The Experiences of Medical Marijuana Patients: A Scoping Review of the Qualitative Literature

Article *in* Journal of Neuroscience Nursing · June 2017

DOI: 10.1097/JNN.0000000000000283

2 authors:

Jennie Ryan
University of Michigan
6 PUBLICATIONS **17** CITATIONS

SEE PROFILE

Nancy C Sharts-Hopko
Villanova University
88 PUBLICATIONS **479** CITATIONS

SEE PROFILE

The Experiences of Medical Marijuana Patients: A Scoping Review of the Qualitative Literature

Jennie Ryan, Nancy Sharts-Hopko

ABSTRACT

Medical marijuana is now legal in more than half of the United States but remains federally prohibited and classified as a schedule 1 drug. The chemical compounds in marijuana are known neuroprotectants; however, their clinical efficacy and safety have not been proven. Many healthcare providers remain unaware of the therapeutic potential of marijuana and its adverse effects. The conflicting laws and lack of guidance from healthcare professionals can lead to confusion and frustration for patients seeking this medication. Multiple factors contribute to the unique and varied experiences of medical marijuana patients. Because more individuals with neurological disorders seek therapeutic marijuana, it is important for healthcare professionals to understand their distinctive experiences. Qualitative research methodology is ideal to capture the thick descriptions of these experiences. This review examines the qualitative research exploring the experiences of medical marijuana patients and discusses common themes across all studies.

Keywords: blurred boundaries, cannabinoids, cannabis, medical marijuana, qualitative research, stigma

Medical marijuana refers to the use of the *Cannabis sativa* plant to treat a variety of ailments. *Cannabis sativa* has been used as a therapeutic agent for more than 5 millennia. Listed in the US Dispensary from 1850 to 1924, marijuana was used for decades across Western cultures for the treatment of illnesses including asthma, anorexia, insomnia, whooping cough, convulsions, nausea and vomiting, and sexual dysfunction.[1] After the end of Prohibition, marijuana was targeted as an illicit drug, which was thought to provoke user insanity and incite societal chaos.[1] Frenzy over marijuana's psychological effects throughout the United States led to the Marihauna Tax Act of 1937. The act was strongly opposed by the American Medical Association.[2,3] In 1942, marijuana lost its legitimacy as a therapeutic drug and was officially removed from the US dispensary.[1,3] In 1970, the Controlled Substance Act classified marijuana temporarily as a schedule I drug, pending a presidential committee review. After the largest government-funded review of marijuana, the Shafer Commission concluded that marijuana was a misunderstood drug that should be decriminalized.[4] Despite these findings, the US Congress upheld the schedule I classification, essentially bypassing the standardized review process set forth by the Controlled Substance Act requiring scientific investigations and evaluations.[5] As a schedule I drug, marijuana was declared to have a high potential for abuse and dependence and no medical value, despite its therapeutic use for centuries.[1,6]

Research into the therapeutic effects of cannabis has intensified in the past 20 years, after the discovery of the endocannabinoid system in the human body. The endocannabinoid system consists of cannabinoid receptors and the chemical compounds that act on them. There are 3 types of cannabinoids: endocannabinoids (produced naturally in the body), phytocannabinoids (found in the cannabis plant), and synthetic cannabinoids (artificially manufactured). Cannabinoids have been shown to act as neuroprotectants, limiting neurological damage in ischemic injuries, and in the treatment of neurodegenerative diseases.[7] The US government

Questions or comments about this article may be directed to Jennie Ryan, MSN CPNP-AC, at jryan45@villanova.edu. She is a PhD Candidate, College of Nursing, Villanova University, Villanova, PA.

Nancy Sharts-Hopko, PhD RN FAAN, is Professor and Director, PhD Program, College of Nursing, Villanova University, Villanova, PA.

The author declares no conflicts of interest.

DOI: 10.1097/JNN.0000000000000283

currently holds a patent for the cannabinoids as antioxidants and neuroprotectants.[7]

Clinical trials have shown mixed efficacy of cannabinoids for the treatment of neurological diseases and their associated symptoms.[8] The American Academy of Neurology (AAN) performed extensive reviews to address the use of marijuana for symptom management in several neurological disorders, such as multiple sclerosis (MS), epilepsy, and movement disorders. The AAN concluded that, although cannabis may potentially be useful in the treatment of some neurological disorders,[9] there is currently insufficient evidence to establish efficacy regarding its effectiveness for the treatment of neurological disorders.[10] The AAN recommends offering patients with MS cannabis for symptoms of spasticity and pain but notes that there are inadequate data to support or refute its use for other MS symptoms.[9] The AAN supports the reclassification of marijuana to allow for more research.[10]

Despite the federal prohibition on marijuana, the popular opinion that once criminalized marijuana is in decline. Starting in 1996, individual states have begun to legalize marijuana for medicinal purposes. Twenty-six states and the District of Columbia have now legalized medical marijuana for a variety of illnesses. Patients seek and use marijuana for the treatment of their symptoms, often without the guidance of healthcare providers. Healthcare providers remain unsure and often uneducated about the beneficial effects of marijuana.[11] More concerning, the healthcare literature is limited on the potential short-term adverse effects, as well as the long-term negative effects, of marijuana.

Contradictory federal and state laws and ambiguity within the medical community about marijuana use have led to confusion and sometimes frustration for patients seeking medical marijuana. The experiences of these patients vary because some seek to conceal their use whereas others are creating social movements to destigmatize and validate the medical uses of marijuana.[12,13] Furthermore, a multitude of other factors can influence the experience of medical marijuana patients, the state or country of residence, their diagnosis, their relationships with family members, their relationships with their healthcare providers, and their own personal beliefs on illicit drug use. The medical marijuana patient faces multiple risks when choosing this medication. Yet, many accept the multiple health and legal risks to reap a perceived benefit from the drug. For many medical marijuana patients, the benefits outweigh the risks.

Because the experiences of medical marijuana patients are varied and diverse, it is often difficult to study them through traditional quantitative methods. Qualitative methodology, in contrast, is more apt to capture their experiences. Qualitative methodology is grounded in the tenets of naturalistic inquiry, seeking truth through the discovery of a human phenomenon as the participants experience and perceive it.[14] Naturalistic inquiry recognizes that each human experience is unique and each participant's beliefs and truths are relative.[14] With qualitative methodology, researchers can elicit rich and thick descriptions of the experiences of the participants.

The qualitative studies of medical marijuana patients have offered enlightening insights into the many aspects of medical marijuana use.

Study Aims and Purpose

The purpose of this study is to explore the qualitative literature examining medical marijuana use. The study aims to identify common findings across the qualitative literature and synthesize themes.

Methods

A literature search was performed using PubMed, Scopus, CINAHL, and Google Scholar. Keywords for the search were "marijuana," "medical marijuana," "qualitative," "interview," and "cannabis." Studies were included if they were in English, published after 2000, and qualitative. Articles were excluded if the focus was recreational marijuana use or if the study used quantitative methodology.

Study Characteristics

Five qualitative studies were identified for review (Table 1). A diverse population of participants was represented in the studies. Most studies included participants with different diagnoses, whereas only Page an Verhoef[13] focused on participants with a single diagnosis, MS.

Studies were performed in North America and Europe. The location of the study is significant when researching medical marijuana because personal beliefs and opinions regarding medical marijuana can be influenced by the legality of marijuana, as well as the overall culture of the study sample. For instance, Pedersen and Sandberg[15] studied medical marijuana patients in Norway, where all participants were using marijuana illegally. In contrast, Bottorf et al[12] studied medical marijuana patients in British Columbia, Canada, who were all using marijuana legally. The legality of the patients' marijuana use can influence their overall perception of the treatment, as well as their decisions about disclosure and consumption. Furthermore, the overall culture in a patient's place of residence may affect personal opinion. For example, British Columbia is known as a liberal province, with a higher degree of tolerance for recreational marijuana use, which may be reflected in the participants' views on the subject. The study setting and the legality of marijuana use can have several effects on participant perceptions.

TABLE 1. Specifics of Individual Studies

Article[a]	Location	Participants	Diagnoses	Marijuana Use	Legality	Method of Delivery
Bottorff et al (2013)	Canada (British Columbia)	n = 23 (10 M, 13 F) Age, 25–66 y	HIV/AIDS, fibromyalgia, arthritis, mood/anxiety disorders, cancer, neurological disorders, gender dysphoria, and other disorders	Medicinal: 2–16 y Recreational: NA	Health Canada licenses (n = 11)	Smoke (n = 26) Vaporizer (n = 9) Ingestion (n = 15) Tinctures (n = 5) Sprays (n = 2) Cannabis mixed with tobacco (n = 1) Topical (n = 1)
Page and Verhoef (2006)	Canada (Alberta)	n = 14 (6 M, 8 F) Age, 38–49 y	Multiple sclerosis	Medicinal: NA Recreational: "some" naive users, "others" previous use, "some" several years	NA	Smoke (n = 14)
Satterlund et al (2015)	United States (California)	n = 18 (13 M, 5 F) Age, 19–66 y	Migraine headaches, depression, chemotherapy and radiation treatment effects, chronic pain, and asthma, with most citing chronic and severe pain	Medicinal: NA Recreational: n = 18	Valid patient ID cards (n = 18)	NA
Coomber et al (2003)	United Kingdom (England)	n = 33 (19 M, 14 F) Age, 26–65 y	Multiple sclerosis, arthritic/rheumatoid/fibromyalgia complaints, cerebella ataxia/cerebral palsy/dystonia, and symptoms related to spinal cord injury	Frequency of medicinal use: daily basis (n = 19), most days (n = 4), 1–3 times a week (n = 4), less than once a week (n = 2) Recreational: n = 23	Illegal (n = 33)	Smoke (n = 24) Both smoking and eating/drinking (n = 5) Eating/drinking exclusively (n = 2)
Pedersen and Sandberg (2013)	Norway	n = 100 (88 M, 12 F) Age, 20–62 y	Muscular pain, back pain, rheumatism, multiple sclerosis, mental health problems, attention deficit hyperactivity disorder/ADHD, anxiety, stress, and insomnia	Medicinal: "several years" Recreational: varied	Illegal (n = 100)	NA

Note. F = female; M = male; n = number; NA = not applicable.
[a]Author(s) (publication year).

Furthermore, participants' previous experience with recreational marijuana may influence their perception of the drug and its risks. In studies where participants' recreational use was reported, most participants had used recreational marijuana, but the frequency of use varied. Attitudes about the risks of marijuana are often closely associated with previous use.[16] A national survey of adolescents has indicated an inverse relationship between substance use and risk perceptions, with recreational substance use lower among adolescents who perceive higher risk of harm from use.[16,17] If participants had used marijuana for recreational purposes, they may perceive a lower risk of harm for medicinal use. Inversely, individuals lacking previous recreational use may perceive a higher risk of harm from medicinal use and therefore may decline medical marijuana.

Common Themes Emerging From All Studies

Stigma

Concerns about the stigma associated with marijuana use and apprehension about being labeled a "pothead" or "stoner" were introduced in several studies.[12,18] The perception of stigma has been shown to have a negative impact on medical treatment.[19,20] Stigmatization for medical marijuana users may affect their health in multiple ways. Primarily, those who may benefit from therapeutic cannabis may forgo it because of concerns about labeling and stigma. These patients may experience unnecessary pain and suffering. Secondarily, those who do use medical cannabis may choose to conceal their use from their healthcare providers, which creates gaps in their care and may also potentially create mistrust in the provider-patient relationship. This, in turn, can lead to healthcare avoidance, which can further deteriorate a patient's overall health status. Finally, and perhaps most importantly, the stigma that patients feel can cause unwarranted stress and anxiety, which can lead to isolation, as seen in multiple studies in this review.[12,18]

Disclosures to Healthcare Providers

There remains a large degree of ambiguity in the healthcare community regarding medical marijuana use, so it is not surprising that there were mixed reactions from healthcare providers when participants disclosed their medical marijuana use. In some situations, healthcare providers were neutral to the participants' use, whereas others were accepting and provided positive feedback.[13,21] Participants from other studies reported negative encounters with healthcare professionals.[12,15] Several participants were warned of the addictive potential of marijuana and were counseled on addiction management.[12] For some participants, the negative feedback caused anger toward and frustration with the healthcare providers who seemed uneducated about the potential benefits of marijuana.[15] These negative experiences can lead to mistrust and have the potential to result in healthcare avoidance by patients.

Risk Versus Benefit

All participants reported beneficial and therapeutic effects from their medical marijuana use. This is not surprising given that purposive sampling was used in all studies, so participants self-selected for positive medical marijuana experiences. All participants used marijuana despite its current status as an illicit substance in their location of residence. Most participants felt that the risk of prosecution was low and that their use of marijuana as a medical therapy would be understood within the context of the current culture.[13,21]

Many participants attested to the "natural" and "green" qualities of marijuana and preferred this to prescription medications.[15,18,21] Complementary and alternative medication use in the United States has increased steadily for the past 2 decades.[22] Overall acceptance and preference for "natural" remedies are becoming more common. Furthermore, distrust of "big pharma" played a role in participants' decisions to choose medical marijuana.[18] Many participants had prescriptions for addictive medications such as analgesics and sleep aids. Most participants were able to analyze for themselves the risk versus benefit of choosing between prescription medications and marijuana use. Participants reported that exerting ownership of medical decision making emboldened them and gave them a sense of control over their own health and body, providing a sense of confidence.[21] Healthcare culture has been shifting from the patriarchal model of physician control over patient care to a more collaborative model in which decisions are made by patients and their healthcare providers as a team.[21] Medical decision making regarding complementary and alternative medical use is reflected in this changing culture.

Adverse Effects

Just as patients assess the risk versus benefit ratio of medical marijuana, so too do medical professionals. Any discussion of risk versus benefit of a medication must include an examination of adverse effects, for no drug is without adverse effects. The more important question is whether these adverse effects are significant enough to outweigh the benefits. Although the studies in this review do not provide long-term data on patient outcomes, they do provide information regarding day-to-day adverse effects. Participants who reported unwanted adverse effects mentioned changes in cognition (eg, decreased lucidity, decreased concentration, and forgetfulness) and problems with balance and fatigue.[15] However, these adverse effects were often dose dependent, and experienced medical marijuana users indicated that they were able to titrate their

dose to achieve a therapeutic level.[21] Furthermore, some participants reported that medical marijuana not only was more effective than conventional medicines but also had fewer adverse effects.[21] All participants in the studies used medical marijuana despite any unwanted adverse effects; however, more studies are needed with participants who discontinued medical marijuana use because of unwanted adverse effects.

Blurred Boundaries

Perhaps, one of the most interesting topics that appeared in all the studies is the often blurred line between recreational use and medicinal use. The term "high" is often used to describe the psychoactive effects of marijuana. Recreational users have stated that a "high" induces euphoria and an overall sense of relaxation. Many participants in the studies reported relaxation and decreased anxiety as benefits of medical marijuana use.[12,13,15,21] Some reported that the psychoactive effects of marijuana contributed to the overall therapeutic value of the drug.[13,15,21] Other participants in the studies used marijuana exclusively for medical reasons and reported never becoming intoxicated.[12,15] There is no clear line to delineate the psychoactive effects from the therapeutic effects of marijuana. However, because of the stigma and labeling of marijuana users as "stoners" and "potheads," many medical marijuana patients are quick to delineate between recreational use and medical use. Participants in Page and Verhoef's[13] study noted that they were motivated by the therapeutic effect, whereas recreational users are motivated by intoxication. The blurred line between recreational use and medical use becomes important for patients seeking to avoid stigma and for the many patients living in states where only medical use is legal.

Implications for Neuroscience Nurses

It is critical that neuroscience nurses be familiar with the current literature regarding medical marijuana, as evidence supporting marijuana's use in the treatment and management of neurological diseases continues to grow. Neuroscience nurses can anticipate that more patients will inquire about the potential use of medical marijuana for themselves. Nurses caring for these patients must be aware of the current recommendations regarding use, the potential therapeutic effects, and most importantly, potential adverse effects. Many strains of recreational marijuana that patients may be using have high levels of tetrahydrocannabinol, a psychoactive cannabinoid. Tetrahydrocannabinol, at higher doses, can cause cognitive changes and worsening motor control.[23] Patients will need to be advised that the percentages of tetrahydrocannabinol can vary by strain and that higher dosages will result in more psychoactive and cognitive adverse effects. It is important to discuss potential adverse effects with patients with neurological diseases because individual tolerance may vary and benefits may not exceed risks for every patient. Patients should have an individual discussion with their healthcare provider regarding medical marijuana use.

Conclusions

Medical marijuana use is growing at a rapid rate and is now legal in half of the United States. Public opinion regarding marijuana use is changing as well, with 53% of Americans in support of full legalization, a drastic increase from 12% in 1969 and a large increase from 42% in 2010.[24] The experience of the patient who uses marijuana for medicinal purposes is unique in multiple ways. The stigma associated with marijuana use, the nondisclosures to healthcare professionals, the blurred line between recreational use and medical use, and the risk versus benefit ratio of the drug are all important topics for further research. Future qualitative research on medical marijuana users will elaborate on their experiences and provide helpful information for the healthcare providers who care for them.

Acknowledgments

The authors thank Dr Suzanne Smeltzer for her guidance.

References

1. Bostwick JM. Blurred boundaries: the therapeutics and politics of medical marijuana. *Mayo Clin Proc*. 2012;87(2):172–186. doi:10.1016/j.mayocp.2011.10.003.
2. Aggarwal SK, Carter GT, Sullivan MD, ZumBrunnen C, Morrill R, Mayer JD. Medicinal use of cannabis in the United States: historical perspectives, current trends, and future directions. *J Opioid Manag*. 2009;5(3):153–168.
3. Ben Amar M. Cannabinoids in medicine: a review of their therapeutic potential. *J Ethnopharmacol*. 2006;105(1–2):1–25. doi:10.1016/j.jep.2006.02.001
4. National Commission on Marihuana and Drug Abuse. The report of the National Commission on Marihuana and Drug Abuse. Marihuana, a signal of misunderstanding. 1972. http://www.druglibrary.org/schaffer/library/studies/nc/ncmenu.htm. Accessed July 26, 2016.
5. Cohen PJ. Medical marijuana 2010: it's time to fix the regulatory vacuum. *J Law Med Ethics*. 2010;38(3):654–666. doi:10.1111/j.1748-720X.2010.00519.x
6. MacDonald J. Medical marijuana: informational resources for family physicians. *Am Fam Physician*. 2009;80(8):779.
7. Hampson AJ, Axelrod J, Grimaldi M. Cannabinoids as antioxidants and neuroprotectants. 2003. http://www.google.com/patents/US6630507. Accessed April 14, 2016.
8. Koppel BS, Brust JC, Fife T, et al. Systematic review: efficacy and safety of medical marijuana in selected neurologic disorders: report of the Guideline Development Subcommittee of the American Academy of Neurology. *Neurology*. 2014;82(17):1556–1563. doi:10.1212/WNL.0000000000000363.
9. Yadav V, Bever C, Bowen J, et al. Summary of evidence-based guideline: complementary and alternative medicine in multiple sclerosis Report of the Guideline Development

Subcommittee of the American Academy of Neurology. *Neurology*. 2014;82(12):1083–1092. doi:10.1212/WNL.0000000000000250.

10. Patel A, Fee D, Brusy J, Song S, Miller T, Narayanaswami P. Position statement: use of medical marijuana for neurologic disorders. 2014.
11. Charuvastra A, Friedmann PD, Stein MD. Physician attitudes regarding the prescription of medical marijuana. *J Addict Dis*. 2005;24(3):87–93. doi:10.1300/J069v24n03_07.
12. Bottorff JL, Bissell LJ, Balneaves LG, Oliffe JL, Capler NR, Buxton J. Perceptions of cannabis as a stigmatized medicine: a qualitative descriptive study. *Harm Reduct J*. 2013;10:2. doi:10.1186/1477-7517-10-2.
13. Page SA, Verhoef MJ. Medicinal marijuana use: experiences of people with multiple sclerosis. *Can Fam Physician*. 2006;52:64–65.
14. Sandelowski M. The problem of rigor in qualitative research. *ANS Adv Nurs Sci*. 1986;8(3):27–37.
15. Pedersen W, Sandberg S. The medicalisation of revolt: a sociological analysis of medical cannabis users. *Sociol Health Illn*. 2013;35(1):17–32. doi:10.1111/j.1467-9566.2012.01476.x.
16. Hughes A, Lipari RN, Williams MR. *Marijuana Use and Perceived Risk of Harm from Marijuana Use Varies Within and Across States*. In: The CBHSQ Report. Rockville, MD: Substance Abuse and Mental Health Services Administration (US); 2013. http://www.ncbi.nlm.nih.gov/books/NBK396156/. Accessed December 20, 2016.
17. Lipari RN. *Trends in Adolescent Substance Use and Perception of Risk from Substance Use*. In: The CBHSQ Report. Rockville, MD: Substance Abuse and Mental Health Services Administration (US); 2013. http://www.ncbi.nlm.nih.gov/books/NBK385059/. Accessed December 20, 2016.
18. Satterlund TD, Lee JP, Moore RS. Stigma among California's medical marijuana patients. *J Psychoactive Drugs*. 2015;47(1):10–17. doi:10.1080/02791072.2014.991858.
19. Livingston JD, Boyd JE. Correlates and consequences of internalized stigma for people living with mental illness: a systematic review and meta-analysis. *Soc Sci Med*. 2010;71(12):2150–2161. doi:10.1016/j.socscimed.2010.09.030.
20. Sirey JA, Bruce ML, Alexopoulos GS, et al. Perceived stigma as a predictor of treatment discontinuation in young and older outpatients with depression. *Am J Psychiatry*. 2001;158(3):479–481.
21. Coomber R, Oliver M, Morris C. Using cannabis therapeutically in the UK: a qualitative analysis. *J Drug Issues*. 2003;33(2):325–356. doi:10.1177/002204260303300204.
22. National Center for Complementary and Alternative Medicine. The use of complementary and alternative medicine in the United States. http://nccam.nih.gov/news/camstats/2007/camsurvey_fs1.htm. Published 2008. Accessed November 20, 2014.
23. Hunault CC, Mensinga TT, Böcker KB, et al. Cognitive and psychomotor effects in males after smoking a combination of tobacco and cannabis containing up to 69 mg delta-9-tetrahydrocannabinol (THC). *Psychopharmacology (Berl)*. 2009;204(1):85–94. doi:10.1007/s00213-008-1440-0.
24. Motel S. 6 facts about marijuana. 2015. http://www.pewresearch.org/fact-tank/2015/04/14/6-facts-about-marijuana/. Accessed August 25, 2015.