, a user under the influence of psychedelics perceives to be set free from who they are as a person in relationship to their individual conscious, and even unconscious, desires. Users almost uniformly consider this experience to be a type of mental, emotional, or spiritual liberation, which impacts their perceptions of themselves and their behavior for long after the effects of the drug have dissipated. It is sometimes associated also with the near-death experiences and out of body experiences often related by DMT users who engage in higher doses (Johnstad, 2015).

Entheogens: A category of plant-derived substances commonly related to the chemical tryptamine family and psychedelic drugs. According to Johnstad (2018), it is derived from the Greek ἔνθεος (entheos) and γενέσθαι (genesthai), meaning 'inspired' or 'filled with God' and 'come into being,' respectively. Johnstad further states that "use of an entheogen is thus believed to potentially elicit or occasion contact with transcendent forces" (p. 244). While the use of naturally forming entheogens is considered to date back into ancient, prehistoric civilizations, the earliest recorded entheogenic use was documented by Franciscan missionaries in observation of Aztecs consuming blue mushrooms in a ritualistic, religious, context (Smith, 2016). While the traditional use of entheogenic compounds is founded in concepts of shamanism and indigenous ritualistic traditions, it cannot be assumed that modern, contemporary reinterpretations or definitions apply to western culture. And while a comprehensive modern definition remains currently lacking in contemporary scientific research (Johnstad, 2018), Tramacchi (2018) states that modern entheogen use is now more represented by a psycho-spiritual terra incognito, and concepts related to the western uses of entheogens should now include the synthetic extracts of plant-based entheogens as well.

Epidemiology: According to the World Health Organization (WHO; 2019), "epidemiology is the study of the distribution and determinants of health-related states or events… to control diseases and other health problems" (Epidemiology section, para. 1). This scientific discipline primarily attempts to track the spread and evolution of diseases throughout a geographic region. However, it is not limited to the study of contagion, and can be administered to help public officials and academics develop a deeper

understanding of the spread of any public safety phenomenon including drug use (Department of Health and Human Services, 2019).

Motivation: A mental process that stimulates or incites one into some form of recognizable action (Motivation, n. d.). According to Baumeister (2016), the preexistence of cognition, agency, and emotion, along with other basic psychological processes, serves to form the primacy of human motivation. He goes on to state, that not all motivations begin, develop, or end in the same way, as they evolve from simple animal desires into complex human motivations.

The most universally recognized understanding regarding human motivation is Maslow's (1943) theory of human motivation, which provides the requisite guidance to frame the element of human motivation. In it, he claims that a set of needs, each one contingent upon the previous, with few exceptions, leads to the ultimate human need, or motivation, and that is the motivation towards self-actualization. It is the need for self-actualization which characterizes human motivation in its purest, most intrinsic form. This motivation guides human behavior when all other, more basic, needs have been satisfied to a relative degree. It is important, when considering the elements and dynamics of human motivation, to recognize the impetus which ultimately guides behaviors on both a conscious and unconscious level. Maslow pontificated that, for a person to be happy, they must pursue that which makes them happy. And so, it is to the inner calling of self-actualization which guides intrinsic motivations into behaviors.

D'Souza and Gurin (2016) support this thesis by claiming that Maslow's concept of self-actualization is synergistic with philosophical and psychological theories which

recommend the transcendence of individual human evolution, from the selfish to the selfless being, and from the frustrated to the fulfilled. Oyserman (2015) adds to this premise by suggesting that motivations are linked to active self-identities, or identity-based motivations (IBM). IBMs guide individuals through situations and difficulties into specific actionable behaviors through an interpretive lens of active identities. Actions which are interpreted by the individual to be identity-congruent, cause the individual to respond positively; conversely, actions which are interpreted by the individual to be identity-incongruent, cause the individual to respond negatively. This relates back to Maslow's contention that a 'musician must make music,' for the act of making music is identity-congruent with the musician's IBM.

Novel (or New) Psychoactive Substances (NPS): Also sometimes known as 'smart drugs' (Simonato et al., 2013), and sold primarily online in 'head shops' (Khaled et al., 2016), these are synthesized chemical compounds which have been modified slightly in their molecular structure to imitate their illegal counterpart substances (Raújo, Carvalho, Bastos, Pinho, & Carvalho, 2015) and then are marketed as safe, legal, alternatives to the illegal versions of very similar compounds. However, sometimes illicit synthesized substances are also inducted by users into this category, based upon the ability to consistently chemically alter newer versions of illicit substances. While psychedelic drugs have been illegal since the United Nations Drug Convention of 1971, NPSs are not typically illegal, primarily because of their ambiguous and chemical-altering nature. Many experts consider them to be dangerous, but the global use levels of NPSs is currently relatively unknown (Schifano et al., 2015).

Psilocybin: A naturally occurring alkaloid that is pharmacologically similar in properties to LSD (Mahapatra & Gupta, 2017). According to Fricke, Blei, and Hoffmeister (2017), "Psilocybin is the psychotropic tryptamine-derived natural product of Psilocybe carpophores, the so-called 'magic mushrooms'" (pg. 12352). Like AYA, psilocybin use also has its roots in ancient entheogenic practices as a sacred, religious, or sacramental agent. It is a strong hallucinogen when taken in larger doses; however, recently it has become a therapeutic agent, when taken in smaller doses, used to treat suicidality, depression, anxiety, and post-traumatic stress disorders (Johnson & Griffiths, 2017). It is a scheduled one drug according to the National Drug Enforcement Agency and has been illegal in the United States since 1971 (National Drug Enforcement Agency, 2019).

Psycho-spiritual: An interdisciplinary concept wherein the quantifications of biology and neurology are transposed upon the qualifications related to an individual's sense of spirituality, as they understand spirituality to be. Religion need not be amalgamated to the concept; however, religion is associated with spirituality to the extent that the individual connects the two phenomena (Crosby, Ritt, & Slunaker, 2018). Valsala and Menon (2019) associate psycho-spirituality as the relationship existing between the mind and contextual understandings of spirituality and believe that it has its roots in Maslow's hierarchy of needs, specifically as it relates to Maslow's concept of self-actualization.

Psycho-spiritual terra incognito entity: A seemingly autonomous, sentient, entity which results from the combination of the 'psycho-spiritual' concept (previously defined)

and the cartography term, ‘terra incognito,’ which relates to unmapped or undocumented regions, of, in this case, the brain. Prüss (2018) considers this concept, or manifestation, to be the result of neurologic synaptic autoimmunity, and a purely reactionary biological invention, often produced by foreign substances introduced to the blood stream and then the brain. The concept of the psycho-spiritual terra incognito entity is very often related to the use of entheogens such as DMT. Under the influence of DMT, users have often reported very similar experiences to one another which detail long and even complex communication with what they perceive to be deliberating entities. These are also considered by many to be mental personifications of the user’s thoughts, considerations, or manifestations derived from religious or para-religious belief systems, although many users contend that they are, in fact, communicating with an exterior element or entity (Tramacchi, 2018).

Psycho-therapeutic: A form of psychological therapy which relies heavily upon learning and developing mental tools related to improved thinking, emotional intelligence, action planning, attention focusing, social cognition skills, coping methods, and increased tolerance towards forms of stress (Horowitz, 2018). According to the Substance Abuse and Mental Health Service Administration (SAMHSA), psycho-therapeutic interventions are related to a very wide spectrum of therapies which include treatments for depression, anxiety, post-traumatic stress disorder, cancer, schizophrenia and substance abuse related disorders (2019).

Tryptamines: A class of serotonergic hallucinogenic drugs, categorized within the area of psychotropic drugs, these substances are specifically associated with creating

profound alterations in mood, sensory perceptions related to space and time, and thought processes in the human brain (Araújo et al., 2015). Acting as agonists of the 5-HT2A receptor, the serotonin (5-hydroxytryptamine, 5-HT) transporter (SERT) creates a psychostimulant response in the brain producing hallucinatory effects, most often associated with psilocybin, LSD, and DMT (Adkins, Barker, & Blakely, 2001). Tryptamines related to psychedelic substances are categorized as a Schedule 1 substance by the federal Drug Enforcement Agency and have been illegal in the United States since the United Nations Convention on Psychotropic Substances, in 1971. However, they do not possess either an addiction severity index score, nor have they been shown to do brain or organ damage, as are both criterion for a Schedule 1 categorization (Eischens & Atherton, 2018).

Assumptions

Given the epistemological context of creating a construct by which to study intrinsic human motivations as they relate to conscious-altering states of mind, and even perceptions of out of body experiences, I assumed that these altered states and perceptions relate to some intrinsic motivational desire. Whether that desire be rooted in simple curiosity, to increase a sense of spirituality or self-awareness, to increase levels of sustained substance abuse recovery, or to indulge in hedonistic behavior, the very first assumption which must be accepted is that perceptual motivations are intrinsically inherent and addresses some aspect of desire. D'Souza and Gurin (2016) expound upon this theory by stating that intrinsic motivations must, ultimately, produce intrinsic rewards. This assumption is necessary in the context of the study, to examine the link

between what we scientifically know to be true about DMT use and the intrinsic motivations that propel individual users towards its use.

Given also that any phenomenological study will focus its attentions upon what and how people experience any given phenomenon (Holstein & Gubrium, 2000), I assume that altered states of consciousness, and even out-of-body perceptual phenomenon, are real to the user even if they cannot be observed, proved, or explained. This assumption is necessary because, while they cannot be observed, proved, or explained, I acknowledge the remarkable similarities in shared perceptual responses, and recognize the phenomenon, whatever it might be, to be an accurate depiction of these shared phenomenological experiences (see Creswell, 2007).

Additional assumptions included that participants would be willing to sit for interviews, that they would be forthcoming about their intrinsic motivations related to illicit drug use, that they would provide honest and accurate responses, and that the theoretical frameworks selected for the study were the best suited to support the research. A final assumption involved the idea that collaboration between a subject and researcher, through a phenomenological approach, was the most accurate and appropriate avenue through which to examine personal perceptions (Creswell, 1998). While this approach can be severely hampered by any number of obstacles, internal or external, the assumption was necessary because it remains the most valid epistemological construct by which to examine the links between intrinsic motivations, DMT use, and perceived experiences of its use.

Scope and Delimitations

Specific aspects of the research problem, the phenomenological and epidemiological increase of DMT use relative to individual intrinsic motivations, that I addressed in this study and literature review are: (a) the history of DMT use, (b) the current relative science suggesting possibilities of DMT's effect on the human brain, (c) the current demographical state of DMT use and DMT users in the United States, (d) the production of DMT, (e) the manner and method in which DMT is typically consumed, (f) experiential responses to DMT use, (g) issues surrounding illegality, (h) the relationship DMT use has with mental health therapies, (i) the relationship DMT has with substance abuse recovery therapies, (j) the relationship DMT use has with psychospiritual, individual, interpersonal, ritualistic, and religious interpretations, and (k) the relationship DMT has (socially, culturally, legally, and chemically) with other tryptamines (hallucinogens). The specific research focus of motivations for DMT use was chosen as it is the impetus for the significant increase in its popularity, and, in consequence, the increase, interest, and evolution of every other previously stated specific aspect of the research problem that I address in this study.

Boundaries of this study included the inclusion and exclusion of specific sample populations. Minors were excluded from the study for multiple reasons. Minors typically possess different motivations than adults for drug use, their cognitive motivational range is, in general, less sophisticated than an adult (Comeau, Stewart, & Loba, 2001), and they also constitute a small minority of the DMT user demographic age range and are not an indicative sample of the overall user population (Davis, Barsuglia, Lancelotta, Grant, &

Renn, 2018). Minors would very likely skew the motivational results of DMT towards a more hedonistic baseline, and for these reasons minors were excluded from the research demographic. Women were also excluded from the study. Women were excluded from the study because there have been no gender-specific studies related to DMT use conducted yet and because females also constitute a small minority of DMT users. Finally, participants will be restricted to users dwelling in the United States. This limitation was enacted because of the lack of research surrounding motivations of DMT use specific to the United States, as most studies are international in nature or they focus their attention on DMT use in South America, due to its limited legality and significantly increased access to viable sample populations (Kuypers et al., 2016; Loizaga-Velder & Verres, 2014; Talin & Sanabria, 2017).

Theories and conceptual frameworks most related to this study which were not included, were the expectancy theory, cognitive evaluation theory, and grounded theory.

Addressing the transferability of this study, the results of this study are applicable and transferable to other studies because the data collection methods, design model, framework, and data analysis can be easily reproduced and replicated in future studies to augment other research or to recreate new research and test it for authenticity. It can also be applied to other population samples, if necessary. According to Ravitch and Carl (2016), transferability is, "...the way in which qualitative studies can be applicable, or transferable, to broader contexts while still maintaining their context-specific richness" (p. 189). Attending to the importance of transferability, Shento (2004) suggested that, when functioning in the realm of positivist work, it is important that the results of the

work can effectively be applied to a wider population. This study maintained these integral qualifications for transferability.

Limitations

Limitations included aspects of both transferability and dependability as they related to the research design model. Because the population sample was derived from a chain-sample technique, as opposed to soliciting a group or institution, and because in-person interviews were used in the collection of data, the sample population was comparatively small when compared to previous well-funded studies, and the geographic circumference was restrictive. This limitation was the direct result of budget constraints. While each participant met the specific criteria (U. S. male ages 18-50, having used DMT at least twice in the last 12 months prior to the interview), the natural and intentional homogony of the sample population is bound to be even more so, as the chain-sample is certain to place people who know one another, and even use DMT together, into the sample. This increased the likelihood of similarities in the sample population beyond those desired or intended, which may have limited or skewed the results (Patton, 2015). For example, because I examined the motivations of illicit drug use, a person who uses DMT for purely hedonistic reasons may likely take the drug with others who are motivated to take it for the same purpose, and they were possibly more likely to refer likeminded, or in this case, similarly motivated, participants to my research project. Thus, my choice of sampling procedure may have created a misrepresentation of motivations for DMT use in the true user population and reducing the validity of both the transferability and dependability of the research.

Another potential limitation of the study was the ability of participants to accurately articulate their motivations and perceived experiences. This could be made difficult for three reasons. The first relating to the often ambiguous ‘psycho-spiritual’ nature of the motivation, the second, the illicit nature of the behavior, and the third relates to the challenge of articulating the phenomenon of radically altered states of consciousness.

Research indicates that one of the main motivations for DMT use includes a desire to increase wellbeing and self-awareness and this is most often associated with a sense of increased spirituality (Johnstad, 2018), however, the vast majority of DMT users self-identify as not belonging to a religion, and many also self-identify as atheists (Griffiths, Hurwitz, Davis, Johnson, & Jesse, 2019). This could prove problematic because people who self-identify as belonging to a religion have already developed a ready vernacular and vocabulary for articulating elements related to spirituality, spiritual growth, and other religiously coherent concepts. But, if my sample population retained characteristics common with previous sample populations, it is likely that my sample population had not developed such an extensive lexicon; but this is impossible to judge with certainty. Being put on the spot and asked questions regarding their spiritual nature or motivations may have proved a difficult task for some respondents. However, this was not the impression I developed while conducting the interviews. To attempt to mitigate this potential concern, I provided them ample time during the interview to answer each question and asked if they were finished answering after each question.

The illicit nature of the behavior in question also possess a limitation. It may have decreased the number of willing participants and it could have also negatively impacted the forthcoming nature of the respondents. However, the completely anonymous nature of the research study should have greatly mitigated this concern.

Finally, the ability to accurately describe altered states of consciousness, or even out of body experiences, may have proved difficult for some respondents. Previous research indicates that it can be difficult to articulate such intense experiences (Johnstad, 2018). Patton (2015) suggested that it is imperative that qualitative research be able to elicit accurate expressions of meaning. However, I did not perceive that participants had difficulty describing their experiences.

Personal bias related to reflexivity is always a potential concern in social behavior research. Reflexivity in qualitative research, which can manifest itself through the use of the interview design, is defined by Ravitch and Carl (2016) as, “the systematic assessment of your identity, positionality, and subjectivities” (p. 15). There is an inherent danger of bias in all qualitative research (Roulston & Shelton, 2015). Potential bias elements, which I had to be accountable for, included the fact that I am interviewing illicit drug users after having spent several years as a licensed clinician conducting similar interviews. I had developed opinions based upon my experience which, while useful in predicting certain patterns of behaviors, could have proved detrimental if these previous experiences caused me to create assumptions on behalf of the respondents, or even ‘lead’ them in interviews. Another potential bias is that I belong to the gender, age, and geographic demographic of my population sample. My personal experiences,

familiarity of positionality, and shared experiences could have caused me to develop assumptions prior to gathering and analyzing data, which possessed the potential to skew results as the result of personal bias.

Overcoming these limitations was possible to varying degrees. Regarding the natural homogony of the selected population sample, which could then be exacerbated by a chain-sample approach, I could have altered the sample selection method if the research indicated that the results were producing a premature saturation point (see Mason, 2010). Marshall (1996) suggests that researchers must often be pragmatic with qualitative sampling techniques, as they can require a certain level of flexibility and fluidity. However, this did not become necessary, as I had ample participant availability and reached saturation within the anticipated number range of participants.

Regarding the three issues associated with articulating honest and accurate responses from the participants, the second issue, the illicit nature of the behavior, was mitigated by developing a rapport through prolonged contact and by taking particular care to stress the assurances of confidentiality and anonymity associated with the study. Regarding the issues of being able to accurately articulate difficult responses, my perception of the interviews was that this was not an issue for any of the interviewees in my research study. They provided concise and articulate responses to the questions and exhibited no noticeable signs of confusion.

Concerning issues related to personal bias, I made deliberate methodological choices which were conducive to the reduction of interposing my own positionality upon the research (Cypress, 2017). I accomplished this by soliciting feedback from individuals

associated with the research project and those who were not, by comparing my results with larger, previous research results, and by making sure to include disconfirming evidence, when applicable.

Significance

This study sought to explore the current gap in the literature as it relates to the intrinsic motivations and perceived benefits of DMT use by addressing a specific United States demographic of DMT users: males aged 18-50 who had used DMT twice in the year previous to this research study. While the motivations for this emergent trend of drug use has been partially examined, the previous studies focused almost exclusively on ritual ceremonial use in South America through the ingestion of AYA. The few studies which focus on DMT use in the United States use eclectic and diverse population samples, to include both genders and a wide age range of participants (Nunes et al., 2016). No current studies have focused specifically on the motivations of DMT use by adult men in the United States. (Winstock et al., 2014).

Further research is necessary as a rapidly growing number of U.S. DMT users have started taking the drug over the last decade, with little understanding of its short and long-term physical and mental effects. Because no research into the motivations of DMT use in U.S. men has been done, researchers do not know why the spread of DMT use is occurring in its most prevalent demographic of use. And because so little is yet understood about how the drug affects the brain, the human physiology, and user's psyche (Davis, Barsuglia, Lancelotta, & Renn, 2018), thousands of users are applying serious potential risks against an unknown variable of benefit. Potential findings may

affect positive social change by creating a deeper understanding of why the use of DMT is escalating in the United States so quickly, what the potential ramifications of this emergent trend might be, and how to create safer and more responsible approaches to DMT use.

Summary

In Chapter 1, I introduced DMT use as a particularly unique drug phenomenon that delineates from previous drug epidemiological models because its intrinsic motivations for use vary significantly more than previous similar phenomenon, and because of its relatively recent, but rapid, popularity growth. Its association with both entheogenic and synthesized psychedelics, as well as its associations, both legal and illicit, with religious entities makes it a study pertinent to both understanding drug use patterns and as an epidemiological phenomenon. With this qualitative, phenomenological study, I examined the intrinsic motivations for DMT use amongst adult U.S. males, its fastest growing user demographic. It was the purpose of this study to provide law enforcement, mental health and substance abuse clinicians and practitioners, as well as legislators, with an increased awareness of the motivations for DMT use, so they can be better prepared to make well-informed decisions.

Chapter 2 is a literature review where I will examine the history of DMT use, the chemical compositions which create the actual compound that is N.N-Dimethyltryptamine, the current relative science suggesting possibilities of DMT's effect on the human brain, the current demographical state of DMT use and DMT users in the United States, the production types and methods of DMT extracts, the consumption types

and methods of the DMT extract, experiential responses to DMT use, and issues surrounding its illegality. Also examined are the relationship DMT use has with mental health therapies, the relationship DMT has with substance abuse recovery therapies, the relationship DMT use has with psychospiritual, individual, interpersonal, ritualistic, and religious interpretations, and the relationship DMT has (socially, culturally, legally, and chemically) with other tryptamines (hallucinogens). Previous studies related to the intrinsic motivations for the use of DMT, in other sample populations, are also explored.

Chapter 2: Literature Review

While all drugs possess the potential to benefit humans under the appropriate conditions, care, and context, they also possess the potential of misuse and abuse. This is particularly true of illicit substances; not because they are illegal, or even because all illicit drugs are necessarily more addictive, but because their illicit nature makes their epidemiology difficult to determine and makes them nearly impossible to regulate (Giggs, 2016). When a drug becomes very popular very quickly, many of the problems associated with its use become exacerbated, and the opportunity for legitimate clinical and medicinal forms of its use becomes diminished (Whitelaw, 2017). These complications become increased with the spread of DMT, as, unlike many other previous drug use phenomena, the chemical mechanisms and neurological responses remain largely unknown (Rodrigues et al., 2019).

Tryptamines, in general, have proven to possess the potential to provide therapeutic value to some individuals who suffer from substance abuse and mental health disorders, but because of rampant recreational use in the 1960s, in an under-informed population, that potential has been regulated to illegality (Lieberman & Shalev, 2016). Those who could benefit from their use have become deprived of their potential therapeutic value. Similarly, DMT today has found a unique niche in popular culture, which has allowed its use to spread at a higher rate than other NPSs, quickly increasing its user base around the world (Schifano et al., 2015). While the use of DMT has been shown to have positive effects when treating mental health diagnosis and producing higher rates of sustained-recovery amongst those impacted by issues related to chemical

dependencies (Garcia-Romeu, Kersgaard, & Addy, 2016) no long-term clinical trials have been conducted. However, as Davis et al. (2018) suggested, there exists as much potential risk to personal and public safety as there does potential benefit.

This is not to suggest that tryptamines, to include DMT, possess more danger than the benefit which they might produce, nor that the use of illicit substances is inherently wrong. Substance illegality is a majority-rule construct rooted in ancient religious and moral traditions; it is not the product of deductive reasoning or the result of a scientific method (Reiman & Leighton, 2013). However, irresponsible or uninformed use of any drug, to include DMT, does damage twice: it presents a potential for physical and public safety, and it also further stigmatizes, de-funds, and marginalizes legitimate scientific research which might otherwise produce a benefit for a population in need of an alternative therapy (Whitelaw, 2017).

The purpose of this phenomenological study was to explore the intrinsic motivations and perceived benefits of DMT use in its most expansive demographic, U.S. adult males, that we, as a society, might have better-informed law makers, substance abuse counselors, mental health clinicians, and law enforcement officers. And, by increasing awareness of why individuals choose to engage in this drug use phenomenon, researchers can potentially learn to minimize the harm and maximize the benefit of DMT use.

This chapter will detail my literature search strategies. I also provide a thorough inspection of the theoretical frameworks employed. I then inspect the many aspects related to, and associated with, the use of DMT. This inspection includes, in addition to

the primary focus of intrinsic motivation of use, (a) the history of DMT use, (b) the chemical compositions which create the actual compound that is N.N-Dimethyltryptamine, (c) the current relative science suggesting possibilities of DMT's effect on the human brain, (d) the current demographical state of DMT use and DMT users in the United States, (e) the production types and methods of DMT extracts, (f) the consumption types and methods of the DMT extract, (g) experiential responses to DMT use, (h) issues surrounding illegality, (i) the relationship DMT use has with mental health therapies, (j) the relationship DMT has with substance abuse recovery therapies, (j) the relationship DMT use has with psychospiritual, individual, interpersonal, ritualistic, and religious interpretations, and (k) the relationship DMT has (socially, culturally, legally, and chemically) with other tryptamines (hallucinogens).

Literature Search Strategy

The literature researched was accessed through databases at the Walden University online library and the American Military University online library. Data was accumulated through the use of search engines, including: Academic Search Complete, Criminal Justice Database, Google Scholar, Health and Medical Collection, ProQuest Science Journals, PsycARTICLES, PsycBOOKS, PsycCRITIQUES, PsycEXTRA, PsychiatryOnline, Psychology Database, Psychology: SAGE Full-Text, PsycINFO, ProQuest, Public Health Database, SAMHSA, ScienceDirect, SocINDEX, Thoreau Multi-Database Search, and the WHO website. Key search words and terms included: *addiction, ayahuasca, dimethyltryptamine, entheogenic, intrinsic motivation, lysergic acid diethylamide, mental health therapy, motivation, novel (or new) psychoactive*

substances, psychedelics, psychotherapy, psychospiritual, psilocybin, Santo Daime. spirituality, substance abuse therapy, and *tryptamine.* The following terms were also searched in conjunction with 'DMT': *addiction, chemistry, consumption, demographics, distribution, entheogenic, experience, legality, mental health, motivation, popular culture, production, psychotherapy, psychospiritual,* and *substance abuse.*

Primarily qualitative terms related to motivational and psychological aspects of DMT use, such as *psychoactive substances, mental health therapy, motivation,* and *substance abuse therapy*, were run through search engines such as the Health and Medical Collection, PsycARTICLES, PsychiatryOnline, Psychology Database, Psychology: SAGE Full-Text, PsycINFO, SAMHSA, and WHO. Primarily quantitative terms related to known variables related to DMT use, such as *legal, chemical, demographic,* and *distribution* were run through search engines such as Criminal Justice Database, Proquest Criminal Justice Database, and Science Direct. All terms were searched with general, open-sourced search engines such as Thoreau, Academic Search Complete, and Google Scholar.

There exists a near 40-year gap in all scientific research related to hallucinogenic drugs, including DMT, since they became illegal under United Nations Convention on Psychotropic Substances in 1971 (Richards, 2015). While over 2000 papers had been published on hallucinogens between 1940 and the mid-1960s, no research was conducted again until the late 1990s (Johnstad, 2015). While synthetic DMT use is a recent and emergent drug use trend, and very little research, comparatively, has been done on it, there does exist about 10 years' worth of sparse scientific material related to synthetic

DMT research. This was scoured intently through the previously listed databases and search engines to provide the most complete and comprehensive literature review possible. An additional method to compensate for the relative paucity of scientific research done thus far on synthetic DMT, and to augment the available results, was employed by researching the nonsynthetic, entheogenic, use of DMT, a history which goes back much farther than synthetic use, and is comprised of significantly more scientific research data. By incorporating the more traditional uses of DMT (primarily its nonsynthetic ingestion through the use of AYA) into the study, I was able to sufficiently expand the breadth and scope of the literature review.

Theoretical Foundation

The two theories applied to this research study of the intrinsic motivation and perceived benefits of DMT use were the self-determination theory (SDT) and the self-efficacy (SE) theory, as they both directly applied to the causality and complexity of intrinsic human motivations and behavioral outcomes. A formal macro, metatheory, based in the Baconian tradition and relating specifically to human intrinsic motivations (Deci & Ryan, 2008), SDT was developed in the 1970s by Edward L. Deci and Richard Ryan; however, it was not accepted as an empirical theory by the scientific community until the mid-1980s. Since the turn of the 21st century, its use has become greatly increased throughout the social scientific community (Gagné, 2014).

The primary theoretical proposition was derived from the concept that for an individual to acquire their optimal functionality and experience their greatest growth potential, there are three innate human needs which need to be satisfied, and three

essential theoretical elements which need to be addressed. The theory was founded in the context of intrinsic motivational forces (with respect to varied extrinsic forces, to a lesser degree) which controls behavior and decision making (Ryan & Deci, 2000).

Regarding the three innate needs, these were relative to an individual's competence, relatedness, and autonomy. These needs, according to Deci and Ryan (2008), were directly associated with needs and intrinsic motivations. They were also universal characteristics and instinctive human desires which transcend geography, gender, culture, and even time. Competence related to an individual's ability and inclination towards mastery experiences. Relatedness was comprised of a sense of community or attachment to other individuals. Autonomy created the sense of power over one's own behavior and an ability to accomplish goals (Ryan & Deci, 2017). The three elements included (a) a natural, proactive, human proclivity towards mastering intrinsic motivation, (b) an inherent human tendency towards higher levels of growth and development, and (c) an individual's optimal state of functionality and development are inherent; however, they are not automatic or assured (Ryan & Deci, 2017).

The SDT has been applied previously in ways similar to the current study, focusing on intrinsic motivations, because of its motivational contexts and definitions. Research studies focusing on behavioral patterns and motivations towards behavioral patterns apply the SDT for its explanations relating to the evolution of personality, emotion, mastery, competence, and autonomy. The SDT is focused primarily on a development towards an understanding of well-being motivations (Ryan & Deci, 2004), which is also one of the key concepts of this study topic.

The SDT was chosen for this study because it is an approach which considers personality and intrinsic human motivation and employed traditional empirical methods. It utilized organismic metatheory which defined the perquisites for behavioral self-regulation and the evolution of personality development as it related to (primarily) intrinsic motivation (Ryan, Kuhl, & Deci, 1997). This theory related specifically to the nature of this study, which was the exploration and study of intrinsic motivations, as they related, in this instance, to DMT use.

And, as much of the research related to the motivations for DMT use indicated strong tendencies towards motivations of self-improvement, self-awareness, and a type of psychospiritual development indicative of 'well-being,' the developers of SDT spoke directly to the heart of my research question. This is because, according to Deci and Ryan (2000), it is the consideration of perceived forces which identify types of motivations and the progression towards a desire for self-improvement and well-being. These sentiments are often perfectly echoed in the previous research studies conducted on the study of motivations towards DMT use.

The SE theory was developed by Albert Bandura and proposed in 1977 as a theoretical framework for analyzing people's ability to achieve goals. Its construct originates from the social cognitive theory, which posits that reciprocal dynamics exist between behavior, cognitions, and the environment which seek to influence each other in a profound and impactful fashion (Gist & Mitchell, 1992). It is also commonly associated with phenomenological research designs.

The SE theory posits that, through the gradual evolution of experiences, often repeated over time, an individual's innate ability to achieve positive motivations manifests itself into well-being and a sense of mastery. These experiences can include: mastery or vicarious experience, physiological feedback, social persuasion, and emotional states (Bandura, 1992). Mastery experience, the primary source of SE, suggests that success and accomplishment build an individual's motivational belief system and creates the belief that progression towards perceived improvement is possible. Vicarious experience, the secondary source, produces a similar motivational route towards perceived success, but is founded in observation rather than experience. Physiological feedback, the third motivational source of SE, is derived from the interpretation of external inputs, and emotional states, the final motivational source of SE is derived from the fact that emotional perceptions tied to cognitive factors will influence decision making (Bandura, 1992).

The SE theory has been applied previously in ways similar to the current study, because it focuses on the sources of motivations, particularly intrinsic motivations. Because human motivations are intrinsically tied to intrinsic and extrinsic stimuli, and because the influence of these factors, according to the SE theory, ultimately defines not just behavior, but the belief to engage in specific behaviors, the SE theory was well-positioned to explain the foundation of human motivational behavior (Schunk & DiBenedetto, 2016).

The SE theory was selected for this study because it provides a macro-scale and holistic interpretation of the sources and foundations of intrinsic human motivation,

relative to a belief system. It was also selected because it utilized empirical metatheory to define and categorize internal cognitive factors related to decision making (Gist & Mitchell, 1992). In addition, it measured perceived controls of behavior related to consistency of thought (Ajzen, 2002).

The SE theory relates to this study because, it too, sought to examine explanations for motivational behavior in a context of intrinsic decision-making. The research questions in this study examined elements related to a specific aspect of cognitive deliberation, and the SE theory examined general reasons for that specific cause. This study examined the intrinsic motivations towards decision-making as it relates towards increasing well-being and was directly correlated to issues surrounding a motivational impetus to improve mental health and reduce substance abuse. The SE theory has proven to be a useful framework in areas ranging from mental health concerns, such as depression and anxiety, and substance abuse related issues as well (Bandura et al., 1999).

Literature Review Related to Key Concepts

DMT: A Definition

DMT is a chemical compound that exists naturally in most plants and animals, including humans, and is most commonly associated with the brain's penial gland (St John, 2016). Though its natural biological purpose in human physiology yet remains unclear, it is suspected that it has an impact on human dream states and circadian rhythms (Bragazzi et al., 2018). While enzyme inhibitors in the stomach prevent naturally occurring DMT from altering states of human consciousness, when suppressed, DMT consumed in larger doses becomes a hallucinogen, and is commonly associated with

other hallucinogens, such as LSD and Psilocybin (Cameron & Olson, 2018). While DMT has its entheogenic roots in Brazilian shamanism (Smith, 2016), the chemical compound has found a modern synthetic manifestation (Rodrigues, Almeida, & Vieira-Coelho, 2019) and is now considered to be prominent and prevalent amongst the NPS (Schifano et al., 2015). DMT is growing rapidly in popularity around the world, particularly in the United States (Zawilska & Wojcieszak, 2018).

History of DMT: Coming to America

While it is suspected that the entheogenic use of DMT reaches back into dozens of ancient cultures, perhaps as far back as thousands of years, the history of DMT's long migration to America originates in the South American rain forests of Brazil, nearly two hundred years ago (Wolff & Passie, 2018). Here the Northwestern Amazonian tribes have been combining the stems of the Banisteriopsis caapi vine with leaves taken from the Psychotria viridis bush for centuries and the resulting liquid is called ayahuasca (AYA), although it is indigenously referred to as 'the vine of the soul', or 'the vine of the dead' (Nunes et al., 2016). AYA is a psychoactive brew which alters states of consciousness and provides hallucinatory visual effects by increasing levels of DMT into the body while suppressing inhibitors which would counter its effects (Lobao-Soares et al., 2018).

The beginning of western scientific knowledge of AYA occurred in the early 19th century when a member of an Amazonian botanical expedition discovered the plant mixture and observed its indigenous use (Garcia-Romeu, Kersgaard, & Addy, 2016). However, AYA remained a very localized tribal secret, used exclusively in religious ritual ceremonies until the early twentieth century when northern Brazilians learned the

secret of making AYA and incorporated its use into their own entheogenic/syncretic religious rituals (Nunes et al., 2016). The oldest of the AYA churches, Santo Daime, became founded in the 1930s in Brazil and then, after decades of static membership, the religion began to grow (Garcia-Romeu et al., 2016). During the 1980s the Santo Daime church expanded into 23 other countries while several other entheogenic/syncretic AYA based churches began to also grow quickly, ultimately prompting, in 1986, the Brazilian government to legalize religious AYA ceremonial use. Upon the legalization of AYA use, the Brazilian ceremonial AYA tourist retreat industry began to grow quickly through the late 1990s, populated primarily by visitors from the United States and Europe who were willing to pay for this new DMT-induced experience (Wolff & Passie, 2018). These tourists brought back primarily positive stories to the United States of their experiences on the AYA retreats, where their accounts, over the last 20 years, have produced many popular books, been reported by major news outlets, disseminated on social media platforms, and popularized by celebrities recounting the therapeutic and healing properties they experienced (St John, 2016).

Upon the development of a popular/sub-culture use of DMT in the United States, instructions for synthesizing DMT from legally available components became commonly found on the internet, thus allowing for a more convenient public consumption and consequently a more rapid spread of its use (Warren, Dham-Nayyar, & Alexander, 2013). Today, according to the largest scientific research completed on the demographics of DMT use, DMT possesses a greater proportion of new users than any other drug (24%) (Brown et al., 2017), and the trend seems to be increasing (Bilhimer et al., 2018).

The State of DMT Use in the United States Today

Thirty-two million Americans reported using psychedelics during the 2000 census (Krebs & Johansen, 2013) and new DMT users are very likely to be amongst them, with 72% of reported new users responding that they had tried other psychedelic drugs, such as LSD, psilocybin, or ketamine, prior to experimenting with DMT. And while much of the appeal towards psychedelics to a wider population is inhibited by their extreme ability to alter states of consciousness and produce intense hallucinations, the trend of DMT use is growing quickly as 42% of world-wide users are now in the United States (Davis, Barsuglia, Lancelotta, Grant, & Renn, 2018). DMT use is becoming increasingly popular in all U.S. demographics (Brown et al., 2017), however, the most common DMT users includes males (79%), Caucasian (86%), heterosexual (82%), who possess an average age of 35.4 years old. Unlike more commonly used drugs, or even more traditional psychedelics, a peculiar aspect of DMT users is that they tend to hold higher levels of education, with a greater percentage of them holding a college degree than those with a high school education or less (Davis et al., 2018).

Obtaining DMT

DMT will not be commonly found for street sale like other drugs such as marijuana, cocaine, or even other more traditional forms of tryptamines (Marion, 2014). However, the internet is replete with instructions for creating DMT and provides hosts of sites which provide the means by which the necessary components might be obtained and the methods by which to chemically extract the active DMT compound (Lanaro et al., 2015). While the pure active substances used for creating DMT are typically illegal, legal

chemical alternatives are available for purchase. These new synthesized chemical compounds are often modified in their molecular structure and then are marketed as legal alternatives to the illegal versions of very similar compounds (Raújo et al., 2015). Only approximately 25% of DMT users report extracting the necessary chemical components from purely plant-based material; the vast majority of users are creating synthetic designer versions of DMT (Warren et al., 2013).

Consuming DMT

Smoking DMT is by far the most common form of ingestion (97%; Davis et al., 2018). When a common dosage (approximately 30 mg) of synthetic DMT is inhaled, there occurs a rapid onset of physical pleasure and visual hallucinations within 5-20 seconds. Ninety three percent of DMT users report the intensity of the experience 'peaking' within a minute of dosing and the peak effect lasting for approximately 5-10 minutes (Winstock et al., 2014). Residual effects of relaxation and euphoria are included in the 'come-down' stage, which lasts an additional 20-25 minutes on average (Timmermann et al., 2018). Typically, DMT users will never re-dose after initial use (61%); however, 28% percent of users will sometimes re-dose, with only 11% responding that they will frequently or always re-dose after the effects have worn off (Davis et al., 2018). For the few DMT users who ingest DMT through AYA, by drinking the plant-based brew, the effects are more prolonged. After ingestion, the effects begin to manifest themselves within 30-40 minutes, peaking in intensity between 60-80 minutes, and gradually subsiding in intensity until the effects disappear approximately 4-6 hours after ingestion (Nunes et al., 2016). No cases of re-dosing AYA has been reported by

respondents, as the ingestion of AYA often results in vomiting, and often diarrhea as well (Lanaro et al., 2015). Almost a full two-thirds of DMT users consider the effects of DMT to be ‘more intense’ than other traditional hallucinogens (i.e., LSD, psilocybin, ketamine) (Davis et al., 2018).

Experiential Responses Using DMT

The use of DMT is often related to that of a trance, dream state, and even intense out-of-body-experiences which are also referred to as ‘breaking through’ (Luke, 2017). It is also often related to concepts surrounding clarity, self-awareness, transcendence, and ego-dissolution, or what is commonly referred to as ‘ego-death’ (Nour, Evans, Nutt, & Carhart-Harris, 2016). There are three basic levels to a DMT experience, and these are typically regulated by dosage amounts. They include the first ‘level’, which involves the ability to see geometric shapes and patterns when a user’s eyes are closed, often referred to as ‘closed-eye’ visuals. The second level involves geometric hallucinations when a user’s eyes are open, referred to as ‘open-eye’ visuals. The third level, often referred to as ‘breaking through’ involves the perception of leaving one’s body and traveling into different dimensions (St John, 2018). Very often, having ‘broken through,’ DMT users report interaction with what appear to them to be completely independent, sentient, beings which typically involve conversations (verbal or telepathic) which exist outside of time and space. Commonly referred to as ‘machine-elves’ (due to the geometric patterns which pervade the hallucinatory effects) users often report that valuable messages concerning their well-being are imparted (Tramacchi, 2018). Users have even reported experiencing what feels to them like a life-time within the 10-15 ‘peak’ period. Euphoria,

contentment, and pleasure are most commonly associated with each of the three stages (Germann, 2016).

Motivations for Use: Previous Studies

Most of the previous studies regarding intrinsic motivations for DMT use have included international, cross-sectional, sample populations, focusing on DMT use through the ingestion of AYA (Talin & Sanabria, 2017), and of the few previous U.S. studies this author has been able to locate, regarding the motivations for DMT use, none have been gender-specific. It then becomes necessary to look to previous and other sample population dynamics to create a baseline by which to compare motivations of DMT use in adult U.S. males. Current data tells us that there are many motivations for the rapidly increasing use of DMT in the United States, as well as internationally; however, according to Johnstad, one of the leading researchers in the field, there are currently three main motivational categories associated with DMT use, (a) perceptions of mental/physical therapeutic value, (b) perceptions of a specific spiritual component value, and (c) perception of a pleasure/hedonistic value (2018). The following are elaborations related to the three main intrinsic motivational categories for generalized DMT use.

Intrinsic motivation category 1: Perceptions of therapeutic value: substance abuse recovery and mental health diagnosis. It should be noted, briefly, and before continuing with the first motivational category for DMT use, that experimenting with psychedelics for the purposes of treating substance abuse and mental health concerns is not a new phenomenon; it has merely been sleeping (Richards, 2015). As early as the late 1940s, psychiatric research began exploring with psychedelics to treat just such

symptoms, and by the mid-1960s over 2000 papers had been published on the topic (Johnstad, 2015). In the late-1960s, however, primarily because of the widespread recreational use of psychedelics, they became criminalized and all such scientific research effectively ended, putting to bed, for a generation at least, any significant scientific research related to the subject (Lieberman & Shalev, 2016). Only since the late-1990s, at approximately the same time that the AYA tourist industry began to flourish and expand, did the restrictions begin to ease, and a renaissance of interest in psychedelic research resumed (Letheby, 2017).

Issues surrounding substance abuse and mental health disorders present significant personal, social, and economical barriers to health and well-being, individually and collectively (SAMHSA, 2019). Over the past twenty years there has been a significant increase in the use of U.S. mental health services resulting in minimal impact on the mental health status of the nation (Mojtabai & Jorm, 2015), while simultaneously placing an ever-increasing strain on treatment communities, the criminal justice system, and the economy (Frazier, Sung, Gideon, & Alfaro, 2015). Thus far, traditional public health campaigns and psychotherapeutic/biomedical models have displayed a limited impact regarding both prevention and treatment, making drugs which ameliorate symptoms of anxiety and depression, while additionally improving cognitive function, very desirable (Cameron, Benson, DeFelice, Fiehn, & Olson, 2019). This is leading many to explore psychedelics, DMT in particular, as a viable, cost-effective alternative (Loizaga-Velder & Verres, 2014).

There is now a significant and rapidly growing number of studies which empirically validates the therapeutic and medicinal values associated with DMT and psychedelics in general (Sessa, 2016), further fueling one of the primary motivational categories for DMT use. And while the use of most illicit drugs provides an indication towards increased risk and likelihood of psychological distress and suicidality, these outcome indicators have not applied themselves to the use of psychedelic drugs (Yaden et al., 2017). In fact, just the opposite is true. The National Survey on Drug Use and Health in the United States stated that a clear and distinct causality existed between lifetime psychedelic use and a significant reduction related to diagnosis of psychological distress and suicidal thinking (Hendricks et al., 2015). Johansen and Krebs (2015) not only definitively echo this sentiment, but go even further to say that there is no evidence whatsoever that the use of psychedelics, to include DMT and other drugs classified in the tryptamine family, harm the brain or bodily organs, cause addiction, or even instigate compulsive use.

Additional studies have shown DMT use to have particularly high efficacy rates for treating depression, anxiety, and mood disorders when treating mental health diagnosis (Garcia-Romeu et al., 2016). A recent international study of DMT users conducted online indicated that users experienced improved symptoms related their mental health concerns with 77% indicating alleviated symptoms of depression, 69% indicating alleviated symptoms of anxiety, and 53% indicating alleviated symptoms of obsessive-compulsive disorder. Also, between 35-50% of respondents indicated symptom

improvements related to attention deficit hyperactivity disorder, autism, bipolar disorder, and eating disorders (Davis et al., 2018).

Because DMT has an extremely low rating on the addiction index (Davis et al., 2018), it is considered by most clinicians and medical experts to maintain a very viable safety profile (Rodrigues et al., 2019), and because the variety of treatment options available today produce moderate to low sustained recovery rates in all tested population samples (Bogenschutz & Johnson, 2016), many are now turning to it as a viable alternative to treat many forms of substance abuse addiction. In fact, it is the main motivation for the vast majority of people who attend the AYA retreats in Brazil to this day, as it has been shown to be particularly effective in treating substance abuse disorders by increasing sustained rates of recovery related to alcoholism, nicotine addiction, and other powerfully addictive substances such as heroin and methamphetamines (Tófoli & de Araujo, 2016).

Investigating the largest AYA church, Santo Diame, a research team employed a questionnaire using DSM-IV criteria to 83 members who were between 18-40 years old. Forty-four percent had maintained church membership for at least three years. Approximately half of the church members signified that they had suffered from some form of substance dependency prior to joining the church. Of these respondents, 90% reported the cessation related to at least one of the substances which they reported a dependency to, prior to membership (Labate, dos Santos, Strassman, Anderson, & Mizumoto, 2014). It is speculated that the levels of serotonin as neuromodulators increased in the brain during and after DMT use may reduce levels of substance

dependency because serotonin levels have been proven to be typically depressed in addict populations (Winkelman, 2014).

While it is important to note that dangerous recreational contexts of tryptamine use can pose serious risks to people, Hendricks (2014) states that DMT and other tryptamines possess the potential to be the most ideal addiction medications because not only are they not themselves addictive, but they typically need to be administered in very small doses on very few occasions to maintain the sustained recovery results cited previously.

There is, however, a rebuttal to be made against the use of DMT for the therapeutic and medicinal applications. First, in the case of DMT consumption through the use of AYA, while researchers generally acknowledge a correlation between the biomedical mechanisms which affect the user's physiology and increased rates of sustained abuse recovery, there may well be other variables which could reach the threshold of significance. These could include elements related to the religious and psychological aspects commonly associated with its use (Malcolm & Lee, 2017). The fact that AYA is traditionally consumed in a ritualistic environment and in a religious-based context should account for some variations in the impacts scientifically recognized (Nunes et al., 2016).

In addition, being the member of a religion, spiritual assembly, or of a group which in general promotes abstinence from the recreational use of illicit substances, may very well create some natural insulation and protection against possible harmful drug use and in general contribute to the mental well-being and quality of life of anyone who

struggles with mental health and substance abuse issues (McDougle, Handy, Konrath, & Walk, 2014). Also, using DMT in the United States means breaking the law, engaging in clandestine behavior, and associating with others who regularly do the same. Lawn et al. (2017) explains that people who typically engage in unlawful behavior are statistically more likely to possess a diagnosis related to mental health or substance abuse issues, and that this dynamic should not simply be overlooked.

This rebuttal being made, it is important to both supporters and detractors of DMT use as a viable therapeutic alternative, to ensure that rigorous scientific research lead to a better understanding and awareness of DMT's toxicological effects (Bilhimer et al.,2018) and that novel or new therapeutic approaches which display the potential to aid people suffering from mental health and substance abuse diagnosis are not stigmatized or marginalized without a scientific basis to do so (Loizaga-Velder & Verres, 2014).

Intrinsic motivation category 2: Perceived benefits of spiritual growth: attempts at well-being and enlightenment. Johnstad's (2018) second motivational category associated with DMT use possess a distinctly spiritual element. However, there is embedded in this dynamic a juxtaposition which must be addressed prior to any further considerations regarding the spiritual motivation for DMT use. The reality that DMT use is very commonly linked to religious ritualistic ceremonies and spiritual growth (dos Santos, Bouso, & Hallak, 2017), stands in stark contrast to the fact that a vast majority of first-time DMT users self-identify as non-religious, with nearly a plurality self-identifying as atheists (Johnstad, 2018). Making the issue more convoluted still, according to one study, more than two-thirds of DMT users who self-identified as atheists

prior to their first DMT use, no longer identified as atheists afterwards (Griffiths, Hurwitz, Davis, Johnson, & Jesse, 2019).

How can these contradictions be reconciled? Newberg (2017) explains that, prior to the late eighteenth century, western religions were defined by theological and dogmatic principles founded in ancient texts based upon the concept of divine revelation, and spirituality was closely linked to an adherence to these behavioral codes and personal disciplines. Since then, spirituality and religion have experienced a gradual divorce, and their relationship has become much more complicated.

Kometer, Pokorny, Seifritz, and Volleinweider (2015) go on to elucidate the divergence of spirituality from religion by providing systematic evidence that a direct correlation exists between specific spatiotemporal neuronal mechanisms and 'spiritual' experiences which result in the perception of enhanced and expanded insights into self-awareness and self-perception. It is their contention that the development of these neural pathways, often through the use of entheogenic materials such as DMT, promotes a sense of 'sustained well-being' and 'psychosocial resilience'. To put it more simply, DMT and other similar tryptamines provides the user with significantly increased access to the portion of the brain which holds emotional memories and the portion of the brain which modulates awareness, and allows these portions to work in tandem at a much higher level, so that the user is allowed to see past experiences in a unique and novel way (Blainey, 2015).

Having reconciled the elements of spiritual enlightenment, ritualistic religious ceremony, and DMT use, it is important to next examine the full scope of the second

motivational category associated with DMT use. A recent large and comprehensive Australian study of the motivations for DMT use indicated that a significant majority of first-time users (75.5%) cited an interest, amongst others, in the ability to access the potential of its psychospiritual benefits. These related to increasing one's ability to gain self-awareness and engage in ego-dissolution (Cakic, Potkonyak, & Marshall, 2010).

One of the means by which this perception of self-awareness and ego-dissolution is accomplished relates to the synergistic neural pathway creation cited just previously: by heightening the levels of DMT in the brain, a unique and novel spectrum of perceptions is accomplished while remaining fully conscious and maintaining physical spatial awareness. However, the second common path to this perception of enlightenment is very different and involves the previously mentioned third (and highest) level of dosage, 'breaking through': the perception of leaving one's body and the cessation of time and spatial awareness (St John, 2015). This typically involves the perception of contact with an ambient sentient representation(s) of a psycho-spiritual terra incognito entity, which imparts what the user perceives to be 'wisdoms' or 'insights' into the nature of their being, reality, and awareness. Often this 'conversation' takes place in a different 'realm of reality' or in a separate 'dimension' (Tramacchi, 2018). And while each 'trip', or experience, is unique to each user, a theme amongst DMT users who break through is the overwhelming concurrence that the experience feels, 'more real' than their conscious reality (Germann, 2016).

There is, however, also a rebuttal to made against the aspects and attributes of the second motivational category associated with DMT use. Prayag, Mura, Hall, and

Fontaine (2016) suggest that, depending on the user's positionality, a DMT experience can just as easily be defined as a recreational drug experience than as a spiritual experience. Hartogsohn (2018) seems to contribute to this possibility by claiming that research conducted in the past suggests that entheogenic compounds have demonstrated the ability to effectively enhance the user's suggestibility, which simply has the result of merely amplifying the user's perceptions of meaning. This, he claims, creates a systemic tendency to make things appear far more dramatic and meaningful than they actually are, or otherwise might appear to be. And Nunes et al. (2016) makes the same cautionary claim as the one provided against the first motivational category associated with DMT use: that simply being part of a group which conforms to socially healthy behavioral norms must account for some type of improvement in one's perceptions of well-being and/or spiritual enlightenment and should not be discounted as non-impactful.

Intrinsic motivation category 3: Recreational motivations: Hedonism, convenience, and the pleasurability index. The third motivational category associated with DMT use is defined by several factors, each un-related to the previous two categories; and, while themes of spiritual enlightenment and psychosocial improvements were experienced by those whose primary initial motivations were unrelated to such benefits, they only emerged after initial use (Johnstad, 2018). The first element related to the third category is purely connected to the desire to experience physical or mental pleasure. Raising levels of serotonin in the brain creates a sense of euphoria, which, while it can often produce benefits to those who experience systemically lower levels of serotonin, it can raise normal levels of serotonin into a state of extreme pleasurability

(Loonen & Ivanova, 2016).

Many people also experiment with drugs based on the conditions of availability. DMT is no different in this regard. NPCs, in particular, appear to be motivated in no small part to opportunistic reasons (Sutherland et al., 2017). Because the chemical derivatives of DMT can be easily purchased online, and because the instructions for extracting DMT are just as easily available, there exists an opportunity to experiment with DMT that directly correlates to motivations which subscribe to more recreational purposes for use (Tittarelli, Mannocchi, Pantano, & Saverio Romolo, 2015). These recreational motivations also include the fact that DMT provides additional 'positive' elements to recreational users such as an excellent value for the monetary investment (as DMT is not considered expensive to make), and DMT offers users a short effect duration, which is often regarded as convenient (Sutherland et al., 2017). Another recreational element which induces users towards the motivation to use, is that DMT is not routinely screened in uranalysis samples which are often employed in the course of securing or maintain employment. And if it were screened, synthetic levels of DMT will not stay in the human system very long, and so is far less likely to be noticed (Beck et al., 2014).

Studies related to the constructs of interest and chosen methodology and methods that are consistent with the scope of the study. Previous qualitative studies related to the constructs of interest are, almost exclusively, phenomenological in nature, and use this approach. The chosen methodologies for the previous studies are split relatively evenly into qualitative and quantitative research designs. Aspects surrounding psychological motivations towards use and experiential aspects of use are heavily

represented by qualitative methods and aspects surrounding the compositional, chemical, biological, and physiological nature of the drug are exclusively quantitative in nature (dos Santos et al., 2016). Previous qualitative studies almost exclusively apply an interview technique, most of which are conducted internationally (Brazil), for reasons surrounding legality. Typical previous studies involve cross-sectional, non-specific, and diverse sample populations. The reason for this is that the vast majority of the previous studies are conducted at AYA tourist retreats, where eclectic groups (typically 12-15) are comprised of people having traveled there from all over the world, representing a wide variety of backgrounds, in addition to a diverse demographical composition. This is typically how sample populations are acquired. A few case studies also represent the current body of literature, but these are few in number and limited in their scope (Kuypers et al., 2016; Loizaga-Velder & Verres, 2014; Talin & Sanabria, 2017).

Ways researchers in the discipline have approached the problem and the strengths and weakness inherent in their approaches. Researchers in the discipline have approached the problems, strengths, and weaknesses inherent in their approaches to the study of DMT with near uniformity. This, also, is the result of the illicit nature of the subject matter, and the very narrow scope of a legally accessible sample population and environment. In fact, the sample population and the environment are typically inseparable; they are either based in studies conducted at AYA retreats or with members of the Brazilian Santo Daime church (dos Santos et al., 2017).

Strengths inherent in previous approaches include the ability to accumulate extremely information-rich respondents to participate, provided the researchers can travel

to areas were use of DMT (primarily through AYA ingestion) is legal. This, however, is a weakness also, because specific sample populations are not available in sufficient numbers. Addressing this weakness, when studying DMT use, researchers have, at times, resorted to internet surveys, to overcome this obstacle (dos Santos et al., 2016). This technique, while expanding the sample size and allowing for more specific sub-samples of the population, does not produce the same depth or character of research that is acquired through structured and semi-structured face to face (FTF) interviews (Ravitch & Carl, 2017).

Another weakness inherent in the internet survey studies, is that they are exclusively self-reported, whereas the FTF interviews are conducted onsite, and the respondents are able to participate shortly after their experience with DMT. Self-reporting sample populations are inherently less likely to produce the same levels of accuracy and validity (Rubin, H., & Rubin, I., 2012). In the case of a systematic empirical literature review on the topic of DMT use, Winstock, Kaar, and Borschmann (2014) suggested that DMT self-reporting internet surveys and self- nominating participants may not represent DMT use in its relationship to a wider population.

They also state that another weakness associated with this technique in studying DMT use is that it is impossible to know what substance users are actually taking, nor is it possible to be aware of the amounts, which can vary the experience greatly, and have implications associated with intrinsic motivations for use as well.

Summary and Conclusions

Major Themes in the Literature

The phenomenon of DMT use in the United States is a multifaceted, complex, and pressing issue, particularly in a period where societies around the world are reexamining their relationships to substances previously banned, controlled, or stigmatized. Major themes in the literature include epidemiological and historical evolution of DMT use, the chemical composition and biological impacts and effects (as they are understood), demographic parameters of popular use, production and consumptions methods, experiential shared accounts of DMT use, issues pertaining to illegality, the relationship DMT use has with mental health therapies, the relationship DMT has with substance abuse recovery therapies, the relationship DMT use has with psychospiritual, individual, interpersonal, ritualistic, and religious interpretations, and the relationship DMT has (socially, culturally, legally, and chemically) with other tryptamines (hallucinogens).

What is Known and Unknown in the Study of DMT

Despite the comprehensive nature of this literature examination, much remains unknown about this mystery drug. Referred to in popular and online culture as, ‘the spirit molecule,’ (Gallimore & Luke, 2015), its relationships to our biological and neurological function within the human brain are, at present, speculative (Bragazzi et al., 2018). In addition, Palamar et al. (2015), claims that because DMT has not been included in any national epidemiological surveys, we cannot be entirely certain regarding its prevalence and use characteristics. They also suggest that much of what is considered to be known

and understood about DMT use in the United States may be primarily anecdotal and the result of self-nominating/self-reporting on the internet.

Despite the slow progress currently experienced in the natural sciences, to illuminate the physical aspects of DMT use, social scientists have made some headway into explaining DMT use and have laid the groundwork for many potential studies which need to be conducted. We do know that DMT use spikes in certain places in the world (with the United States and Europe being the primary locations), we know how it is typically made, obtained, and consumed, and we know that many suffering from mental health and substance abuse addictions claim to have found a relief agent in DMT (Hendricks, 2014). We also know, as this study will seek to build upon, what some of the intrinsic motivations of its use are, even if there are gaps in this research yet to fill.

Filling the Gap in the Current Literature

The present study will fill a gap in the literature by focusing its attention upon the intrinsic motivations and perceived benefits for DMT use amongst U.S. adult males, ages 18-50. While some very limited research, comparatively, has been conducted on the motivations for DMT use, these population samples have always been eclectic, regardless of the size of the study. For reasons stated previously, most studies are regulated either to very specific, and international, locations, or they are conducted on the internet by self-nominating, self-identifying participants. In both cases, no study into the intrinsic motivations of DMT use has been conducted yet, which identifies intrinsic motivations specifically in U.S. men. This will extend knowledge into the discipline because this specific demographic is the largest set of new users and, consequently, will have the

largest social impact on raising awareness related to its phenomenological and epidemiological user progression. The gap in the literature pertains to intrinsic motivations for DMT use, amongst a specific demographical subset: adult U.S. males ages 18-50, the fastest growing DMT user population (Winstock et al., 2014).

In Chapter 3, I will present a methodological approach and design to provide a construct and context by which to fully examine this particular gap in the literature related to motivations surrounding DMT use. Elements of this research construct will include research questions; the role the researcher will assume; justifications related to the approach selected; instrumentation; acquiring an appropriate sample population; the setting the interviews will take place in; ethical issues related to consent, confidentiality, and anonymity; data collection and analysis; issues related to positionality, reflexivity, and social location, to include potential conflicts of interest or researcher bias; and issues surrounding trustworthiness, validity, accuracy, and reliability.

Chapter 3: Research Method

There is an ever-growing trend of illicit NPS use, amongst which DMT has the fastest growing user base throughout the United States and the world, growing approximately 25% faster than any other drug (Winstock et al., 2014). And while intrinsic motivations for illicit drug use can often be generalized as hedonistic in nature, the intrinsic motivations for DMT use has proven to be far more nuanced and complex, and very often ill-reconciled with traditional motivations for illicit drug use (Sutherland et al., 2017). The three main motivations, according to Johnstad (2015) for the rapid spread of DMT use and its growing popularity revolve around (a) the desire to self-medicate to treat issues surrounding chemical dependency and substance abuse problems, (b) the desire to gain psychospiritual insights and develop a deeper sense of personal, spiritual, 'self-awareness,' and (c) the more traditional motivations commonly related to hedonism and pleasure. However, no study has thus far examined motivations specific to U.S. DMT users or their most common user base: adult males. The purpose of this qualitative phenomenological study was to explore the intrinsic motivations and perceived benefits of U.S. men ages 18-50 for experimenting with, and sustaining their use of, DMT. Further study of the United States' most common DMT user demographic is needed to increase our understanding of the epidemiology of this illicit drug-related phenomenon and prevent any potential negative consequences of its use.

In Chapter 3, I provide a comprehensive overview of my research methods. I begin with the rationale and research design, which will provide restating the research question and stating and defining concepts, as well as the phenomenon of the study. My

role as the sole researcher in this study will then be addressed in the second section, by explaining any personal or professional relationships I might have with participants and any biases I might possess in regard to this research study. Plans for managing these elements will also be addressed. The third section will examine my research methodology. This will include subsections related to participant selection logic, instrumentation, procedures for recruitment and data collection, and a data analysis plan. Section four explores issues related to trustworthiness. This subsection addresses credibility, transferability, dependability, confirmability, and any ethical procedures related to the study. Finally, a summary of all the material provided is provided at the end of the chapter.

Research Design and Rationale

Using a phenomenological approach, I posed the primary research question: What are the primary intrinsic motivations and perceived benefits of U.S. men ages 18-50 for using DMT? Current international and eclectic, cross-sectional sample populations have suggested that there are several varying types of motivations for the rapidly increasing use of DMT around the world, but none are specific to the fastest growing demographic of U.S. users. My research included the following subquestions:

Subquestion 1: What are the primary intrinsic motivations of U.S. men ages 18-50 for experimenting with DMT for the first time?

Subquestion 2: What are the primary intrinsic motivations of U.S. men ages 18-50 for sustaining their use of DMT?

Subquestion 3: How do the intrinsic motivational expectations of U.S. men ages 18-50 align with their experiences of DMT use?

The central phenomenon of this study was the use of DMT in an adult U.S. male population. Any form of ingestion of any natural plant-based or synthesized version of N, N-Dimethyltryptamine was considered DMT use. Use also constituted having taken one dose of DMT on at least two occasions during the 12 months prior to the interview, so that the intrinsic motivations associated with a sustained use can also be explored, in addition to motivations associated with first-time-experimentation. U.S. adult males were considered anyone who self-identified as a male, resided in the United States, and was between the ages of 18 and 50 at the time of the interview.

The research tradition was a qualitative, phenomenological research design. This tradition was chosen for several reasons. First, I was interested in examining participant's perceptions related to the phenomenon to specifically include trends in participant's thoughts and opinions. Second, I was also interested in collecting non-numerical data through semistructured interviews. A qualitative design supports such aims (Smith, 2015). A phenomenological approach was employed as such an approach seeks to examine a participant's perceived relationship with a particular phenomenon. According to Patton (2015), a phenomenological approach to research investigates perceptions of experiences and perceived relationships between participants and the phenomenon itself. An additional rationale for selecting this tradition was that almost all previously published social science research studies related to DMT use, and the motivations for

DMT use, are both qualitative and phenomenological in design, suggesting that this was an appropriate method for this study.

Role of the Researcher

My role as a researcher was to gather data from adult U.S. males (aged 18-50) who self-reported using DMT at least twice in the previous year, analyze that data, and then provide that analysis to interested audiences, as well as a summary analysis to each participant after publication, upon request. This role included conducting private, FTF, individual, semistructured, interviews, at locations which were safe, afforded privacy, and were convenient to the participant. Phone interviews were considered for use in the study, if saturation could not be reached by interviewing enough willing participants in my geographic area. Because interviewees self-reported an illicit behavior, it was important to provide participants with the consideration of sufficient privacy (Rubin, H., & Rubin, I., 2012). My role was strictly to inquire after intrinsic motivations and perceived benefits of previous DMT use, and, as such, was regulated to post-observations related through the interviews. I did not participate in or directly observe the phenomenon itself.

When addressing and managing potential bias in scientific research, becoming too involved in the lives or social interaction of the study group can have negative consequences and seriously compromise the integrity of the work of the researcher. It can lead to bad data due to increase bias if a researcher becomes blinded by personal connections that then, ultimately, can skew results (Ravitch & Carl, 2016). I did not have any personal or professional friendship or affiliation with any of my participants. I

interviewed strangers within the specified demographic categories previously detailed.

Because my participants were strangers, and no prior professional or personal relationships existed, there was no reasonable potential for power-relationships impacting research results during data collection or analysis. However, personal bias remains inherent in qualitative research, and cannot ever be fully avoided. Awareness of personal bias, ideology, and positionality, which are the results of personal observations and experiences, was addressed, examined, and deliberately minimized (Roulston & Shelton, 2015). A useful question all researchers should ask prior to their study is posed by Ravitch and Carl (2016) as, "[d]o I impose-either explicitly or implicitly- my opinions or value judgements during data collection and broader interactions with participants..." (p. 116). I was careful to deliberate upon these considerations and recognize my positionality.

My potential for bias in this research study primarily involved a familiarity with the general demographic as well my previous professional experience as a licensed chemical dependency counselor. Both presented challenges regarding the issue of reflexivity. This required a systematic approach to the construction of the research during each stage of the process, to ensure accuracy and validity while minimizing the potential for bias (Noble & Smith, 2015).

Regarding the general demographic, I am also a U.S. male in the age inclusion range for the study, and, as such, may be prone to either drawing conclusions or assertions based upon the shared experiences of gender, age, and geographic positionality (Mason-Bish, 2019). This potential bias increased the possibility that I could examine the

phenomenon through my own past experiences rather than the lived experience of the participant (Bettez, 2015). Regarding my previous professional experience: as a licensed chemical dependency counselor who maintained a client caseload of individuals incarcerated for substance abuse related crimes, who interviewed clients daily regarding numerous aspects of their illicit drug use, who provided addiction recovery plans, and who wrote addiction recovery curriculum for the Texas Department of Criminal Justice, I possessed the potential bias of assuming motivations for drug use based upon previous professional and clinical experiences.

According to Ravitch and Carl (2016), "[q]ualitative researchers should make deliberate methodological choices to acknowledge, account for, and approach researcher bias" (p. 13). They go on to state that there are several strategies a researcher might employ to minimize or manage personal bias in qualitative research. Of the several techniques which they provide, I employed the techniques of, (a) soliciting feedback from insiders and outsiders, (b). situating my research in relationship to larger contexts and previous research, and (c) paying particular attention to disconfirming evidence and ensure its inclusion, if applicable.

Lash et al. (2014) suggests additional methods of bias reduction, which I employed, to include (a) developing a protocol guide to structure my research work, (b) discussing assumptions used and potential limitations with other researchers to illicit feedback, (c) avoidances of single study inferences which might possess the potential to be misleading, and (d) avoid inferences beyond the scope of the study in general. As a result of my prior professional experience interviewing individuals about their previous

illicit drug use, I also ensured that my interview questions were non-judgmental, inquisitive rather than leading, designed to elicit honest responses, and made the respondent feel comfortable in their participation. Ultimately, I had to discern the respondent's perceptions through the lens of his own perceptions, because if this was not consciously considered, the data would likely become skewed or misinterpreted (Rubin, H. & Rubin, I., 2012).

Methodology

Participant Selection Logic

The sample population was acquired through the employment of an exponential discriminative chain (or snowball) sample technique, where a single candidate is selected and recruits additional candidates, however, not every candidate is necessarily expected to recruit further candidates. This form of sample population acquisition is particularly useful when seeking to elicit responses from ‘hidden populations’, or groups which are engaged in secretive, or even illicit behavior (Etikan, Alkassim, & Abubakar, 2016). Because the elements of the subject matter for the research study related directly to illicit drug use behavior, and there existed no institution or organization outside of a corrections environment to solicit interviews solely related to this topic, (and because a corrections environment cannot provide the same level of privacy to elicit candid and honest responses as a private setting can), a chain sample technique was the most appropriate (Patton, 2015).

The participants in the study were those who had used DMT at least twice within the last 12 months prior to the date of the interview, self-identified as males, whose

primary residence is within the United States, and whose age at the time of the interview was between 18-50. Participants were known to meet the stated inclusion criteria through self-identification. Anonymity was observed by not collecting personal identifiers, avoiding email and other traceable identifying forms of communication, using pseudonyms in place of real names, and using implied consent.

While Mason (2010) contends that the sample size of most qualitative research studies is ultimately determined by saturation, this is not always the case, and other factors can produce an impact on the sample size of a study. Moustakas (1994) echoes these sentiments by claiming that there exists no set rules for sample size determination; practicality and pragmatism must also be observed.

According to Guest, Bunce, and Johnson (2006), "Guidelines for determining non-probabilistic sample sizes are virtually nonexistent" (p. 59), however, in their own example they claim that when conducting 60 interviews, saturation occurred within the first 12. Mason (2016) claims that when studying saturation rates in qualitative studies, when 560 studies were examined, the results implied that a mean sample size is 31, and Baker, Edwards, and Diodge (2012) seem to confirm this estimate by suggesting that the number is typically between 12 and 60, with 30 being the mean average. Guest et al. (2006) suggests that graduate students should consider 30 interviews as being a good rough estimate, however, they go on to state that, "But in general the old rule seems to hold that you keep asking as long as you are getting different answers" (p. 6).

Studying previous qualitative articles, which also use a phenomenological approach to study DMT use, I've found that Winkelman (2005) used 16, Kjellgren,

Eriksson, and Norlander (2009) used 24, Loizaga-Velder and Verres (2014) used 29, and Warren et al. (2013) used one, as it was a case study. Often the sample size is determined by a specific group of retreatants or is the result of the extent of a snowball technique constructing a sample group (Patton, 2015). In the case of this study, the production of the discriminative chain sample technique did not prohibit reaching saturation. The anticipated number of participants for this research study was 12-15, and saturation was considered to be reached at 13.

Instrumentation

Data collection instruments were sourced from semi-structured FTF interviews which included an interview protocol guide, analytical memos, an audit trail, audio-recordings, and interview transcripts. All instrumentation remained uniform and consistent throughout the data collection process.

The interview protocol guide served as an anchor for the semi-structured interview and included the introduction, consent form, interview questions, possible follow-up questions, and concluding remarks, including when the participant can expect to receive the study results, if requested. The analytical memos included deliberate and careful documentation, which related to (a) specific data reflections, (b) systemic check-ins, (c) general impressions (regarding participants and the relevant research environment), and (d) reflections regarding social location and positionality (Ravitch & Carl, 2016). Audio-recording equipment captured the interview audio, which was utilized to create a transcribed account of the interview. Recordings were transcribed by hand and then coded as appropriate. No video recording were utilized.

For each data collection instrument and each research question, data was collected from within the United States and was collected exclusively by this researcher. Interviews lasted, on average, approximately 25-35 minutes each, and the duration for all interviews and data collection was complete in six weeks. Follow up plans, if recruiting failed to meet saturation included expanding FTF interviews to phone interviews to encompass more participants. Participants exit the procedure by completing their interviews and a review of the consent form. Providing study results after publication constituted the follow-up procedure.

Procedures for Identifying, Contacting, and Recruiting Participants

I had, prior to commencing my data collection, established communication with an entheogenic-shaman, who lives within my geographical area, and who expressed a willingness to help me recruit participants who qualify via the established inclusion criteria. He became my initial contact (or chain sample 'seed') and contacted qualified participants who he thought would be willing to submit to an interview. He then provided them with my phone number. Those who were willing to submit to an interview then contacted me via phone, and a time and setting convenient to the participant was arranged. I asked those who qualified and who contacted me to please provide my phone number to others who they were confident would meet the inclusion requirements, and who they thought would also be willing to participate in the research study. This process was repeated until I was able to reach a saturation point by exclusively conducting FTF interviews. The interview questions and format remain uniform and consistent throughout each interview process.

Relationship Between Saturation and Sample Size. The data saturation point is considered to be the point of the research and data collection process when, "…no new information is forthcoming" (Rubin, H. & Rubin, I., 2012, p. 63). This essentially means that no matter how much more data a researcher collects, it is unlikely to have any significant impact upon the over-all results. At this point a researcher can feel relatively confident that the picture has emerged from the data. However, Mason (2010), contends that the concept of saturation should be concerned with finding the point in the research where more research becomes counter-productive, rather than searching for the point in the data collection where nothing new is obtained. A careful understanding of saturation points is important because if the research is concluded prior to saturation, then it is incomplete, and the results could inadvertently become skewed by ending the data collection too soon (Patton, 2015).

Saturation in this study was reached after 13 interviews, at which point nothing new was being obtained through the interviews.

Data Analysis Plan

The data analysis plan for this phenomenological research was to utilize each aspect of every instrumentation tool to creative a comprehensive and holistic understanding of the research topic. Generally speaking, this was accomplished through the process of moving inductively from small, coded units, to larger representations, to include broad categories and then abstract themes by which to interpret the respondent's perceptions of the topic selected (Smith, Flowers, & Larkin, 2009).

Immediately upon completion of data collection, I began the afore mentioned process. Specifically, this entailed scouring the transcripts to decipher codes, or reoccurring words, phrases, or ideas. The codes, once created, were color-coded to create a method by which to keep them separated by topic, but still allowed them to also be included in more than one category, in case the idea or concept was not exclusive to a single category. The codes were also color-coordinated to reflect the research question which they corresponded to. These were then sifted into subcodes, creating appropriate ranges of the codes for further analysis. These subcodes were then placed into categories and subcategories (also colored coded), which then, when examined, provide additional context by which to develop themes and concepts (Saldaña, 2016). Software used for this process included Microsoft Word. Discrepant cases were not discovered.

Issues of Trustworthiness

Credibility

According to Ravitch and Carl (2016), credibility is grounded in the researcher being able to draw reliable conclusions based upon the instruments ability to measure what they are designed to measure. To ensure credibility, I made certain that my research design and instrumentation were in alignment with my research purpose and problem, as well as the research questions which are derived from them. This required maintaining a focus upon my alignment and making sure that they complement one another and did not confuse the reading audience or hinder the research process or presentation. I made certain that my findings, and patterns within my findings, were consistent, uniformed, and lend themselves well to revealing commonalities in respondent's perceptions. I

contributed to the internal validity of my research by including the use of well-established theories and methodologies, and by making sure that my data collection reached reasonable levels of saturation (Shento, 2004).

I also contributed to my study's credibility by engaging in triangulation, the use of combining data sources. In addition, I was better able to support higher levels of credibility by demonstrating high levels of engagement, observation, and the use of field notes (Cope, 2014). Maintaining an audit trail was of value while attempting to enhance credibility (Ryan-Nicholls & Will, 2009), and the element of prolonged exposure, the commitment to allow adequate time to make observations and gather data, was also accounted for.

Transferability

Transferability ensured that my research and findings can also be applied to different groups or settings (Houghton, Casey, Shaw, & Murphy, 2013). It is described as, "...the way in which qualitative studies can be applicable, or transferable, to broader contexts while still maintaining their context-specific richness" (Ravitch & Carl, 2016, p 34). Appropriate strategies for ensuring high levels of transferability in my research included providing thorough and detailed information related to the research context as well as all assumptions and restrictions inherent in the study or used in the research. I ensured that the parameters of the research were clearly defined, such as the framework, data collection and analysis strategies, and the design model (Shento, 2004).

Dependability

Dependability ensures that an identical study, with all the variables remaining constant, would produce similar results. My research documentation included the type of research design used, how the design was implemented, how the data was accumulated, and a reflection of the evaluation conducted. This ensured that my results had the required dependability to constitute strong and dependable research (Shento, 2004).

Confirmability

Confirmability is the reduction of subjective qualitative elements and the enhancement of objectivity, to the extent that the researcher is able in relationship to their reflexivity. It underscores the ability to confirm research which can be subjective in nature and interpretation (Lincoln & Guba, 1985). Because no researcher can claim complete objectivity, as the result of personal bias and individual reflexivity and positionality, I had to be honest about the limitations of the study while pursuing the truth as far as I was able to comprehend it. I accomplished this through the use of an audit trail and analytical memos. The employment of an audit trail allowed me to clearly define a rationale between my results and the data I collected, and my analytical memos related to: a. specific data reflections, b. systemic check-ins, c. general impressions (regarding participants and the relevant research environment), and d. reflections regarding social location and positionality (Ravitch & Carl, 2016).

Ethical Procedures

The first ethical issue identified was the informed consent of each interviewee prior to their participation. A researcher must be honest, transparent, and forthcoming

regarding the parameters of the research being conducted with the respondent, prior to the collection of the data, to ensure that each participant approves of the ethical responsibilities of the researcher and that they understand and approve of the anonymity and confidentiality standards set by the researcher. (Ravitch & Carl, 2016).

An informed consent form was provided to each participant prior to their participation. I then allowed them to read the form which explained the purpose of the research, the way data will be collected, the methods which will be used to conduct the research, the anonymity afforded them, their rights as they relate to participation in the research, and contact information of the university if they wished to receive additional information about the study.

The respondent was made aware of the time investment asked of them, prior to the start of the interview, and was also informed that they could exit the interview at any point. I asked, in each interview, after the interviewee had finished reading the consent form, if they had any additional questions and or concerns. In each instance the interviewee did not, and I then asked if they consented to proceed with the interview, which, in every case, they did. The consent form was approved by Walden University on October 16, 2019 and the IRB approval number for the research study to commence was 10-16-19-0832020.

Also prior to the start of the data collection, I was sure to be cognizant of where appropriate personal and professional boundaries should be drawn. The primary method of addressing this was not to interview anyone who I knew or was personally or professionally acquainted with. This is important because becoming too attached or

familiar with the respondent can impact the way the researcher gathers and analyzes data, and that data can become biased or skewed as a result of not creating interview boundaries (Patton, 2015).

This ties into the concept of beneficence, which says that the welfare of participants should always be a primary consideration in research, and no research should cause harm in any way to a participant. It should be noted that the primary responsibility of the researcher, while gathering data, is to do no harm to the participant. This ethical consideration should be paramount, as nothing will serve to incriminate your integrity and the results of the data than if the process of collecting it caused any form of harm to the respondent (Ravitch & Carl, 2016).

I employed procedures to protect each participant's identity and information as it relates to anonymity and confidentiality. This entailed ensuring that respondents are not mentioned by name (the use of pseudonyms was employed), no personal identifiers were collected, and contact between myself and the participants was restricted exclusively to the phone (no email was used in communicating with any participant). I made sure that the information I collect was only shared with qualified university supervisors, and while it was being used, I kept the data secure by digitally locking the information and keeping it protected in encrypted, secured files. The data will be deleted five years from the date of the completion of this dissertation.

Summary

In this chapter, the research design and rationale for this qualitative, phenomenological study were explained. The role of the researcher was then addressed,

which encompassed issues relating to biases and personal relationships associated with the research or participants. Methodology was then addressed as it pertains to the logic for participant selection, instrumentation, procedures for recruitment, participation, and data collection, a data analysis plan, issues related to trustworthiness (credibility, transferability, dependability, and confirmability), and ethical considerations germane to research study being conducted. In Chapter 4, I will focus on the results of the study. I detail issues surrounding the research study settings, the participant's demographics, the data collection methods as well as the data analysis results, evidences of the elements of trustworthiness provided in this chapter, and, finally, the study results.

Chapter 4: Results

The purpose of this phenomenological qualitative study was to explore the intrinsic motivations and perceived benefits of DMT use among the United States' most common DMT user demographic: men ages 18-50. This research is needed to increase awareness of DMT use for law enforcement agencies, substance abuse and mental health clinicians, policy makers, and legislators, to provide them an increased opportunity to make well-informed decisions, and to prevent potential negative consequences of its use.

Using a phenomenological approach, I posed the main research question: What are the primary intrinsic motivations of adult U.S. men ages 18-50 for using DMT? My research included the following subquestions:

Subquestion 1: What are the intrinsic motivations of U.S. men ages 18-50 for experimenting with DMT for the first time?

Subquestion 2: What are the intrinsic motivations of U.S. men ages 18-50 for sustaining their use of DMT?

Subquestion 3: How do the motivational expectations of DMT use in U.S men ages 18-50 align with their perceived experiences?

I begin Chapter 4 by detailing the setting in which the research study took place and describe conditions under which data was collected from participants. I then examine the participants' demographics, providing information related to the make-up of the sample population and characteristics relevant to the study. In the next section, data collection will be explored, which will expound upon the number of participants, the location, frequency, and duration of the data collected, how the data was recorded, and

any unusual circumstances encountered in the data collection. A data analysis section will follow the collection section and will examine issues of trustworthiness in the analysis as it relates to creditability, transferability, dependability, and confirmability. Finally, the results of the study will be examined prior to a chapter summary.

Settings

Each FTF interview took place in a quiet, public, and informal setting which was selected by the participant and was conveniently located to accommodate both the participant's schedule and privacy (i.e., coffee house or park). Interviewees were thus able to communicate freely and without any concern related to their experiences being overheard, thus increasing levels of both candidness and confidentiality. There existed no perceivable external conditions which might unduly influence the participants, or their experience related to the interview at the time of this study. No personal conditions unduly influenced participants or their experience at the time of the study which could have reasonably been expected to influence the interpretation of the study results, and no organizational conditions existed, as no organizations were utilized or enlisted in the assistance of this study. Each interview was conducted in-person, FTF, and no interviews were conducted by phone, video, or electronically.

Participant Demographics and Characteristics

This qualitative study involved interviews with a total of 13 participants and demographic information pertaining to age, gender, and U.S. residency, was collected from each of them. All participants self-identified as male. All participants were able to show proof that they were between the ages of 18-50 and lived within the United States at

the time of the interview. All participants self-reported using DMT at least twice within 12 months prior to the interview. All participants met each inclusion criteria and demographic qualifications to participate in the study. I used alphabetical pseudonyms to achieve participant anonymity, and each participant will be referred to by their pseudonym throughout this chapter. Additional delineations of respondent demographics are depicted in Table 1.

Table 1

Participant Demographic Variables

Participant	Age	# of times using DMT within last 12 months (Some approximations apply)
Adam	32	12
Bob	41	2
Charles	41	3
David	35	4
Edward	26	2
Frank	40	2
Gary	39	2
Hank	40	3
Isaac	43	6
Jeff	47	6
Ken	35	7
Larry	21	4
Mark	36	8

Data Collection

My data collection procedure was approved by Walden University's IRB on October 16, 2019 (Approval No. 10-16-19-0832020). The use of a chain sample technique was employed to garner the participation of 13 interviewees. The 'seed', or initial contact, was an entheogenic shaman who lived within a geographic proximity to me and who initiated the chain (or snowball) sample technique for my sample collection.

My initial contact was able to refer qualifying participants to me, who were then able to refer others who qualified to me as well, until I had completed enough interviews to reach saturation. Participants satisfied the inclusion criteria through self-identification. I was contacted by phone from the respondents who wished to participate and then we set up a time and place convenient for the respondent to participate.

Prior to each interview, consent forms were provided and reviewed, to ensure that each participant was confident and familiar with the parameters of the consent form. Each was reminded once more, prior to the start of the data collection that the interview was completely voluntary and that the participant had the right to exit the interview at any point. The right to privacy, anonymity, and confidentiality were also reviewed, just prior to, and again after, the interview. The data, from each of the 13 participants, was collected through the use of FTF, semistructured interviews.

All interviews were recorded using audio recording equipment and then were manually transcribed into a Microsoft Word program. The audio recording was stored on a secure and password encrypted laptop until it was transcribed, at which point the audio was deleted, per my IRB approved data collection plan. The transcripts were also secured on a password encrypted laptop and were then stored on an encrypted, separate, back-up hard drive. All potential personal identifying information was removed from the transcripts prior to analysis and pseudonyms were immediately applied to each participant. At this point the research was completely anonymous, per my IRB approved data collection plan. The transcripts themselves will be permanently deleted 5 years from the finalization of this research study.

Field notes were employed to record basic impressions related to each interview and to collect basic demographic data by hand. An interview guide was used to provide structure and the interview questions, and an audit trail was employed to provide consistency to the data collection program. An identical application of these collection tools was applied to each interview.

Each participant was interviewed a single time and the interviews lasted approximately 25-35 minutes. All interviews were conducted during October and November of 2019. There existed no variations or alterations from the data collection plan presented in Chapter 3. The data collection was conducted uniformly across the entire sample population. There existed no unusual circumstances encountered in the collection of the data.

Data Analysis

The process of thematic analysis was accomplished by inductively moving the data collected from small, coded units, to larger representations, to include broad categories, and then abstract themes by which to interpret the respondent's perceptions of the topic selected. This is widely considered a common and reputable technique (Smith, Flowers, & Larkin, 2009). Nowell, Norris, White, and Moules (2017) provide the framework for this process by introducing six phases of thematic analysis by which a qualitative researcher might achieve accurate and trustworthy thematic data analysis. They suggest that a qualitative researcher should (a) familiarize themselves with the data collected, (b) generate initial codes, (c) search for themes, (d) review themes, (e) define and name themes, and (f) produce the report. However, thematic analysis can also be

highly flexible and can be modified for each study based upon the needs of the researcher or the nature of the data collected (Maguire & Delahunt, 2017). My data analysis conformed to the basic six phases provided by Norwell et al. (2017) and followed each step, but was modified slightly in phase two and three, as I applied an appropriate color-coding system to my thematic analysis, as is recommended by Saldaña (2016), to allow for some codes to be used in multiple themes and to arrange codes to correlate with their corresponding research question.

In Phase 1, I familiarized myself with the data. I did this by first reviewing the audio and then transcribing the audio, personally by hand, into written transcripts. I then reviewed the transcripts I had created from the audio a second time and familiarized myself with their basic contents, already looking for similarities. In Phase 2, I scoured the transcripts to locate reoccurring words, phrases, or ideas, and then deciphered them into codes. The codes, once created, were color coded to create a method by which to keep them separated by topic, but still allowing them to also be included in more than one category, in case the idea or concept is not specific or exclusive to a single category (Saldaña, 2016). Phase 3 had me sift through the codes to create subcodes, which created appropriate ranges of the codes for further analysis. These subcodes were then placed into categories and subcategories which then, when examined, provided additional context by which to further develop themes and concepts in Phase 4. In Phase 5, I defined the themes which I had distilled from the categories and ensured that they were separated according to the research questions. In Phase 6 the themes and concepts were articulated and provided in this report. Specific instances of the coding process related to emergent

codes, categories, and themes are detailed below. Themes as they relate to their corresponding research questions are addressed later in this chapter.

Emergent Codes

Emergent codes, relating to participant's intrinsic motivations for experimentation with DMT, and the perceived benefits of DMT use, which became apparent by virtue of appearing consistently throughout the coding process, led to the formation of eight separate, distinct, motivational categories, including a desire to (a) satisfy a general curiosity, (b) address mental health concerns, (c) explore mystical and/or psycho-spiritual development, (d) raise levels of self-awareness and/or self-improvement, (e) enhance feelings of pleasure, (f) experience a more convenient psychedelic experience, (g) use DMT based specifically upon prior use of other psychedelics, and (h) acquire a positive lasting impact from DMT use.

Examples of codes related to the motivational category of satisfying a curiosity included, curios, curiosity, searching, and wanting to know:

- Adam- "I always had this interest in it, and I started reading about it, what it was and what other people would say, and I thought, 'Well, that sounds very enlightening', and, I guess, at that point in my life I was searching for something."
- Gary- "I just wanted to know what that experience felt like…"
- Isaac- "Curiosity, I guess, first and foremost."

- Ken- “I was really quite curious about the effects I was reading about. I had tried other psychedelics before, I mean, it had been a while, but this sounded different.”

Examples of codes related to the motivational category of addressing therapeutic, mental health concerns included, PTSD, depression, seasonal depression, and medication:

- Adam- “I would say, at least, PTSD and depression related symptoms.”
- Bob- “I’ve dealt with depression in my life…I think its therapeutic...”
- Jeff- “I suppose that I continued to try it because I felt that it did help with my seasonal depression.”
- Ken- “…a combination of curiosity and wanting to see if it might help me with getting off my meds.”

Examples of codes related to the motivational category of a mystic or psycho-spiritual experience included, mind-altering, ego disillusionment, breakthrough, out-of-body-experience, spiritual, spirituality, and oneness:

- Bob- “It’s definitely mind-altering, in the extreme sense…it’s like, the ultimate ego disillusionment.”
- Charles- “Spiritual… It just put things into perspective.”
- Edward- I was motivated by the term, ‘breakthrough.’ I was like, it’s a thing, there’s a bunch of people saying it’s a thing, and that was the goal, to hit that.”
- Gary- “I really wanted to reexperience the spirituality of it. The oneness. The feeling of letting go of inhibitions and self-perceptions, and really just sort of become free of the baggage.”

- Jeff- “I wanted to know if I could breakthrough, leave my body… I wanted that experience.”

Examples of codes related to the motivational category of increased self-awareness and/or perceptions of self-improvement included, clarity, self-improvement, self-awareness, self-discovery, self-perception, and self-inspection:

- Adam- “I can recognize between the person that I know that I don’t want to be, and the person I want to be. And since then, it has definitely given me more clarity.”
- Gary- “Because I use LSD once and a while, for the purpose of self-improvement, or raising levels of self-awareness, I was really hoping to do the same thing with DMT...”
- Hank- “I don’t always have such clarity, and I could sort of feel the better version of me inside, and I wanted to be that person. I wanted to be at peace with the better version of me, and even know that person better. I wanted to be that person too.”
- Isaac- “Definitely self-discovery and an increase of self-awareness…I tried to focus on love and kindness and empathy.”
- Larry- “Absolutely for self-inspection…I wanted the opportunity to try on a new pair of lenses…to see my life and the world through.”

Examples of codes related to the motivational category of pleasure included, fun, pleasure, euphoria, and exciting:

- David- “It was such a fun experience. You’re like, holy cow, I gotta try that again and again.”
- Ken- “…re-experiencing the euphoria.”
- Mark- “It’s just a great trip. Nice, short, easy, fun, pleasurable. Just a great little ride.”

Examples of codes related to the motivational category of time-convenience (short effect-duration) included, convenience, short trip, appealing, willingness, 10-20 minutes:

- Adam- “I guess the most appealing thing about it was the fact that, like, 10 minutes and that’s it; you’re out. I mean, it’s the busy man’s acid.”
- Bob- “It was definitely appealing that it only lasted like 15 or 20 minutes.”
- David- “Because it was such a short trip, it made me much more willing to do it.”
- Frank- “If I was going to be high for 12 hours, I would not have done it, but, twenty minutes or so, I could handle that.”

Examples of codes related to a motivational category based upon prior use of psychedelics included, fascination, source of my curiosity, willingness to try, increased my curiosity, confident, and courage to try DMT:

- Adam- “It was like, a double edged-sword, because I was terrified of psychedelics, but, at the same time, also I had developed a fascination with psychedelics.”

- Gary- “It [previous psychedelic use] was the source of my curiosity, and my willingness to try it [DMT]…”
- Isaac- “I don’t think I would have had the courage to try DMT if I hadn’t tried acid and mushrooms before.”
- Jeff- “I probably would never have tried DMT if I hadn’t previously tried LSD...”
- Larry- “I was far more confident having tried other hallucinogens previously.”

Examples of codes related to the motivational category of creating a positive, lasting, impact included, clarity over time, lasting impact, fondest memories, new perspective, leaves an impression, experience left a memory, and changes you:

- Adam- “It’s a tool…and it has definitely given me more clarity over time.”
- Charles- “…even two years after, I still remember some of those [DMT] journeys and they are some of the fondest memories I have…because they reflect on the happiest and most beautiful things in my life.”
- David- “It has a lasting impact, in a way that other drugs don’t…you don’t have to keep doing it. You can do it a couple times and it forever changes your outlook and puts a whole new perspective on life.”
- Edward- “I definitely do feel like it leaves an impression, an impression that lasts. I could probably remember each and every time. It’s quite profound…The experience left a memory.”

- Jeff- "…those memories of that experience don't just disappear overnight. You carry that with you, it even changes you, and you don't need that [DMT] all the time."

Emergent Categories

Category 1: Satisfy a curiosity. With the exception of a single discrepant case, this was an intrinsic motivation for initial use only, and was cited as a motivation for use in 11 of the 13 participant's responses. This motivation was developed primarily through interest generated by exposure to the effects by researching DMT on online platforms (primarily YouTube) and eight of the 13 respondents specifically cited developing a curiosity by watching a documentary called, The Spirit Molecule, which is based on the book by the same name, by Rick Strassma. Several respondents also cited developing a curiosity by listening to podcasts which regularly discuss DMT and its effects; six of the 13 respondents specifically cited a podcast facilitated by a host named, Joe Rogan. Other sources of developing a curiosity to try DMT included, but were not limited to, friends who had previously tried DMT, and authors or online personalities such as, Graham Hancock, Terrence Mckenna, and Duncan Trussell, who were typically described as DMT 'gurus'.

Category 2: Address mental health concerns. Only a single respondent cited this as an intrinsic motivation for initial use of DMT, while four of the 13 cited this as an intrinsic motivation for sustained use of DMT. The mental health concerns described by the respondents varied; mental health issues which they believed DMT could help them with included Post Traumatic Stress Disorder (PTSD), depression (regular and seasonal),

emotional blockage, and chronic stress. The use of DMT to address issues related to mental health concerns was expressed by a minority of participants, however, the participants which cited these concerns were intent upon finding a more manageable method of therapy than anything which they had tried before.

Category 3: Explore mystic/psycho-spiritual development. Among the participants who expressed this as an intrinsic motivation for DMT use, three cited it as a motivation for initial use, but that number jumped to eight as a motivation for continued use. The mystical aspect of the category centered around DMT's very specific, and unique, ability amongst psychedelic experiences to leave one's body and communicate with terra-incognito spiritual entities. This phenomenon is referred to in the DMT drug use culture as, 'breaking through,' and is also typically associated with the term, 'ego-dissolution,' in which the user loses their sense of individual ego, and experiences a, 'oneness' with their environment. It was a common goal amongst members of this sample population who were motivated to try DMT because of this category.

Respondents who cited the intrinsic motivation of developing a psycho-spiritual experience did not express any specific desire beyond a sense of expanding their perceptions through a spiritual medium, however, none of the respondents cited any specific traditional religious dogma or theology as it related to DMT use.

Category 4: Raise levels of self-awareness and/or self-improvement. Participants who cited this intrinsic motivational category expressed a wide variety of elements related to self-awareness and self-improvement, and while it was only cited once as a motivation for initial use of DMT, that number jumped to four when expressing

a motivation for sustained use. Concepts related to self-awareness often focused on a form of introspection, taking self-inventory of one's life, gaining a new perspective on life, meditation, positive growth, a different view of reality, and increased clarity related to their purpose in life.

Concepts related to self-improvement often focused on increasing one's sense of empathy and lovingness towards other people in their lives, becoming a better person, and rising above the monotony of everyday life.

Category 5: Enhance feelings of pleasure. As an intrinsic motivation for initial use, only a single respondent cited this category, however, upon sustaining use, that number rose to three. This was typically associated with a desire to experience a sense of euphoria, weightlessness, and a more general sense of pleasure. While it is likely that each participant experienced these phenomena, a small majority cited them as motivations.

Category 6: Experience a more convenient psychedelic experience. As an intrinsic motivation to use DMT, DMT's unique ability to provide a psychedelic experience in 10-20 minutes (as opposed to the 6-12 hours associated with all other types of psychedelics) was nearly uniformly recognized. Ten of the 13 respondents cited it as a motivational element for initial use and 11 of the 13 cited it as a motivation for sustained use, with several of the participants stating that they would not have necessarily tried DMT at all, had it not been for this unique characteristic. Between both categories (initial and sustained use motivations), it was cited 21 times out of 26 possible responses. This was the highest combined motivational response in any category.

Category 7: Explore the experience of DMT based upon prior use of other psychedelics. Prior use of psychedelics was uniformly present in the sample population (13 out of 13 participants had previously experimented with psychedelics, and all 13 had experimented with both LSD and psilocybin). However, participants also expressed that prior use of other psychedelics was often a double-edged sword when impacting the desire, confidence, or intrinsic motivations towards first-time DMT use. Because of previous psychedelic use, participants typically reported being very hesitant to try something which is often reported to them as being a more powerful psychedelic experience than previous and traditional psychedelic drugs, and they report often being too afraid to try it at their first opportunity. In fact, when asked in the second interview question: How long was it between your first developing an interest or desire to try DMT and your first actual use of DMT? participant's responses ranged from less than one week to up to seven years, with an average delay of use of just over two years.

Participants were already aware of the extreme mental states which can be incurred by the use of psychedelics (based upon uniform prior use), and they were aware that sometimes these experiences can be negative and can be negative in relationship to, and in proportion to, the potency of the drug. Thus, a high dosage of a psychedelic has both the potential to be an extremely positive experience, but also an extremely negative experience, whereas a low dosage has less potential for either. And so, typically, their perception was that a psychedelic drug which was considered to be more potent/milligram than the previous psychedelic drugs which they had experimented with, must also have the potential to create an extremely bad experience, or 'trip.'

However, participants also report that had they not previously experimented with other psychedelics (most commonly psilocybin and LSD), there was a smaller chance that they would have had the courage to engage in their intrinsic motivation to experiment with DMT for the first time. And, upon first time experimentation with DMT, all participants reported having uniformly positive experiences with its use, despite having consumed varying dosages on the first attempt, and each reported that their inhibitions became quickly reduced (with the exception of the single discrepant case).

Thus, the previous use of psychedelics causes both the inhibitions associated with intrinsic motivations to experiment with DMT for the first time, as well as the courage to engage in those intrinsic motivations to experiment with DMT for the first time. To state it more simply, participants often reported that previous psychedelic use caused them to delay their initial use of DMT out of fear of its potency, but previous psychedelic use also gave them the courage to then, ultimately, overcome that same fear.

Category 8: Acquire a positive lasting impact from DMT use. This was the only intrinsic motivational category which was not represented when expressing motivation for initial DMT use, and it becomes represented in five instances of motivations of sustained DMT use. It also appears that there exists a juxtaposition between the convenience associated with DMT use (a very short physiological impact duration, i.e. a 10-25-minute trip, and no physical discomfort, hang-over, or side-effects) and its frequency of use. The short duration of DMT's experiential effects suggests that it would be easier and more accessible to use and would consequently suggest increased intervals of use.

However, because interviewees related that DMT's therapeutic value is not contingent upon its use duration (like other drugs where the benefit is closely associated with the sensation a drug produces while it remains in the user's system), and that, very often, the perceived benefits of DMT use becomes apparent in the days, months, and even years following the DMT use. Several expressed that DMT use need not be frequent to enjoy its benefits. In fact, often, and despite the convenience of DMT's short trip-duration, ease of use, and its euphoric effects, participants reported enjoying these benefits while not feeling the need to re-dose, or dose again, often for months, and sometimes even years at a time, because the perceived benefits of DMT use are commonly associated with a sense of delayed gratification. Tables 2 and 3 provide a list of the participants that corresponds to intrinsic motivational categories relating to both initial and sustained DMT use.

Table 2

Participant Identification with Motivational Categories Relative to Initial Use

Participant	Category #1	#2	#3	#4	#5	#6	#7	#8
Adam						X	X	
Bob	X					X		
Charles	X							
David	X				X	X		
Edward			X				X	
Frank	X					X		
Gary	X			X				
Hank	X					X		
Isaac	X					X	X	
Jeff	X		X			X		
Ken	X	X				X		
Larry	X					X		
Mark	X					X		

Note. Category numbers are as follows: 1= Satisfy a curiosity; 2= Address mental health concerns; 3= Explore mystic and/or psycho-spiritual development; 4= Raise levels of self-awareness and/or self-improvement; 5= Enhance feelings of pleasure; 6= Experience a more convenient psychedelic experience; 7= Explore the experience of DMT based upon prior use of other psychedelics; 8= Acquire a positive lasting impact from DMT use.

Table 3

Participant Identification with Motivational Categories Relative to Sustained Use

Participant	Category #1	#2	#3	#4	#5	#6	#7	#8
Adam		X	X	X		X		X
Bob		X	X	X		X		
Charles			X					X
David					X	X		X
Edward		X					X	X
Frank	X					X	X	
Gary			X	X		X		
Hank			X	X		X		
Isaac			X			X		
Jeff		X	X			X		X
Ken					X	X		
Larry			X			X		
Mark					X	X		

Note. Category numbers are as follows: 1= Satisfy a curiosity; 2= Address mental health concerns; 3= Explore mystic and/or psycho-spiritual development; 4= Raise levels of self-awareness and/or self-improvement; 5= Enhance feelings of pleasure; 6= Experience a more convenient psychedelic experience; 7= Explore the experience of DMT based upon prior use of other psychedelics; 8= Acquire a positive lasting impact from DMT use.

Emergent Themes

While examining and then merging the eight categories, three main themes began to solidify: (a) the correlation between curiosity and convenience, (b) the divergence between initial and sustained motivations, and (c) the relationship between intrinsic motivations and self-actualization. These are discussed in further detail in the next section.

Theme 1: The correlation between curiosity and convenience. In the process of developing the emergent categories into emergent themes, it became important to highlight the statistically significant correlation between the intrinsic motivations of curiosity and convenience as they pertain to motivations for participant's initial use of DMT. This correlation exists not in their similarity as categories, but, rather, in their rates of frequency by response. Between the 13 interviewees, 11 responded that curiosity was a motivational influence and 10 responded that the convenience of DMT use was a motivational influence. Table two further highlights this association and shows that these two categories account for 21 of the 29 (72%) total responses across all motivational categories. It is thematic in nature that the combination of these two motivations must account for a significant influence on the participant's motivation and desire towards initial experimentation with DMT.

It is also noteworthy that the number of interviewees who cited curiosity as a motivational influence for initial DMT use dropped from 11 down to one when citing motivations for continued use of DMT, and that the single exception to this trend was the discrepant case (which is explained later in this chapter). However, when examining the

transition from initial use to sustained use, the number of participants who cited convenience rose from 10 to 11, which is the highest frequency response to any category in either initial use or sustained use (separately). The motivational category of convenience of use accounts for a total of 21 motivational citations, which is twice the number of any other motivational citation in any category between both initial use and sustained use (combined). It appears that curiosity and convenience couple to provide the main impetus for initial experimentation with DMT, while convenience then remains the primary impetus for sustained use, when coupled with a diverse range of other motivational categories.

Theme 2: The divergence between initial and sustained motivations. In the process of developing the emergent categories into emergent themes, it also became apparent that while the focus of motivational categories when examining initial use of DMT was narrow, there occurred a significant divergence in motivational categories when examining the sustained use DMT. Outside of the two primary motivational categories for initial use (curiosity and convenience), only eight other citations occurred, spread across five other categories, but, when the examination shifted to sustained use of DMT, 26 other citations occurred across the six other categories. This suggests that a myriad of combinations of motivations becomes manifested in participants after their first use of DMT and before each subsequent use of DMT.

This is most likely the result of a perception by most respondents who claimed that, while they had heard about the drug, researched the drug, and though they had, very often, substantial prior experience with taking psychedelics, DMT's unique qualities

caused it to remain, nonetheless, very much an unrelatable, unknowable, experience prior to initial use. Many experienced and expressed having significant anxiety about taking DMT prior to initial use (as is detailed previously, in the description of category seven) and did not know what to expect, despite having heard many reports. Many also reported that once they had tried it the first time, their motivations and expectations became radically altered.

Based upon the interviewee's responses, it became apparent that few of the participants could gauge what the experience might entail prior their initial use, and, upon their first use of DMT, their expectations and motivations for using DMT became significantly altered. This would explain the significant divergence in motivational responses between their initial and their continued use of DMT.

Theme 3: The relationship between intrinsic motivations and self-actualization. It is appropriate, upon merging these categories into themes, to note the similarities between categories two, three, and four, and group them into a theme, especially as, in addition to their similarities, they also share an increased frequency of responses across the categories associated with motivations of sustained use of DMT. The category descriptions highlight their similarities in nature and table three highlights their similarities in frequency.

Category 2 examines DMT use as it relates to a desire to treat mental health concerns (i.e., PTSD, depression, and emotional anxiety). Category 3 examines DMT use as it relates to a desire to explore mystic and/or psycho-spiritual development; and category 4 examines DMT use as it relates to a desire to raise levels of self-awareness

and/or self-improvement. Each of these motivations are relevant to the concept of self-actualization, or a consistent desire (or intrinsic motivation) to realize one's full potential (Malsow, 1943), as is previously discussed in chapter two.

And these categories are not simply thematic by nature; Table 3 shows a clustering of citation responses when examined in relationship to motivations associated with sustained, or continued, use of DMT. In the previously detailed theme, the divergence between initial and sustained motivations, I stated that it became apparent that, while the focus of motivational categories when examining initial use of DMT was narrow, there occurred a significant divergence in motivational categories when examining the sustained use of DMT, and that this suggested that a myriad of combinations of motivations becomes manifested in participants after their first use of DMT and before each subsequent use of DMT.

I posit the summation, based upon Table 3, that, while the divergence in motivational categories after the initial use scatters into several other motivational categories, categories related to self-actualization remain the most prominent. Out of the six categories not closely associated with initial DMT use, 16 out of the 26 citations are regulated to concepts closely related to self-actualization. This suggests that once someone has tried DMT for the first time, they are more likely to experience a motivational impetus based upon self-actualization (within the three stated categories) than any other type of motivation. Table 3 indicates a strong correlation between sustained DMT use and a consistent desire to achieve one’s personal potential, or of achieving sustained levels of self-actualization.

A single discrepant case was discovered in the course of the data collection and analysis of this research project. In the case of 'Frank,' he revealed through his interview responses that he was currently taking a medication which qualifies as a psychotropic medication, in the drug family of Selective Serotonin Reuptake Inhibitors (SSRIs). While he did not specify which medication he was taking, he claimed that he had had difficulties in the past, when experimenting with psychedelics, experiencing their typical effects. He stated that, "I had an expectation that it was going to somewhat fail because I've had failures with other psychedelics because of SSRIs, which are pills that I take every day that kind of block the full experience."

It is known that DMT use can raise levels of serotonin in the brain and this impacts the effects of the DMT (Loonen & Ivanova, 2016), and because SSRIs can behave as serotonin inhibitors, they can impact other drugs which are taken that impact serotonin levels.

This was further corroborated by another participant (Adam), who claimed that he too had been taking an SSRI, at one point, and while on that medication, he had also noticed an inability to experience the typical effects associated with DMT use, and other psychedelic drugs. However, in Adam's case, his use of an SSRI had been temporary, it had been taken over a brief period of time, and after sustaining use of DMT for several years, and so it did not cause his case to become discrepant, as he was able to respond to all the interview questions without it impacting their validity.

In the case of Frank, his responses only impacted three of the 12 interview questions, as the purpose of the interview questions were to inquire after intrinsic

motivations to experiment with DMT, and only focused on the effects of DMT in relationship to motivations for sustained use. And so, the majority of his responses remained valid, and were included in this research study. The methods by which his non-confirming data were still applied to the study are discussed in greater detail later in this chapter.

Evidence of Trustworthiness

Credibility

To ensure credibility, I made certain that my research design and instrumentation were in alignment with my research purpose and problem, as well as the research questions which were derived from them. I did this by ensuring that my findings, and patterns within my findings, were consistent, uniformed, and lent themselves to revealing commonalities in respondent's perceptions. I contributed to the internal validity of my research by including the use of well-established theories and methodologies and made sure that my data collection reached reasonable levels of saturation, as is prescribed by Shento (2004).

I also contributed to the study's credibility by engaging in triangulation, which examined the responses I collected against other similar peer reviewed studies, and the use of field notes, which detailed elements and aspects of the interview in addition to the verbal responses captured on my audio recorder. This is recommended by Cope (2014). I maintained an audit trail, which is of significant value, (Ryan-Nicholls & Will, 2009), and engaged in the technique of prolonged exposure, which allowed for some interviews to run longer than anticipated, the use of follow-up questions and probing questions, and

spending additional time reviewing the data collected (Lincoln & Guba, 1985). There were no adjustments to the credibility strategies stated in chapter three.

Transferability

To ensure appropriate levels of transferability in my research study, I placed great effort into providing the richest descriptions of the collected and analyzed data that I could, so that the findings could be transferred easily, if desired, as suggested by Lincoln and Guba (1985). Strategies for ensuring high levels of transferability in my research also included providing thorough and detailed information related to the research context, as well as all assumptions and restrictions inherent in the study or used in the research. I ensured that the parameters of the research were clearly defined, such as the framework, demographics, data collection and analysis strategies, and the design model (Shento, 2004). There were no adjustments to the transferability strategies stated in chapter three.

Dependability

To achieve dependability, I attempted to ensure that my research process possessed a sound logical approach, that it is entirely traceable, and that each element of my work, at each stage, was well and clearly documented (Tobin & Begley, 2004). My research documentation included the type of research design used, how the design was implemented, how the data was accumulated and analyzed, and a reflection of the evaluation conducted (Shento, 2004). There were no adjustments to the dependability strategies stated in chapter three.

Confirmability

Guba and Lincoln (1998) contend that confirmability is only established after the other issues surrounding trustworthiness are sufficiently accounted for and proved as far as is reasonably possible. Koch (1994) believes that, to ensure that readers or other researchers are able to fully understand how and why research decisions were made, it is important to include certain markers along the way. I attempted to accomplish this by including considerations related to methodology, theory, collection, and analysis.

Also, confirmability is the reduction of subjective qualitative elements and the enhancement of objectivity, to the extent that the researcher is able in relationship to their reflexivity. It underscores the ability to confirm research which can be subjective in nature and interpretation (Lincoln & Guba, 1985). Because no researcher can claim complete objectivity, as the result of personal bias and individual reflexivity and positionality, I strove to be completely honest about the limitations of the study while pursuing the truth as far as I was able to comprehend it. I attempted to accomplish this through the use of an audit trail and analytical memos. The employment of an audit trail allowed me to clearly define a rationale between my results and data I collected, and my analytical memos related to (a) specific data reflections, (b) systemic check-ins, (c) general impressions (regarding participants and the relevant research environment), and (d) reflections regarding social location. There were no adjustments to the conformability strategies stated in chapter three.

Results

In this section the results of the research study are organized by research questions and are delineated from the themes discussed in detail previously in this chapter. The main research questions for this study was: What are the intrinsic motivations and perceived benefits of U.S. adult males for taking DMT? The following are the three research sub-questions:

Subquestion 1: Motivations for First Time Use

In Subquestion 1, I asked, *what are the intrinsic motivations of U.S. men ages 18-50 for experimenting with DMT for the first time?* The results clearly indicate that when examining the intrinsic motivations for first time experimentation with DMT (initial use), of the eight categories established by the coding process for this research study, the motivations related to both curiosity and convenience were cited with significantly greater frequency than any other motivational category. In fact, between the 13 interviewees, 11 responded that curiosity was a motivational influence and 10 responded that the convenience of DMT use was a motivational influence. Table 4 further highlights this association and shows that these two categories account for 21 of the 29 (72%) total responses across all categories related to motivations for the initial use of DMT. It is clear that the coupling of these two motivations accounts for a significant impetus towards the desire to experiment with DMT for the first time among the sample population selected for this study. Table 4 and the following examples of quotes from my interviews support this theory.

Table 4

Participant Identification with Categories Relative to Initial and Sustained Use

Motivational Category	Initial Use	Sustained Use
Curiosity	11	1
Therapeutic: Mental Health	1	4
Mystic/psycho-spiritual	2	8
Self-Awareness/Improvement	1	4
Pleasure	1	3
Convenience	10	11
Prior Use of Psychedelics	3	2
Lasting Impact	0	5

Curiosity and convenience were main motivational factors for initial use of DMT. For example, Bob stated, “I think it was curiosity.” Other respondents were more emphatic. Frank, for example, when asked why he tried DMT the first time stated, “Curiosity. For sure.” Convenience, the other main motivational factor for initial use of DMT, was cited by respondents because the drug-induced experience was shorter. For example, Jeff stated, “Acid or mushrooms, you need to have several hours, at least, set aside… But DMT is only, really, like five to ten minutes of trip… it’s much easier.” Linking the concept of time to overtly to the larger construct of convenience, Mark stated, “I really liked mushrooms, but those take time, they’re less convenient. DMT was much more convenient.”

It is also important to note that, prior use of psychedelics was uniformly present in the sample population (13 out of 13 participants had previously experimented with psychedelics, and all 13 had previously experimented with both LSD and psilocybin), and this previous use of psychedelics caused a unique contrariety in the results, and played an impactful role in the motivations for first time experimentation with DMT. Participants

often reported being very hesitant to try DMT for the first time as a result of prior use of psychedelics (as is detailed also previously in the chapter, while examining emergent category #7).

In fact, when asked in the second interview question, "*How long was it between your first developing an interest or desire to try DMT and your first actual use of DMT?"* participant's responses ranged from less than 1 week to up to 7 years, with an average delay of use of just over 2 years. This delay in use was typically reported as a fear related to the extreme potency/milligram of DMT. Because participants stated that a psychedelic experience could be both very positive, as well as being very negative, a concern was present that such a powerful and potent experience could also become extremely negative.

The contrariety stemmed from interviewees responding that previous use of psychedelics was both an inhibitor as well as a motivator to experiment for the first time with DMT. Participants often reported that previous psychedelic use caused them to delay their initial use of DMT out of fear of its potency, but previous psychedelic use also gave them the courage to then, ultimately, overcome that same fear. Eight of the 13 respondents reported developing the courage to try DMT based upon their previous use of psychedelics and then also reported emotions ranging from anxiety to fear, when faced with the prospect of trying DMT for the first time, based upon previous use of psychedelics. Six of the 13 reported that the primary cause of the anxiety or fear was based upon their understanding that DMT had the ability to cause the user to have an out-of-body experience, or what is typically referred to in DMT culture as a, 'breakthrough

experience.' The following quotes are examples from interviews to support this supposition.

- Adam- "I was [initially] too afraid to actually do it, because I had done other psychedelics previous to, and it was not always a pleasant experience. So, if DMT was that much more intense, then I couldn't even imagine it."
- David- "My first psychedelic experience was very enlightening, but I was scared to go beyond it [with DMT]…losing control of my body makes me nervous."
- Gary- "It [previous psychedelic experiences] was the source of my curiosity, and my willingness to try it…it [DMT] also provided me with a fair bit of anxiety too, because the idea of leaving your body is not typically associated with using psychedelics."
- Hank- "…we both were pretty excited. I guess, maybe a little nervous too, because psychedelic experiences can be, sort of, uhm, hard to control sometimes."
- Isaac- "I don't think I would have had the courage to try DMT if I hadn't tried acid and mushrooms before… I wanted more and more to have that break-through experience with DMT, but, I confess, I was also very nervous about that, but it was also definitely a motivation for me."

Regarding intrinsic motivations for first time experimentation with DMT, the data collected for this research project strongly suggests that the coupling of curiosity and the convenience of DMT's short time-effect duration provide users with an impetus to

engage in initial use of the drug. These motivators, plus the courage to experiment with DMT based upon prior experimentation with psychedelics, which is often cited by the respondents, appears to allow DMT users to overcome their initial fear and anxiety related to the drug, and then engage in first-time use.

SQ2: Motivations for Sustained Use

With the second subquestion I asked: *what are the intrinsic motivations of U.S. men ages 18-50 for sustaining their use of DMT?* Results from the data collected and analyzed in this research study indicate that the narrowing of motivational categories when examining initial use of DMT becomes significantly expanded when examining the motivational categories associated with the sustained and continued use DMT, as is evidenced by table 4. Outside of the two primary motivational categories for initial use (curiosity and convenience), only eight other citations occurred, spread across the five other categories (see Table 2), but, when the examination shifted to the sustained use of DMT, 26 other citations occurred across the six other categories (see Table 3). This would suggest that a significant shift in motivational priorities occurs after the participants' first use of DMT and before each subsequent use of DMT.

Based upon responses to the interview questions, it is most likely the case that, despite each respondent reporting that they had been aware of the effects that a DMT experience was supposed to create, prior to their first use, they reported still having difficulty predicting what a psychedelic DMT experience would be like, or what effects it might produce for them personally, as there remains, very often, a variety of responses based upon the individual and the potency of the dose. Also, several of the participants

expressed experiencing significant anxiety, and even fear, about the idea of experimenting with DMT prior to their initial use, and did not know what to expect, despite having heard many stories about the effects of DMT.

Many reported that once they had tried DMT for the first time, their motivations and expectations became radically altered, as it relates to their continued, or sustained use of DMT, as is evidenced by the following examples from many of the quotes.

- David- "The expectation definitely changed because I was aware that I wasn't going to get what I was initially searching for…I mean, after the first experience, I knew what I was getting into and it was exactly what I wanted to get into."
- Edward- "I guess that I was very naive, at first. I was like, 'hey, let's have a good time,' and experiment with this, and then after it happened it was totally different…every pre-determined thought I had was totally nullified."
- Isaac- "But, after the first experience was passed, and it was such a positive moment, I knew that I could go again, no problem…My motivations changed after the first try, I knew what I was getting into now."
- Jeff- "Well…I wasn't driven by curiosity anymore, because I knew what was coming each time."
- Larry – "…it takes you so high so quickly, that it, well, you know, it is an overpowering experience the first time."

These responses suggest that once the user had initially tried DMT, and had somewhat acclimated to the experience, their motivations for continued use became altered, thus the shift and expansion in reported motivations for sustained use of DMT.

This divergence in motivational categories when examining the sustained use DMT resulted in each category expanding in the number of citations, with the exception of category #1 (curiosity), which dropped from 11 to one (the single exception was the result of the discrepant case of Frank, who barely experienced the effects of DMT his first attempt because of medication he was taking), and category #7 (Prior Use of Psychedelics). These drops in motivational citations are, most likely, the result of having then tried DMT, and they no longer experienced the same level of curiosity nor did previous psychedelic experience any longer create the same impetus for continued use, as they became supplanted by other motivations.

It should be noted that, in particular, there existed a more significant jump in the citations associated with motivational category #3 (Mystic/psycho-spiritual), from two citation to eight, and in category #8 (Lasting Impact), from zero to five (an average rise of 5.5 citations), than in the four other categories which experienced a rise in citations (an average rise of 2.25), which was exactly half the average citations of categories #3 and #8. See Table 4.

It becomes apparent, when examining the data related to the second research question, that after their initial use of DMT, the users became acclimated to the unique psychedelic experience and their motivations of use and their expectations of the experience became altered, often radically so. DMT users in this study who continued

their use after their initial experimentation (except for the discrepant case) shifted their motivations of use from primarily curiosity and convenience to several other separate and distinctly different motivations.

However, it should be noted that, while each category experienced a change in the number of citations when switching from initial to sustained use, only a single category remained constant (again, except for the discrepant case), as each respondent maintained their adherence to motivational category #6 (convenience). This would suggest that of all the motivational categories, the convenience of DMT use had the greatest overall impact on motivation of use.

SQ3: Alignment of Expectations to Experiences

With the third subquestion I asked, *how do the motivational expectations of DMT use in U.S men ages 18-50 align with their perceived experiences?* Based upon responses by the interviewees, there seemed to by little uniformity in the alignment of expectations met, regarding both initial and sustained DMT use. This is exhibited by the fact that only two of the thirteen participants answered the same expectational response to both categories (initial and sustained use), and one of those was the discrepant case (Frank), who did not experience the effects of DMT because of the medication he was taking. The other instance, Charles, maintained that he refused to have expectations of any kind whenever taking psychedelics, to include DMT. Ken, who was unsure if his expectations were met upon his initial use, stated that he had no further expectations upon continued use, and only David was unsure about whether his expectations were met upon subsequent usage.

When reporting that expectations were unmet upon initial use, several participants reported that the reason for this stemmed from an inability to properly use the vaping device, and that it took practice and several tries to learn how to inhale the DMT to get the full effects of the drug. This is evidenced by the following examples of responses:

- Edward- "I think that the first time, we weren't experts in the device, so it was something that you had to… there was a learning curve with the device that you try to use and the first time it worked, but I don't think that I mastered the technique."
- Isaac- "I had to figure out how to use the vaping instrument. Again, I'm old. I smoke joints, I don't know anything about vaping. So, it took practice, figuring out how to inhale properly. I coughed a lot the first time, and the effects were relatively faint."
- Charles- "…and the way that we first tried doing it, was maybe a little ineffective. Maybe not the dosage or, or maybe it was more the…technique?"

An additional reason for participants not having expectations met, in both initial and sustained use, stemmed from a disappointment of failing to achieve a breakthrough experience, and not having experienced the sensation of leaving their body. Achieving a breakthrough experience was a common motivation for both initial and sustained use of DMT (yet also a source of some anxiety), and so the failure to achieve this experience also caused some respondents to express that their expectations were not met. This is evidenced by the following examples of responses:

- Adam- “After doing the break-through, somewhat failed to meet expectations (did not breakthrough again).”
- Isaac- “Never broke through or left my body, which is a little disappointing, but, at the same time, it’s a scary thought, so, you know, it’s okay too.”

Of the five expectational categories, only the category of met expectations included a variation in the number of citations which was greater than two citations. Only one respondent reported having his expectations met upon their initial use of DMT; this number rose to six upon expectations related to their sustained use. This is most likely the result of participants reporting that the initial experience was very difficult to predict, despite the stories they had heard and the research they had done, and so they did not really know what to expect. This is evidenced by the following examples of responses:

- Edward- “I wasn’t really prepared, for the actual experience…I wasn’t really quite sure what to expect.”
- David- “Wasn’t what I was expecting but I was pleasantly surprised. Let’s put it that way.”
- Gary- “Like, acid and mushrooms are different drugs, and even slightly different highs, but this didn’t sound like that. This sounded different, so that there is no real frame of reference, like there is with other types, of, psychedelics, I guess.”

In the category of exceeding expectations, four participants related that the experience exceeded their expectations upon their initial use of DMT, however this number dropped to two, after participants had had their first DMT experience and

understood what their continued experiences might be like. This is evidenced by the following examples of responses:

- Adam- “In hindsight, it exceeded every expectation ever known to man.”
- Bob- “It was euphoria. So, it exceeded my expectations.”
- David- “… I would say…it far exceeded my expectations. It was definitely a unique experience. It wasn’t what I was initially searching for, per se, but it was awesome on a whole ‘nother level.”

Because so many of the respondents received their information on what a DMT experience is like from so many different sources, because the experiential effects of DMT can vary amongst individuals, and because the participants had so many varying motivations for both their initial use as well as their sustained use, it is not surprising that responses varied across expectational categories in both initial and sustained use without much consistency. No real patterns emerged while analyzing the data, with the exception of the fact that once several of the participants had had their first DMT experience, and developed a better understanding of what to expect, the number of citations for met expectations rose from one up to six. This suggests that the sample population’s expectations aligned sporadically based broadly upon a variety of intrinsic motivations, as is exhibited in tables five and six.

Table 5

Participant Identification with Meeting Expectations for DMT Use Relative to Initial Use

Participant	Exceeded Expectations	Met Expectations	Did Not Meet Expectations	Unsure	Had No Expectation
Adam	X				
Bob	X				
Charles					X
David	X				
Edward			X		
Frank			X		
Gary		X			
Hank					X
Isaac			X		
Jeff	X				
Ken				X	
Larry			X		
Mark					X

Table 6

Participant Identification with Meeting Expectations for DMT Use Relative to Sustained Use

Participant	Exceeded Expectations	Met Expectations	Did Not Meet Expectations	Unsure	Had No Expectation
Adam			X		
Bob		X			
Charles					X
David				X	
Edward		X			
Frank			X		
Gary	X				
Hank	X				
Isaac		X			
Jeff		X			
Ken					X
Larry		X			
Mark		X			

The discrepant case of Frank was included in the research findings because, while he claimed that he did not experience the full effects of inhaling DMT due to medication that he was taking, the research questions were designed to ascertain the motivational

tendencies towards attempting the use of DMT, rather than ascertaining what the actual experience might entail. Thus, his motivations remained valid, particularly in the case of intrinsic motivations for the initial use of DMT.

His inability to fully experience the effects of DMT upon initial use was not unique amongst respondents, as is indicated previously, as several participants related an inability to experience the full effects of DMT upon their initial use based upon their inability properly use the vaping device upon their first attempt, and so his motivations for his sustained use should not be discounted either.

The only research question in which his discrepancy becomes unusual is the final research question, relating to whether DMT use met his expectations. However, because his case is noted as being discrepant, and because it does not skew the results (particularly as there was only a single trend to be detected during the data analysis relating to the third research question), his case was noted appropriately and remained included in the findings.

Summary

The intrinsic motivations of U.S. men ages 18-50 for both initial and sustained experimentation with DMT, based upon the coding process applied to the population sample in this research study, were delineated into eight separate motivational categories: (a) to satisfy a curiosity, (b) to address a mental health concern, (c) to explore a mystic and/or psycho-spiritual development, (d) to raise levels of self-awareness and/or self-improvement, (e) to enhance feelings of pleasure, (f) to experience a more convenient psychedelic experience, (g) and to acquire a positive lasting impact from DMT use.

From these motivational categories, three main themes emerged: (a) a correlation between the motivational categories of curiosity and convenience in initial use of DMT, (b) a divergence between initial and sustained motivations for the use of DMT, and (c) a relationship between intrinsic motivations to try DMT and a desire to achieve an increased sense of self-actualization. From these emergent codes, categories, and themes, the following research questions have been addressed. The following is a summary of the answers to the research questions based upon the analysis of the data previously detailed.

SQ1: What are the intrinsic motivations of U.S. men ages 18-50 for experimenting with DMT for the first time? While this study revealed and explored eight different categories of intrinsic motivations for experimenting with DMT for the first time, the categories of curiosity and convenience displayed a significantly greater level of representation in the responses to this question. Between the 13 interviewees, 11 responded that curiosity was a motivational influence and 10 responded that the convenience of DMT use was a motivational influence for initial experimentation with DMT. The coupling of these categories accounted for 21 of the 29 (72%) total responses across all motivational categories for first time use. This sample population clearly displayed a propensity for initial experimentation based upon these two categories.

An additional relevant finding related to motivations associated with first time use was that each of the 13 participants responded that they had used and experimented with other types of psychedelic drugs prior to their first use of DMT, and nine of the participants related that their prior use of psychedelics had had a strong impact on their curiosity and desire to experiment with DMT for the first time. It should also be noted

that of the nine interviewees who had expressed that prior use of psychedelics had induced them in some way to experiment with DMT for the first time, six of them also expressed that prior use of psychedelics had also caused them anxiety about trying DMT for the first time, because they understood DMT to be a more powerful experience based upon its potency. However, each of these six did then go on to experiment for the first time with DMT. In summation, the motivational categories of curiosity and convenience, and the desire and courage to try DMT for the first time based upon prior use of psychedelics, all played a significant role in the sample population's intrinsic motivations for their initial use of DMT.

SQ2: What are the intrinsic motivations of U.S. men ages 18-50 for sustaining their use of DMT? Results from the data collected and analyzed in this research study, from the sample population, indicate that the narrowing of motivational categories, when examining initial use of DMT, becomes significantly expanded when examining the motivational categories associated with the sustained and continued use DMT. This research study indicates that after their initial use of DMT, these participants became acclimated to the unique psychedelic experience and their motivations of use and their expectations of the experience became altered. DMT users in this study who continued their use after their initial experimentation significantly shifted their motivations of use from the primary categories of curiosity and convenience to several other separate and distinctly different motivations. In particular, there existed a significant jump in the frequency of responses related to the motivational category associated with mystical/psycho-spiritual experiences and in the motivational category

associated with creating lasting positive impact in the user's lives, more so than in the four other categories which also experienced a rise in the frequency of motivational citations.

Results from the data collected and analyzed in this research study, from sample population, also indicate that when examining initial use of DMT, the coupling of curiosity and convenience as the major contributors towards creating an intrinsic motivational desire for first time experimentation with DMT dissolves, as curiosity is no longer a contributing factor. However, the presence of convenience as a major contributing factor became even more prevalent when examining continued use, as 11 of the 13 participants continued to cite this as a primary motivation. The notable prevalence of a motivational desire to experiment with DMT based upon prior use of other psychedelics also becomes significantly reduced, beyond use associated with a first-time experience. This would suggest that of all the motivational categories, the convenience of DMT use continued to have the greatest overall impact on motivation for use in both initial and sustained use categories.

SQ3: How do the motivational expectations of DMT use in U.S men ages 18-50 align with their perceived experiences? Results from the data collected and analyzed in this research study, from the sample population, indicate that there seemed to by little uniformity in the alignment of expectations met, regarding both initial and sustained DMT use. Because many of the participants received their information on what a DMT experience is like from so many different sources, because the experiential effects of DMT can vary amongst individuals, and because the participants had so many varying

motivations for both their initial use as well as their sustained use, responses varied greatly across expectational categories in both initial and sustained use. No real patterns emerged while analyzing the data, except for the fact that once several of the participants had their first DMT experience, and developed a better understanding of what to expect, the number of citations for met expectations rose significantly when examining sustained use. This suggests that the sample population's expectations aligned sporadically based upon a variety of intrinsic motivations.

It is relevant to note, however, that despite the varying responses across all motivational categories, and between both initial and sustained use, regarding the alignment of their expectations of DMT use with their perceived benefits of DMT use (with the exception of the discrepant case who did fully experience the effects of the drug), each participant indicated that they felt that they had in some way benefited from their use of DMT, that they intended to continue their use of DMT, and that they would be willing to, or already had, recommended DMT use to a friend, family member, or colleague.

Transition to Chapter 5. Chapter 4 began with an introduction which briefly reviewed the purpose of the study and the research questions, prior to previewing the chapter's organization. It then focused on the elements relevant to the research study's setting and where the individual interviews were conducted. Then, participant demographics and characteristics which pertained to the study were examined. Data collection was subsequently discussed, to include (a) the number of participants, (b) the location, frequency, and duration of the data collection, (c) how the data were recorded,

and (d) variations in data collection from the plan presented in Chapter 3. Data analysis was then explored, to include (a). coding principles and applications, (b) the specific codes, categories, and themes which emerged, and (c) discrepant cases. Issues of trustworthiness were then explored. These included (a) credibility, (b) transferability, (c) dependability, and (d) confirmability, as they related to implementation of and/or adjustment to the strategies stated in Chapter 3. Result were then addressed, and a summary provided.

In Chapter 5, an introduction is provided, which includes a concisely reiterated purpose and the nature of the study, to include why it was conducted. It then also concisely summarizes the key findings of Chapter 4. Findings are then interpreted, as they relate to analyzing and interpreting them within the context of the theoretical frameworks. Limitations will then be revised and updated from the chapter one examinations, and limitations to the actual study are examined. After this, recommendations for further research are described, which are grounded in the strengths and limitations of the current study and the literature reviewed in Chapter 2. The implications for positive social change are then examined, to include any potential impacts, as well as examining any methodological implications. Chapter 5 then ends with a conclusion which summarizes the main take-aways of the research study.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this study was to examine the intrinsic motivations and perceived benefits of DMT use amongst U.S. males ages 18-50 who have used the hallucinogen more than once. The nature of this research study included a qualitative approach, and a phenomenological design was employed to examine shared lived experiences amongst the cited sample population related to their DMT use. This research model and design was utilized to further elucidate the reasons why this previously under-researched sample demographic of DMT users chooses to engage in this illicit drug use phenomenon by inspecting relevant aspects of its rapidly increasing user-rate and the epidemiological elements which correspond with its growing popularity within the United States.

This study was conducted amongst the specified sample population because previous scholarly research into the intrinsic motivations surrounding DMT use had been traditionally conducted internationally and had used eclectic, non-specific, demographic variables; no studies within the United States had been either gender or age specific. It was also conducted in the hopes that the research findings from this specific sample population would provide useful information for relevant law enforcement agencies, mental health and substance abuse clinicians, policy drafters, and legislative bodies, that they might better comprehend the nature of, and motivations for, DMT use, its epidemiology, the motivations which contribute to its rapidly increasing user rate, and that they might be better positioned to make increasingly well-informed decisions related to its use.

Key findings included a strong correlation between prior use of psychedelics and first-time experimentation with DMT, as 13 out of the 13 participants reported having taken psychedelics (most notably LSD and psilocybin) at some point before their initial use of DMT. In addition, nine of the 13 respondents reported being heavily influenced by their prior use of psychedelics to experiment with DMT for the first time, despite the fact that many also reported simultaneously experiencing feelings of fear and anxiety about taking DMT based upon prior use of psychedelics.

Participant's intrinsic motivations associated with initial use of DMT was shown to be heavily predicated upon two of the eight major motivational categories for initial DMT use: curiosity and convenience of use (short time-duration effects of the drug). These two motivational categories accounted for 21 of the 29 (72%) total responses across all motivational categories for first time use. This sample population clearly displayed a propensity for initial experimentation based upon these two categories.

Participant's intrinsic motivations associated with sustained use of DMT was shown to be far more diverse than the intrinsic motivations for initial use, as after the initial use participants reported having a much better understanding of what to expect when experimenting with DMT. In particular, there existed a significant jump in the frequency of responses related to the motivational category associated with mystical/psycho-spiritual experiences and in the motivational category associated with creating lasting positive impact in the user's lives, more so than in the four other categories which also experienced a rise in the frequency of motivational citations.

When further examining the motivations for sustained use of DMT, respondents reported a dissolution of the coupling between the categories of curiosity and convenience, as curiosity no longer remained a motivational influence for continued use; however, the motivational category of convenience remained prevalent and even increased in the number of responses associated with motivations of sustained use. Of all the citations of motivational influences, across all eight categories associated with both initial and sustained use of DMT, the motivational category of convenience of DMT use was the most represented.

Interpretation of the Findings

Findings from this research study both confirm and extend knowledge in the discipline as they are compared with what was found in the peer-reviewed literature described in Chapter 2. No results from the thematic coding of the data collected inclined itself towards a repudiation of previous thematic results, nor was there any analysis to disconfirm previous studies related to the intrinsic motivations and perceived benefits of DMT use, even amongst dissimilar sample populations.

Regarding the confirmation of previous findings, this study's data analysis maintains and supports the three main themes related to intrinsic motivations and perceived benefits, as are asserted by many of the leading researchers in this discipline. These are that the intrinsic motivations and perceived benefits of DMT use revolve around (a) a desire to self-medicate to address issues related to substance abuse and mental health concerns, (b) a desire to gain personal insights, clarity, and raise levels of empathy and self-awareness through a unique state of consciousness, and (c) a desire to

experience the pleasure associated with elevated levels of serotonin (Garcia-Romeu et al., 2016; Johnstad, 2018; Cameron et al., 2019; Cakic et al., 2010). Findings from this research study confirm these previous studies, despite the previous studies utilizing far more diverse and eclectic sample populations.

The semistructured interviews of the far narrower and more specific sample population utilized in this research study revealed all these themes as well, and, often, with definitive, decisive, responses. Elements of the three main motivations were prevalent throughout the data analysis and were coded appropriately to represent their prevalence. Regarding the three main motivational elements for DMT use discovered and discussed in the literature review detailed in Chapter 2, no evidence was discovered to contradict any of these intrinsic motivational elements.

In further confirmation of previous research studies related to the intrinsic motivations for DMT use, this research study corroborates the correlation between the prior use of psychedelics and the motivation to experiment with DMT for the first time. This speaks directly to the first research subquestion of this study: What are the intrinsic motivations of U.S. men ages 18-50 for experimenting with DMT for the first time?

The link between prior use of other psychedelics and the motivations associated with first-time DMT experimentation was not a primary focus of the research study, as it was not addressed specifically in the research question or the subresearch questions, however, because the literature reviewed in chapter two suggested a strong correlation between the previous use of psychedelic drugs and first-time experimentation with DMT (72%; Davis et al., 2018), and because motivations for first-time experimentation with

DMT was a main focal point of the study, the following interview questions were included in the interview protocol: Had you experimented with any other psychedelics prior to your first use of DMT? And, if so, which ones? If applicable, how did your previous use of psychedelics effect your motivation to try DMT for the first time?

The first two interview questions related to prior use of other psychedelics were specifically designed to be closed-ended questions to create a baseline, so that the open-ended question could, if applicable, further illuminate the correlation as it relates to intrinsic motivations and perceived benefits. Without exception, each respondent in this research study had experimented with other psychedelic drugs prior to their DMT use. This serves to further confirm previous studies addressed in the literature from Chapter 2, which showed that a direct correlation exists between the prior use of other psychedelic drugs and first-time experimentation with DMT.

This research study did serve to extend knowledge in the discipline, by virtue of the respondents claiming additional types of motivational categories not specifically expressed in the literature examined in Chapter 2. The three main categories examined in the literature review (a desire to self-medicate, to raise levels of self-awareness, and to experience the pleasure associated with elevated levels of serotonin) were commonly asserted in previous studies, however, this study produced five additional intrinsic motivational categories through the coding process of examining emergent codes, categories, and themes. These additional categories included (a) curiosity, (b) exploring mystic and/or psycho-spiritual development, (c) convenience of use, (d) exploration of DMT based upon prior use of other psychedelics, and (e) acquiring a positive lasting

impact from DMT use. It should be noted that the previous studies examining motivations for DMT use did not distinguish between initial use and sustained use, which could account for the additional categories which emerged and were prevalent within this research study.

Additionally, when the demographic parameters used in this study are applied, and research into the motivations for DMT use are restricted to include only U.S. males ages 18-50, the motivations of curiosity coupled with convenience becomes exceedingly prevalent, along with prior use of psychedelics, when associated with first-time use of DMT. General curiosity is found to be very often predicated upon research the users conducted prior to initial use, typically through online resources and popular podcasts, however, its influence as a motivation greatly dissipates upon the user's initial experimentation with DMT and has little effect upon the motivations for continued use.

The participants in this study who reported convenience of use as category, did so at a higher rate than any other category in both initial and sustained use categories. This sample population, with its narrower inclusion criteria, exhibited an increased interest in the ability to utilize the perceived benefits of a psychedelic drug when the effects of the drug last 10-20 minutes as opposed to 6-12 hours. Convenience appears to play a significant role in motivations to experiment with DMT in both the categories of initial and sustained use of DMT.

Also further extending knowledge in the discipline, it was displayed in this research study that the motivations associated with sustained, or continued, use of DMT are more diverse than those associated with initial, or first-time, use of DMT. While

motivations of initial use in this sample population were heavily regulated between the categories of curiosity and convenience, the number of citations associated with the other six categories rose significantly when examining the motivations of sustained use. Specifically, there existed a significant rise in the frequency of responses related to the motivational category associated with mystical/psycho-spiritual experiences and in the motivational category associated with creating lasting positive impact in the user's lives, more so than in the four other categories which also experienced a rise in the frequency of motivational citations.

The two theories applied to this research study of the intrinsic motivation and perceived benefits of DMT use were the SDT and the SE theory, as they both directly apply to the causality and complexity of intrinsic human motivations and behavioral outcomes. The theoretical frameworks utilized to analyze and interpret the findings of this research study possess several similarities, however, the main qualifying distinction between the two would be that, while they both posit explanations for motivations surrounding an individual's desire to manifest positive self-change or self-improvement, the SDT's primary focus seeks to explain the *tendencies* towards self-improvement goals while the primary focus of the SE theory seeks to explain the *ability* to achieve self-improvement goals.

The SDT has been applied previously in ways similar to this current study, focusing on intrinsic motivations, because of its motivational contexts and definitions. Research studies focusing on behavioral patterns and motivations towards behavioral patterns apply the SDT for its explanations relating to the evolution of personality,

emotion, mastery, competence, and autonomy. The SDT is focused primarily on a development towards an understanding of 'well-being motivations'(Ryan & Deci, 2004), which is also one of the key concepts of this study topic.

The SE theory has been applied previously in ways similar to the current study, because it focuses on the sources of motivations, particularly intrinsic motivations. Because human motivations are intrinsically tied to intrinsic and extrinsic stimuli, and because the influence of these factors, according to the SE theory, ultimately defines not just behavior, but the belief to engage in specific behaviors, the SE theory is well-positioned to explain the foundation of human motivational behavior (Schunk & DiBenedetto, 2016).

When analyzing and interpreting the findings of this research study in the context of this theoretical framework, participants consistently exhibited elements of both theories through their interview responses: positing both a desire and *tendency* towards change, and the perceived *ability* to manifest 'well-being' through the catalyst of intrinsic motivations and perceived benefits. These manifestations occurred through a curiosity about DMT when first learning of its existence, an active seeking-out of the substance, first-time experimentation with DMT, and then also through the sustained use of DMT (particularly as first-time expectations did not consistently match initial perceived benefits of first-time use, in this research study). The SDT delineates the tendencies and inclinations exhibited by the participants through their responses, as they expressed a strong desire specified through a series of intrinsic motivations; while the SE theory of engaging in a mastery experience to elevate levels of 'well-being' was exhibited by

examining the perceived benefits of the behavior (DMT use), and then subsequently engaging in that very specific behavior. In short, it might reasonably be supposed that the alignment of the SDT delineates the individual's path which leads to the DMT door, while the alignment of the SE theory defines who opens the door, how, and when.

Limitations

The first limitation to trustworthiness which arose from the execution of the study stemmed from the homogenous nature of the sample population. Often, this is a natural by-product of employing a chain sample technique for the purpose of examining or interviewing 'hidden populations,' which are engaged, or have been engaged, in an illicit action or behavior (Patton, 2015). Because of the discriminative nature of the snow-ball recruitment technique in this particular study, some of the respondents who qualified to meet the inclusion criteria where familiar with one another (as must be the case to some degree in all snow-ball sample techniques) and had used DMT together. This, as anticipated in chapter one, most likely increased the likelihood that the user, and the users which they recruited, shared a similar DMT use history, which could well include similar intrinsic motivations and perceived benefits in relation to the shared experience of the use. For example: because I examined the motivations of illicit drug use, a person who uses DMT for purely hedonistic reasons may likely take the drug with others who are motivated to take it for the same purpose, and they were possibly more likely to refer likeminded, or, in this case, similarly motivated, participants to my research project. Or, users who take DMT to self-medicate for issues related to depression or anxiety, may do so with other who use for the same or similar reasons.

This homogeny may have induced otherwise dissimilar responses towards a more uniform set of answers to the interview questions, however, it should also be noted that, amongst the participants, there existed a variation of responses which remained consistent, in many respects, to previous research studies conducted amongst sample populations acquired through other recruitment techniques as well.

Another potential limitation of the study, as it relates to the issue of trustworthiness, was the ability of participants to accurately articulate their motivations and perceived experiences. This is made potentially difficult for three reasons, (a) accurately articulating the often ambiguous 'psycho-spiritual' related motivations of use, (b) the illicit nature of the use, and (c) accurately articulating experiences related to altered states of consciousness.

Regarding the first reason, it is common for DMT users to not have any formal, traditional, religious affiliations and yet they often participate in DMT use for spiritually related motivations (Johnstad, 2018). This can often cause a rift between the participant's perceptions and their able to accurately articulate a quasi-religious or psycho-spiritual experience. To mitigate this potential concern, I provided them ample time during the interview to answer each question and asked if they wished to add anything before moving to the next question.

The second concern involved participants providing accurate responses which required confessing to the use of an illegal substance. There were two circumstances which I believe effectively mitigated this second concern, to the point where I felt reasonably confident that the answers I received were accurate and reliable. The first is

that the participants where afforded complete anonymity; pseudonyms replaced real names and so the interviewee was free to respond without any fear of legal, economic, or personal reprisal. The second mitigating circumstance was that DMT users and psychedelic enthusiasts tend to be vocal advocates of its medicinal and therapeutic benefits. This may be because they tend to skew older and possess higher levels of education, (Davis et al., 2018), thus they may be more inclined to be honest and provide better-articulate responses.

The third concern, the ability to articulate or describe altered states of consciousness, or even out of body experiences, provides the potential for respondents to have difficulty answering with a sense of accuracy, or in a manner which might be readily understood by the reading audience. Previous research indicates that it can be difficult to articulate such intense experiences (Johnstad, 2018), and Patton (2015) suggests that it is imperative that qualitative research be able to elicit accurate expressions of meaning. However, I did not perceive that participants found it reasonably difficult describing such experiences. Again, each interviewee was provided as much time as they wished to articulate their response to each question, and I asked if they had anything to add to each answer prior to moving to the next question.

Finally, there remains the fundamental limitation associated with the effective execution of qualitative research: that researcher positionality, reflexivity, and bias, cannot be inexorably extracted from the process of collecting and analyzing data (Patton, 2015). The first step in attempting to mitigate this limitation is always to acknowledge its existence (Ravitch & Carl, 2016). I share common demographical variables with the

sample population, despite its narrow scope (I am also a U.S. male within the inclusive age range), and I have many years' experience interviewing individuals about their drug use history in a clinical setting, and in several different modalities. Acknowledging these demographics and experiences allows me to be forthcoming to my reading audience and any researchers who may wish to replicate this study and determine its transferability. I have sought to avoid suppositions based upon my demographic similarities, as well as my experiences working as a licensed chemical dependency counselor. I have utilized my data collection tools uniformly and have applied a measure of objectivity to my data analysis, as best as I am able. The use of an audit trail assisted me with this process.

These constituted the limitations associated with the research study, as they pertain to trustworthiness, and address attempts to mitigate and reduce issues inclined to reduce trustworthiness.

Recommendations

Recommendations suggested for further research and future studies, which are grounded in the strengths and limitations associated with the current study, as well as the literature reviewed in chapter two, include the need for further analysis of motivations for taking DMT with (a) a larger U.S. male sample population, (b) a sample population that encompasses a greater geographical diversity (while still remaining geographically specific to the United States), and (c) an expanded examination of how previous psychedelic drug use impacts intrinsic motivations for, and perceived benefits of, using DMT.

In regard to a larger sample population, a well-funded examination which incorporated a significantly larger sample size is likely to reduce concerns related to sample homogeny and the likelihood that participants recruited through the chain sample employed may have similar intrinsic motivations for their DMT use if they used DMT together (Patton, 2015). This would broaden the potential for a more diverse set of responses and provide additional clarity and accuracy to the intrinsic motivations and perceived benefits of DMT users in the actual U.S. population.

Regarding greater geographical diversity, there exists a paucity of information related to intrinsic motivations and perceived benefits of DMT use specific to the United States (Winstock et al., 2014). A more geographically expansive recruitment process and study, which could incorporate each state (as this study could not), would likely increase the reliability of the resulting findings and provide a more comprehensive understanding of motivations for DMT use domestically.

Finally, A review of the existing literature indicated a strong correlative relationship between previous use of psychedelic drugs and first-time experimentation with DMT (Davis et al., 2018). This was also borne out in this research study, as every participant indicated that they had used DMT only after having been motivated previously to try other types of tryptamines and psychedelic drugs. The intrinsic motivations and perceived benefits of DMT use seem to correspond decisively with the use of similar substances, however, the exact nature of that correlation is unrepresented in the current literature, and was only secondarily examined in this study, as it was included

as an interview question to create an intrinsic motivational baseline. Further examination of this specific correlation is warranted.

Implications

The implications of this research study, and other similar to it, for positive social change are most likely to result at the societal/policy level, particularly as we are entering a period where, for the first time in over four decades, the reexamination of drug scheduling by the federal government's U.S. Drug Enforcement Agency is actively underway (Sacco, 2014). The criteria for scheduling an illicit substance, as well as its illegality itself, has traditionally been based upon two primary factors: the substances' addiction severity index and its potential for medicinal benefit (U.S. Drug Enforcement Agency, 2019).

For example, a schedule one substance, the most highly regulated, is considered to have a high addiction severity index and no known medicinal properties or benefits. Included in this tier are DMT, and the other psychedelic drugs associated with it, examined in this research study, despite being shown to have no addiction severity index and a significant potential for a number of medicinal treatments (Johansen & Krebs, 2015).

However, according to Coulson and Caulkins (2012), "Decisions on whether and how to 'schedule' drugs (i.e., to determine their legal status and penalties to be applied for sale or possession) are often heavily criticized" (p. 767), and this criticism has been growing, providing also a growing opportunity for well-documented scientific research to have a legitimate impact on public policy as it relates to our drug laws.

This research study could contribute to the discussion, as policy is often impacted by a myriad of dynamic elements, which can include perceptions of motivation, amongst others (Ferguson, 2015). For example, policy drafters and legislators may be inclined to reexamine both the scheduling and the potential penalties if they had a better-informed idea of why people are engaging in a particular behavior. Harsher penalties and stricter regulations might result from research suggesting that use is primarily predicated upon a desire to enhance physical pleasure, or regulations and penalties might be reconsidered if it was determined that use is primarily predicated upon a motivation to treat a chronic illness or address issues related to treating mental health disorders or substance abuse concerns. In addition, it would be helpful to substance abuse and mental health clinicians to better understand why people are engaging in this particular form of tryptamine use. It could create a heightened sense of awareness which might also impact policy levels in clinical modalities related to treating these types of disorders.

The methodological implications of this study include the possibility that a shift in the data collection tool, from an interview technique to a focus group, may prove useful in furthering the conversation related to intrinsic motivations and perceived benefits of DMT use amongst U.S. men ages 18-50. Ravitch and Carl (2016) indicate that interviewing techniques in a group-setting are often able to shed additional light, and develop new avenues of data collection, which are not necessarily available in a strictly one on one interview, regardless of its type of structure (i.e., structured, semistructured, unstructured). The use of focus groups in the literature examined to develop Chapter 2 was severely underrepresented, as a data collection technique. Having conducted focus

groups, as well as individual interviews, as a chemical dependency counselor, I believe that one methodological implication for the furtherance of this research topic, based upon conducting this research study, would be to see a shift from individual interviews towards a group dynamic, when collecting qualitative, phenomenological, data related to motivations for DMT use.

Finally, it is my intention to use the findings of this study by submitting excerpts and a summary of the conclusions to several journals and periodicals, to include the *Anthropology of Consciousness*,a primary publication of the Society for the Anthropology of Consciousness which is associated with the American Anthropological Association, and the *Journal of Psychoactive Drugs*, a peer-reviewed medical journal which covers topics associated with psychoactive drugs. I also hope to use this study as a foundation to develop further studies into the potential properties of psychedelic medicines through the increased use of focus groups as a data collection tool, as they are underused and underrepresented as a data collection tool in qualitative, phenomenological research studies related to the therapeutic benefits of altered states of consciousness.

Conclusion

Intrinsic motivations and the perceived benefits of, and for, illicit drug use are eclectic across wide swaths of varying demographics, and narrow with the scope of the drug's type and the user's characteristics. This research study does nothing to dispute that assertion, however, what it does tend to suggest, which previous research studies on the intrinsic motivation and perceived benefits of DMT use have not suggested, is that there

exists an additional motivational element, or dynamic, which is more unique and prevalent to the demographic variables used in this study than in separate populations sampled in previous studies. Namely, that while motivations related to treating substance abuse issues and mental health concerns, as well as engaging in DMT use for the pleasure associated with its effects, remained prevalent in this study, the element of convenience as a motivation was significantly more common when the population sample was narrowed specifically to U.S. men ages 18-50.

While the use of more traditional psychedelics is associated with experiences which typically last for 6-12 hours (among common doses), DMT provides users with a 15-20-minute experience (Germann, 2016). This particular motivation may be influenced by the fact that the average DMT user is often a working professional with a higher level of education, and who skews older than other psychedelic drug users (Davis et al., 2018), and places a higher premium on convenience, particularly as it relates to time. It may also be the result of its convenience related to availability. DMT is not considered a 'street drug,' and its availability is regulated far more to components found on the internet, or even the dark-web, and a more sophisticated approach is required to obtain the materials (Marion, 2014). But, while the materials require a higher level of sophistication to obtain, they can be delivered right to your door, unlike more traditional psychedelics such as LSD, psilocybin, or peyote. Thus, once again, elevating the level of convenience afforded the user.

It is fair to say that while most male U.S. DMT users ages 18-50 often maintain intrinsic motivations and perceived benefits similar to users who fall into different

demographic variables-such as age, geography, and gender, they may, as would be indicative of the limited population sample employed by this qualitative research study, also be highly motivated by an increased access to material and to the reduced affect-duration of DMT's altered state of consciousness.

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Appendix: Interview Questions

Interview Questions:

1. Where, how, or from whom did you first develop an interest or desire to try DMT for the first time?
2. How long was it between your first developing an interest or desire to try DMT and your first actual use of DMT?
3. What do you believe to be your primary motivation for your first use of DMT?
4. Did you hope to accomplish anything specific through your first use of DMT? And if so, what?
5. How did your first use of DMT meet, or fail to meet, your expectations?
6. What do you believe to be your primary motivation for your continued use of DMT?
7. Did you hope to accomplish anything specific through your continued use of DMT? And if so, what?
8. How did your continued use of DMT meet, or fail to meet, your expectations?
9. Had you experimented with any other psychedelics prior to your first use of DMT? And, if so, which ones?
10. If applicable, how did your previous use of psychedelics effect your motivation to try DMT?

11. Do you feel, or have you ever felt, motivated to recommend (or not recommend) using DMT to someone who had never tried it before? Why or why not?
12. Is there anything else that you would like to add, which was not discussed, before we close the interview?