



# Medical Cannabis in Adult Mental Health Settings: Reconstructing One of the Most Maligned Medications in the United States

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## Abstract

Although twenty-nine states in the United States of America have legalized medical cannabis, the stigma surrounding cannabis continues and few clinicians have been educated on its use and benefits. This paper presents the history of therapeutic cannabis use as well as the political perspectives and federal laws leading to ongoing stigmatization of this substance and its users. A summary of cannabis' therapeutic properties, and its potential use in the treatment of mental health problems is discussed.

**Keywords** Cannabis · Marijuana · Mental health · Endocannabinoid system · Medical cannabis · Medical marijuana · Gateway drug · US drug policy

## Introduction

Prior to 1937 cannabis was legal in the United States (Moeller and Woods 2015). Until that time, cannabis was widely acknowledged to be in the pantheon for medicinal purposes (Moeller and Woods 2015). In 1970, The United States Controlled Substance Act identified cannabis, colloquially known as marijuana, as one of the most dangerous drugs, comparable to heroin and LSD (Drug Enforcement Agency 2017). As a result, US policy has created an environment making it practically prohibitive to conduct research on cannabis and its effects on physical and mental health (National Academies 2017). Despite federal law, medical cannabis is currently legal in 29 states and the District of Columbia (29 legal medical marijuana states and DC 2017). Admittedly, there is a potential for cannabis abuse as there is for alcohol, food, and other prescribed and non-prescribed substances. However, current international research supports the beneficial use of cannabis for the treatment of pain, multiple sclerosis, epilepsy, post-traumatic stress disorder, and many other health conditions (Maccarone et al. 2007). Unfortunately, as a result of the emphasis on cannabis abuse and the current federal criminalization of cannabis, many mental

health clinicians are uninformed about the potential benefits of medical cannabis in the treatment of health and mental health problems, and on their role in working with clients using medical cannabis. The purpose of this paper is to (1) provide a historical review of cannabis use and policy in the United States and the impact of current US policy on cannabis on clinicians' access to the latest research findings on medical cannabis and health outcomes, (2) to provide a brief synopsis of research on the endocannabinoid system, and (3) to provide information to clinicians who have patients that use medical cannabis as a part of their medical treatment regimen.

## Historical Analysis of Cannabis Use in the United States

To understand cannabis use in the US one must have an understanding of the history of how the social construction of cannabis and its use has evolved over time. Social construction theory "proposes that most of what passes for knowledge in society is socially constructed, particularly common-sense knowledge that constitutes the reality of everyday life for the ordinary members of society" (Boeri and Lamonica 2017, p. 259). Furthermore, this theory posits that phenomena are created, modeled, and promoted within society (Boeri and Lamonica 2017).

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The social construction of cannabis has transformed from viewing cannabis as a widely accepted and prescribed medication in the early 1900s to a highly demonized Schedule I drug in the 1970s; this shift occurred as a result of racism and propaganda reflecting the social and political perspectives of their times (Baum 2016). Consequently, the resulting US policy impacted the funding of research which then was used to further re-validate the existing US policy.

### The Stigmatization of Cannabis

The use of cannabis was viewed as therapeutic, not recreational, until the early 1900s. During the 1920s, cannabis was used recreationally, mostly by wealthy individuals (Millhorn et al. 2009). However, the stigmatization increased in the 1930s as a growing number of Mexican users emigrated to the United States, and black jazz musicians became more popular with both groups using cannabis recreationally (Boeri and Lamonica 2017; Hudak 2016a). As a result of these changes, politicians began to lobby for the prohibition of cannabis (Hudak 2016a). The term cannabis, which had been used previously, was replaced by the term “marijuana” or “marihuana,” a pejorative term used to link the substance to Mexican immigrants (Boeri and Lamonica 2017; Hudak 2016a). During the 1930s, propaganda films such as “Reefer Madness,” were released depicting an unrealistic and frightening view of the consequences of cannabis use (Hudak 2016a). These films and accompanying propaganda, often racist in nature, were successful in scaring the public and driving usage underground. Consequently, politicians continued to institute other laws criminalizing cannabis, such as the Marihuana Tax Act of 1937.

### Prohibition of Cannabis

Cannabis was never federally regulated or prohibited until the passage of the Marihuana Tax Act of 1937 (Boeri and Lamonica 2017). This law, which was vehemently opposed by the American Medical Association, did not specifically prohibit the use or sale of cannabis. However, it did place hefty levies on the substance which essentially crippled the economic production of cannabis (Boeri and Lamonica 2017; Ryan and Sharts-Hopko 2017; Szaflarski and Sirven 2017). The Marihuana Tax Act, coupled with anti-cannabis propaganda films and literature that effectively promoted cannabis as a dangerous drug with high potential for addiction, paved the groundwork for cannabis’ prohibition at the federal level (Boeri and Lamonica 2017), which will be discussed later.

As the political and social unrest in the US heightened in the late 1960s and 1970s, the prohibition of cannabis was concretized. The intersection of the civil rights movement, social and political unrest, and the Vietnam war resulted in a

hard-line approach in US policy called the “War on Drugs,” the largest anti-drug campaign in US history (Kuzmarov 2009). Initiated by President Richard Nixon in 1971, the “War on Drugs” aimed to reduce drug use by criminalizing drug use (Sirin 2011). This “war” sought “to discredit liberal social ideology and eradicate public anxiety over Vietnam” (Kuzmarov 2009, p. 101). However, this policy campaign which focused on cannabis and heroin use arose from other motives as well. John Ehrlichman, a former aide to President Nixon, revealed in an interview in 1994 that protestors and African-Americans were the true target of the “War on Drugs” (Baum 2016). Ehrlichman was quoted as saying:

The Nixon campaign in 1968, and the Nixon White House after that, had two enemies: the antiwar left and black people. You understand what I’m saying? We knew we couldn’t make it illegal to be either against the war or black, but by getting the public to associate the hippies with marijuana and blacks with heroin, and then criminalizing both heavily, we could disrupt those communities. We could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news. Did we know we were lying about the drugs? Of course we did (Baum 2016, p. 22)

This powerful statement reveals the biased impetus behind cannabis prohibition in US policy. With the advent of the United States Controlled Substance Act of 1970, cannabis’ fate was sealed as a dangerous substance on par with heroin and LSD (Drug Enforcement Agency 2017). Viewing US drug policy through Goffman’s notion of deviance and stigma’s effect as a social control agent, the US drug policy has been effective in achieving Nixon’s aim at targeting minorities through criminalization, mass incarceration, and further marginalization (Fornili 2018; Garner 2016; Goffman 1986; Szaflarski and Sirven 2017).

### Cannabis as a Schedule I Drug

Nixon successfully continued his politically motivated efforts at linking cannabis with heroin and demonizing drug abuse. As part of Nixon’s war on drugs initiative, and the passage of the Controlled Substances Act in 1970, the US Drug Enforcement Agency (DEA) created a system to categorize any substance or drug regulated by federal law based on their therapeutic use, safety, possibility for abuse, and potentiality for dependence. The DEA has created five categories of substances, referred to as “schedules,” with “schedule I” including the most harmful substances and “schedule V” the least harmful (DEA 2017). Cannabis was declared as a Schedule I drug with DEA claiming that it has a high likelihood to be abused, that it has no recognized

medicinal efficacy, and that it cannot be used safely even under medical supervision (DEA 2017, p. 9).

As a result of this designation as a Schedule I drug, research on the efficacy and impact of cannabis has been severely restricted by the DEA (Bridgeman and Abazia 2017; National Academies 2017; Hudak 2016b; Pettinato 2017). In order to conduct research on Schedule I substances like cannabis, researchers must obtain separate permission from the DEA; the approval process for studying cannabis is more complicated for researchers than studying other Schedules II-V substances (Bridgeman and Abazia 2017). Another challenge to conducting research on cannabis is the actual procurement of quality cannabis for research (Bridgeman and Abazia 2017; Hudak 2016b). Issues such as poor quality, lack of strain variation among cannabis, and slow production of cannabis have negatively impacted researchers' abilities to conduct rigorous research in the US (Hudak 2016b). However, in countries such as Great Britain, Israel, Canada, and Spain, cannabis research has proliferated and has demonstrated positive health outcomes related to pain reduction, seizure reduction and a variety of other conditions (Americans for Safe Access 2017). These positive findings on the relationship of cannabis to improved physical and mental health outcomes are counter-indicative of the classification of cannabis as a Schedule I drug.

### National Institute on Drug Abuse and the Gateway Hypothesis

Building upon the War on Drugs initiative in 1974, the National Institute of Drug Abuse (NIDA) was established "as the Federal focal point for research, treatment, prevention, training, services, and data collection on the nature and extent of drug abuse" (National Institutes of Health 2018). Research initiatives were supported through NIDA funding and directed by US policy. One of the most interesting NIDA supported works revolved around the "gateway hypothesis" (Setting the record straight on the phrase 'gateway drug' 2015).

The gateway hypothesis postulates that cannabis leads to abuse of harder and more dangerous drugs (Kleinig 2015). The gateway hypothesis, originally coined by Denise Kandel but promoted by Robert L. DuPont, the first Director of NIDA, was so powerful that it became a central hypothesis for cannabis research in mental health (Choo et al. 2008; Garner 2016; Kleinig 2015; Secades-Villa et al. 2015). Kandel's research was funded by NIDA with the specific intent to investigate cannabis as a potential "gateway" to harder substances (Setting the record straight on the phrase 'gateway drug' 2015). However, there have been recent questions to the validity of this hypothesis (Choo et al. 2008; Garner 2016; Kleinig 2015; Secades-Villa et al. 2015). Several studies have failed to find the direct causality between cannabis

use and other harder illicit drug use and suggest other variables that might be of influence, such as behavioral issues or co-occurring mood disorders (Choo et al. 2008; Secades-Villa et al. 2015). The findings from these studies demonstrate that the use of the more dangerous substances, such as heroin and cocaine, are more likely related to emotional disorders than the use of cannabis (Choo et al. 2008). Consequently, the gateway hypothesis, which has served to reinforce current US drug policy, reflects an inherent bias and has been challenged as a simplistic and inaccurate (Kleinig 2015).

### Therapeutic Uses of Cannabis

According to Pubmed, there are more than 40,000 empirical articles on cannabis and its molecular components (Pettinato 2017). Research on the effectiveness of cannabis has indicated that not only does cannabis provide relief from several specific diseases, but that cannabis may be able to prevent some health problems as well such as seizures, inflammation, irritable bowel syndrome, and pain (Pettinato 2017; Russo 2016a).

### Understanding Cannabis and the Endocannabinoid System

Cannabis is a phytocannabinoid, a cannabinoid that naturally exists in the cannabis plant and that interacts with the endocannabinoid system (ECS), a naturally-occurring physiological system within the body that is responsible for maintaining cellular homeostasis and keeping the body in a state of wellbeing (Americans for Safe Access 2017; Pettinato 2017). The ECS is composed of neuromodulators, corresponding receptors, and signaling pathways which help regulate numerous physical functions (Maccarone et al. 2007; Gui et al. 2015; McPartland et al. 2014; Russo 2008, 2016a). Furthermore, the ECS "modulates virtually every brain region and thereby contributes to nearly every function of the CNS" (Hillard 2015, p. 3). A regulated endocannabinoid system results in healthy functioning within a body, whereas a dysregulated ECS results in pathological functioning through pain, mood disorders, inflammation, and neurodegenerative diseases such as Alzheimer's, Parkinson's, and Huntington's disease (Hillard 2015; Maccarrone et al. 2007; Moeller and Woods 2015; Pettinato 2017; Russo 2016a, b; Sinclair 2016). In addition, healthy functioning of the ECS has been shown to reduce cancer, osteoporosis and rheumatoid arthritis (Gui et al. 2015; Moeller and Woods 2015; Pettinato 2017; Sinclair 2016).

The ECS is comprised of endocannabinoids, innate endogenous molecules such as Anandamide and 2-Arachidonoglycerol, that are critical to homeostasis, stress

management, and immune function (Lu and Mackie 2016; Russo 2016b). Endocannabinoids bind to receptors, such as receptors CB1 and CB2, which are found throughout the body and regulate homeostatic functioning (Sinclair 2016; Ward and Tuma 2014). Failure to produce enough endocannabinoids can result in dysregulation, i.e. improper functioning of the endocannabinoid system; this malfunctioning of the ECS is referred to as clinical endocannabinoid deficiency (McPartland et al. 2014; Russo 2008, 2016a). Cannabis is a phytocannabinoid that can supplement endocannabinoids in the ECS by attaching to receptors in order to assist in healthy functioning of the ECS (Lu and Potter 2017; Russo 2016b; Sinclair 2016). Cannabis' unique complex chemical makeup which is comprised of cannabinoids along terpenoids, essential oil-like compounds found in cannabis, synergize to boost the therapeutic potential of cannabis in affecting the ECS (Marcu 2016; McPartland et al. 2014; Russo 2008, 2016a, 2016b). Over one hundred cannabinoids have been found to be present in the cannabis plant (Marcu 2016). If a person's body does not produce enough endocannabinoids, then the chemical compounds in cannabis can serve to supplement the ECS to bring about its healthy regulation (Gui et al. 2015; McPartland et al. 2014; Sinclair 2016).

### Current Research and Mental Health

There is a growing body of work related to cannabis use and behavioral health. Researchers have a better understanding of the ECS and mood regulation at a molecular level (Hill et al. 2009; Micale et al. 2013). Components of cannabis demonstrate antidepressant and anti-anxiety effects on animal models and the mechanisms are currently being identified (Walsh et al. 2017). For example, cannabidiol, a phytocannabinoid present in cannabis, has been found to produce antidepressant-like effects (Sartim et al. 2016). McLaughlin and Gobbi (2012) reported that low-doses of the phytocannabinoid THC, one of the major molecules found in cannabis, produces an anxiolytic response in animal models when directly injected into the medial pre-frontal cortex. In addition, studies on the ECS' and cannabis' impact on PTSD have produced some promising results (O'Neil et al. 2017). Cannabis has been successfully used to improve sleep and negative affect symptoms in people with PTSD (Walsh et al. 2017). A recent study of U.S. veterans found that cannabis "was associated with a retrospective self-reported 75% reduction in re-experiencing, avoidance, and arousal symptoms of PTSD" (Walsh et al. 2017, p. 22).

Research studies on the use of cannabis as a therapeutic tool in regulating moods are also showing promising results (Hill et al. 2009; Walsh et al. 2017). Another focus for researchers has been pain. Because of cannabis' known analgesic effect, researchers have worked to understand the impacts that ECS and cannabis have on pain relief

(Woodhams et al. 2017); as a result, cannabis, as a known analgesic, has been suggested as a harm-reduction substitute for opiate use and opiate addiction (Lucas and Walsh 2017). In fact, in a study of over 1248 cannabis users, Corroon et al. (2017) reported that 36% of cannabis users reported that they use cannabis to avoid the use of opiates and to help manage their pain.

### Issues to Consider for Therapeutic Use of Cannabis

Mental health clinicians need to have adequate education about cannabis and the issues that are important for healthy, therapeutic use. In order to best serve adult clients who utilize medical cannabis, mental health clinicians need to understand the issues related to healthy cannabis use. These include the entourage effect, the biphasic effect and dosage, the effect of different varieties of cannabis, method of consumption, and the role that cannabis can play in a harm reduction strategy for opioid addiction.

### Determinants of the Effects of Cannabis

Historically, it was believed that the variety of cannabis, i.e., indica versus sativa, was the primary cause of the relatively different experiences of consumers. Research had demonstrated that many variables affect how cannabis is experienced. One's metabolism of cannabis, tolerance and method of consumption impact the effects of cannabis use. However, the individual molecular properties of cannabis—the ratios of chemical compounds found within the cannabis plant—are the main determinants of the effects of cannabis (Marcu 2016). Cannabis has over 100 different cannabinoids which produce separate unique effects (Marcu 2016). The most commonly known cannabinoids are THC and cannabidiol (Marcu 2016). THC is a cannabinoid that provides energy, stimulates hunger, and is chiefly responsible for the "high" feeling experienced when consumed. Cannabis varieties high in THC are often suggested for people with pain, nausea, depression or insomnia (Sinclair 2016). A second cannabinoid, cannabidiol (CBD), is known to produce anti-anxiety effects, reduce inflammation and pain without the high experienced with THC (Sinclair 2016). However, another compound widely known to influence the effects of cannabis are terpenes, a chemical compound that produce smells that often act like essential oils in producing excitatory or inhibitory responses (Sinclair 2016).

### Entourage Effect

Since THC is known to produce psychoactive effects such as euphoria, feelings of being "high," increased laughter,

and increased awareness, there has been a push to reduce THC and look for only CBD-based products. However, research suggests that due to the “entourage effect,” or the unique chemical makeup of the molecular compounds in the cannabis plant, these different cannabinoid molecules work collaboratively and more efficiently together than separated (Russo 2011). Cannabinoids and terpenoids both play important roles in the types of effects that cannabis provides to consumers (Russo 2011). Therefore, the grouped effects of the present cannabinoids and including terpenoids in the cannabis plant present greater potential for healing than an isolated, sole cannabinoid. This unique understanding of the entourage effect presents exciting research opportunities, but also makes replication of the unique chemical compound found in cannabis plants more challenging (Russo 2011).

### Biphasic Effect and Dosage

Another issue to consider when discussing the role of cannabis in mental health treatment is the biphasic effect, which suggests that a drug can cause one reaction at a low dosage and an opposite reaction at a high dosage. Because of this effect, it is important to understand that overuse of cannabis can be damaging. Knowing the optimal dosage allows cannabis users to determine the appropriate amount needed to regulate their endocannabinoid system efficiently. It would bear to reason that since cannabis has potential for positive health outcomes, it can potentially be used for health purposes.

The use of cannabis use does not automatically translate to abuse. The excessive use of any substance, whether alcohol, benzodiazepines or pain medications such as opiates can lead to harmful consequences. A therapeutic dosage of cannabis should be enough to activate the ECS but not too much to dysregulate it. For example, cannabis using clients who experience a lack of motivation, increased anxiety, paranoia, or physiological problems like chronic vomiting syndrome, are demonstrating the effects of a dysregulated ECS (Richards 2017). Microdosing may modulate these effects and lead to healthier ECS functioning.

### Method of Consumption

Method of consumption is another issue that needs to be considered when planning the therapeutic use of cannabis. Typical methods of consumption include “capsules, sublingual sprays, edible (oral) forms, infused oils (oral), tinctures, soft extracts, concentrated extracts, vaporizing, smoking (combustion) and topical oils, creams or ointments” (Sinclair 2016, p. 114). Each method of use has different effects on symptom relief. For example, for pain, edibles can provide more relief from symptoms for a longer period of time because of how they are metabolized

in the liver (Sinclair 2016). Smoking or vaping, on the other hand, produces a more immediate, yet shorter duration of symptom relief (Sinclair 2016).

### Impact on Opioid Epidemic

Currently, the U.S. is in the midst of a widespread opioid epidemic (Hsu 2016). Research has demonstrated that there is a negative correlation between legal access to cannabis and the reduction of deaths from opioids (Hsu 2016; Livingston et al. 2017). Research from Vyas et al. (2018) assert that states with medical cannabis laws to treat pain have fewer deaths than opioid related deaths than states without medical cannabis for pain laws.

It is widely known that cannabis use is a safer alternative to opiate use. Cannabis has been shown to have analgesic effects and does not impact the respiratory system as opioids do (Lucas and Walsh 2017; Pettinato 2017). Furthermore, research has demonstrated that patients who use cannabis along with opiates use significantly less opiates to control pain than patients who do not use cannabis (Boehnke et al. 2016). For patients with chronic pain for more than one year, cannabis has been shown to provide a better quality of life, improvements in physical functioning, improved cognitive function, and reduction of pain when compared to patients who use solely opiates (Ware et al. 2015). Although this is an emerging topic for researchers which needs to be explored more thoroughly, the risk of death associated with cannabis use are far less than the inherent physiological risk of death for opioid users due to the potential effect on the respiratory system (Lucas and Walsh 2017; Pettinato 2017).

### Shifting Attitudes and the Need for Mental Health Researchers and Clinicians to Re-Evaluate their Approach

Despite federal law, currently 29 states have legalized medical cannabis (29 legal medical marijuana states and DC 2017). This populist-led change in laws at the state levels has result from anecdotal accounts and a substantial amount of literature demonstrating the positive benefits of cannabis for a variety of health conditions (Americans for Safe Access 2017). This is contributing to a shift in perspective and reduced stigmatization as the stories of therapeutic use as well as the increasing numbers and types of patients using cannabis continue to grow. The therapeutic use of cannabis calls for practitioners to be aware of the continued stigmatization and role of public policy that influences physicians as well as research funding.

## Stigmatization of Cannabis Today

Cannabis use continues to be stigmatized, with federal policies in the US reinforcing this stigmatization. By continuing criminalization, society reinforces the notion of cannabis users as marginalized people. Even though medical cannabis in the US is legal in many states, the perceived stigmatization still occurs. Medical cannabis patients often express concerns “about being labeled a ‘pothead’ or ‘stoner’” (Ryan and Sharts-Hopko 2017, p. 188). There are commonly held societal beliefs that medical cannabis users only want “to get high.” One consequence of this continued stigmatization is that people are less likely to reveal their use of medicinal cannabis to their healthcare providers for fear of being further stigmatized (Ryan and Sharts-Hopko 2017).

Stigmatization even occurs related to the consumption method used for medical cannabis. Research indicates that medical cannabis patients view orally administered cannabis consumed through capsules, sublingually or via oral suspensions more favorably and with less stigma than traditional methods of consumption, such as smoking, using a water pipe, or vaping (Rudski 2014). In addition, research has indicated that the type of ailment being treated also plays into how others perceive medical cannabis (Lewis and Sznitman 2017). The less stigmatized an illness is, i.e. cancer versus HIV/AIDS, the less stigmatized is the use of medical cannabis for it (Lewis and Sznitman 2017).

Most clinical research on addiction focuses on the attitudes and measurements of stigma based on the substances used rather than the actual addictive behavior of the users (Lang and Rosenberg 2017). Unfortunately, focusing on the substances tend to negate the devastating effects that compulsive and addictive behaviors can have. Few studies have measured the experience and the positive impact of healthy cannabis use, while most studies focus on the dysfunction of the cannabis user (Garner 2016). The studies documenting the positive experience of cannabis use tend to be disregarded (Garner 2016).

### Bias Among Researchers and Clinicians

Researchers have their own bias and stigmatization of cannabis which often is reflected in the research questions asked and the research that is conducted (Garner 2016). As indicated previously, since most of the research in the mental health field focuses primarily on cannabis use from a pathological lens, mental health educators lack resources that do not view cannabis from a pathological framework (Garner 2016). This skewed perspective on cannabis, coupled with the lack of education informing budding clinicians on current research on the endocannabinoid system and its effect on physical and behavioral function, leads to continued marginalization of cannabis users.

When discussing cannabis, many clinicians often express concerns about the effects of cannabis on the brain. However, current research on cannabis and brain functioning often provides confusing and contradictory information (Becker et al. 2018; Grant and Cahn 2005; Mokrysz et al. 2016; Pope et al. 2001). Many clinicians are also influenced by research focusing on the gateway hypothesis, as well as their internalized biases against cannabis and cannabis use. Research on mental health clinicians’ attitudes toward cannabis is difficult to find. Identifying one’s biases and counter-transference are vital for clinicians to provide quality clinical care to clients. A small study by Garner (2016) on seven graduate students who consumed cannabis revealed that even these students had internalized societal stigmatization and recognized that their own use was contrary to stereotypes of graduate students. In addition, the graduate students interviewed reported that the stereotypes and stigma around cannabis use led to feelings of internalized shame, increased secrecy, and fears of being judged by others. One participant was quoted as saying,

Just as a graduate student in general I feel like it’s something I have to hide. Um, I feel like it’s not something you could admit and talk about with anyone because there is this persona that I have to represent (Garner 2016, p. 6)

In her findings, Garner (2016) reports that the students interviewed noted that their cannabis use provided positive benefits in their lives. Respondents reported that cannabis use provided self-awareness, a feeling of connection with others, and positive self-care (Garner 2016). These attributes starkly contrast with the internalized societal sense of shame also experienced by the respondents in this study.

In her conclusions, Garner (2016) suggests that clinicians need to be wary of their own bias and to recognize that cannabis may provide positive results for the respondents. Furthermore, Garner (2016) suggests that implications from this study should inform mental health clinical practice:

Given the symbolic and facilitative role that marijuana played for many participants in respect to their identity, extracurricular enjoyment, and self-care, clinicians may also wish to explore the meaning of marijuana use as part of their case formulation before deciding whether such use is pathological or to what extent it will be a focus of treatment. (p. 12)

The findings suggest that mental health clinicians should identify their own biases and determine what type of role cannabis plays in their clients’ lives before pathologizing the use (Garner 2016).

As stated earlier, the use of cannabis has been viewed through the lens of substance abuse, an approach that has reinforced the stigmatization of this substance and its

perception as a pathological, maladaptive coping strategy that is harmful to the individual and has no medical benefits. Current clinical training does not provide objective education about cannabis as a medicine, nor does it address the benefits that cannabis can provide. Mental health clinicians and other healthcare providers, including physicians, pharmacists, and nurses often lack up-to-date information based on scientifically rigorous research (Brooks et al. 2017; Evanoff et al. 2017; Moeller and Woods 2015; Pettinato 2017). Unfortunately, this lack of scientific knowledge reinforces the current US policy which pathologizes cannabis use. Consequently, clinicians are ineffective in their care, because they lack education around topics such as dosage, the effects of different varieties of cannabis, method of consumption and impact on mental health outcomes.

Currently, little research exists on the role of mental health practitioners working with adult clients using medical cannabis. As indicated previously, funded research has been relegated to the study of cannabis abuse and not on healthy or medical cannabis use. A recent EBSCO search of more than seven million sources on “healthy use of cannabis” and “healthy use of marijuana” yielded zero results pertaining to non-pathological use of cannabis. In addition, when performing another EBSCO search on “recreational use of cannabis” and “recreational use of marijuana,” no studies linking cannabis use to healthy behavioral outcomes were reported. It is challenging to find researchers in mental health who are studying the healthy use of cannabis (University of British Columbia 2017a, b).

## Conclusion

The federal cannabis prohibition policy and the DEA policy listing cannabis as a Schedule I drug has negatively impacted objective research. Past research has demonstrated a bias to view cannabis use pathologically often using the gateway hypothesis as its focus (Choo et al. 2008). Until recently, research has not focused on the efficacy of cannabis in treating certain health conditions despite cannabis being used for over 2000 years as a medicine.

Current international research and clinical experiences demand that mental health clinicians rethink their position around the use of cannabis. The Gateway Hypothesis is a simplistic view of cannabis use and ignores underlying behavioral and emotional issues that may influence negative coping behaviors. Cannabis has demonstrated positive benefits and the continued stigmatization adds to continued disconnection between clients and clinicians. Furthermore, the current environment hinders clinicians from providing evidence-based guidance and care that our clients deserve.

By observing their own biases around the stigmatization of cannabis use, mental health clinicians can provide better

care for their clients. Reducing stigmatization among mental health clinicians is also necessary to provide clients with objective resources and helpful information about healthy cannabis use. Clinicians need to be educated on both the positive and negative effects of cannabis. In addition, they should be aware of varieties of cannabis, methods of consumption, and dosage. By having this knowledge, mental health clinicians can frame conversations with their clients in a more meaningful and therapeutic manner.

Currently, there is an emerging field of research about cannabis, the endocannabinoid system, and its impact on mental health. This area needs to be examined closely to objectively study the effects of cannabis use on health and wellbeing. There is a need to provide education for mental health clinicians by providing current evidence-based education around cannabis, including the endocannabinoid system, its effects on health outcomes, and role in mood regulation. Furthermore, there is an opportunity for educators and researchers in mental health to partner with basic science researchers in the understanding of some of the physiological effects of the endocannabinoid system and to bridge the gap between basic science and research in mental health clinical settings.

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