

THE URGENCY OF MEDICAL MARIJUANA LAWS IN INDONESIA

^{1*}Amarta Yasyhini Ilka Haque, ²Muh Endriyo Susila

¹Supreme Court of the Republic of Indonesia

²Faculty of Law, Universitas Muhammadiyah Yogyakarta, Indonesia

amarta.y.law18@mail.umy.ac.id

Abstract

Marijuana legalization remains a contentious public health issue in Indonesia. Despite public debates sparked by a mother's appeal for medicinal marijuana last June, Indonesia maintains strict anti-drug measures under its Narcotics Law, which prohibits the use of all elements of marijuana in medical treatments. However, medicinal marijuana has gained recognition in other jurisdictions for its potential to treat various chronic illnesses. This study employs a doctrinal legal research methodology, relying on secondary sources, legislation, and scholarly analyses. The findings emphasize the urgent need to legalize medicinal marijuana as a critical intervention for specific medical conditions. While possession and use of marijuana remain illegal, Indonesia's ratification of the Single Convention on Narcotic Drugs 1961 allows for research and the controlled use of medicinal marijuana. By examining the experiences of nations with established medical marijuana legislation and emphasizing further research on its applications, this study advocates for the legalization of medicinal marijuana in Indonesia under stringent regulations.

Keywords: *Marijuana Law, Human Rights, Marijuana Legalization.*

1. Introduction

Santi Warastuti gained widespread attention on social media in June of the previous year due to her unwavering advocacy for the use of medical marijuana. Her advocacy was driven by the urgent medical needs of her daughter, Pika, who has cerebral palsy and requires marijuana to mitigate severe seizures.¹ This compelling case has ignited significant discourse among governmental bodies and lawmakers regarding introducing limited exemptions within existing marijuana restrictions. The ensuing debates have underscored the complexities of balancing medical necessity with legal frameworks, prompting a reevaluation of policies that govern access to medical treatments for individuals with critical health conditions like Pika's.

Marijuana legalization has been one of the most controversial issues in the field of public health in many countries, including Indonesia. Discourse on marijuana legalization in Indonesia started in 2010 when a group of individuals demanded the removal of marijuana plants from the list of prohibited substances as governed in the Narcotics Act 2009 (*Undang-Undang Nomor 35 Tahun 2009 tentang Narkotika*). Under this Act, marijuana is classified as "Narcotics Group I" that can only be used for scientific research. As such, the use of all genera of marijuana and all

¹ Aisyah Llewellyn, "Indonesian Mothers Fight for Medical Marijuana for Their Children | Health News | Al Jazeera," August 10, 2022, <https://www.aljazeera.com/news/2022/8/10/indonesian-mothers-fight-for-medical-marijuana-for-their-children>.

parts of the plant, including its derivatives, for other purposes, including therapy, is strictly prohibited.²

Recently, the use of marijuana for medical treatment has received wide attention from the public as it works well for addressing various chronic medical conditions, including pain.³ Even various countries have legalized the use of marijuana for medicinal as well as recreational purposes under severe legal limits. Although some countries allow the use of marijuana for medicinal purposes in order to improve one's health, the Commission on Narcotic Drugs (the annual meeting of all members of the United Nations to discuss and decide a broad range of topics concerning the global drug control system) grants each government the authority to revoke this authorization.⁴

However, according to the Public Relations and the Deputy for Law and Cooperation of the National Narcotics Agency (BNN), the Indonesian government continues to reject the legalization of marijuana for both medical and recreational purposes. The firm stance taken by BNN Deputy for Legal Affairs and Cooperation, Susanto, as the leading sector in dealing with drug problems in Indonesia, states that “given the situation and conditions of abuse and illicit trafficking of narcotics, particularly marijuana, which is very high in Indonesia, efforts to legalize marijuana are unlawful acts that can be sanctioned under the Narcotics Law.”⁵

As public policies have not further shifted, access to medical marijuana is very needed, and public support for marijuana legalization has further grown in Indonesia. Even though Santi's story has drawn attention from the public and the mass media to the importance and urgency of the use of medical marijuana in the health sector in Indonesia, it has been observed that the legality of marijuana is unlikely given that the Constitutional Court of Indonesia has rejected the judicial review of the Law No. 35 of 2009 on Narcotics regarding the use of medical marijuana.⁶ Therefore, this study aims to focus on the urgency of defining the marijuana problem through the utilization of medical treatment for the medical sector in Indonesia by analyzing the benefits of medical marijuana and its implementation in other countries.

² Section 8 point (1) of the Narcotics Act 2009.

³ Lisa Caulley, Benjamin Caplan, and Edgar Ross, “Medical Marijuana for Chronic Pain,” *The New England Journal of Medicine* 379, no. 16 (2018): 1575–77, <https://www.nejm.org/doi/10.1056/NEJMclde1808149>.

⁴ United Nations, “CND Votes on Recommendations for Cannabis and Cannabis-Related Substances,” accessed October 9, 2022, <https://www.unodc.org/unodc/en/frontpage/2020/December/cnd-votes-on-recommendations-for-cannabis-and-cannabis-related-substances.html>.

⁵ Ferdinan, “BNN Rejects Legalization Of Marijuana, Affirms Narcotics Category 1 Is Not Allowed For Drug Purposes,” July 5, 2022, <https://voi.id/en/berita/186713/bnn-tolak-legalisasi-ganja-tegaskan-narkotika-golongan-1-tak-diperbolehkan-untuk-kepentingan-obat>.

⁶ BBC News, “Legalisasi Ganja Untuk Keperluan Medis Ditolak MK - BBC News Indonesia,” July 20, 2022, <https://www.bbc.com/indonesia/articles/c19m3k9wvmvo>.

2. Method

This study employs a doctrinal legal research methodology, concentrating on secondary sources, mainly legal documents such as legislation and scholarly analyses. The data were collected from primary legal sources, specifically statutory provisions, including Indonesia's Narcotics Act (Law No. 35 of 2009) and international treaties such as the 1961 Single Convention on Narcotic Drugs, as well as secondary legal sources comprising journal articles and pertinent publications that examine the application of medicinal marijuana in various jurisdictions, including the United States and Thailand.

The analysis employed statutory analysis, comparative analysis, and synthesis and interpretation. Statutory analysis involves an examination of Indonesia's Narcotics Act to identify obstacles to the legalization of medicinal marijuana and its potential conformity with international law, including the rules of the Single Convention on Narcotic Drugs. A comparative analysis examined the legislative frameworks of nations that have legalized medicinal marijuana, such as the United States and Thailand, to extract lessons and best practices applicable to Indonesia. Consequently, results from statutory and comparative assessments were combined to formulate policy recommendations for legalizing medicinal marijuana in Indonesia under particular regulatory conditions.

3. Results and Discussion

3.1. The History of Medical Marijuana Using and Its Benefits

Marijuana is one of the world's most widely utilized psychotropic drugs⁷ that causes exhilaration and relaxation.⁸ It is described as an annual plant that may grow to a height of about 2 meters and has finger leaves with female and male flowers on distinct plants, implying two households.⁹ It can only be grown or utilized in temperate and hot regions. Although some people refer to it as marijuana, the World Health Organization (WHO) refers to it as cannabis universally.¹⁰ Marijuana, sometimes known as cannabis, is the most common illegal substance in

⁷ Aaron L Sarvet et al., "Medical Marijuana Laws and Adolescent Marijuana Use in the United States: A Systematic Review and Meta-analysis," *Addiction* 113, no. 6 (2018): 1003–16, <https://doi.org/10.1111/add.14136>.

⁸ B Yankey et al., "Relationship between Years of Marijuana Use and the Four Main Diagnostic Criteria for Metabolic Syndrome among United States Adults," *Journal of Addiction Research & Therapy* 11, no. 1 (2017): 22–34, <https://doi.org/10.4172/2155-6105.1000S11-017>.

⁹ Marisca Evalina Gondokesumo and Nabbilah Amir, "Legality Of Marijuana Use In The Need For Medical Treatment In Indonesia (Judging From Law Number 36 Of 2009 Concerning Health And Law Number 35 Of 2009 Concerning Narcotics)," *Journal Equity of Law and Governance* 1, no. 2 (2021): 119–26, <https://doi.org/10.55637/elg.1.2.3938.119-126>. Gondokesumo and Amir.

¹⁰ Carolyn Baird, "Marijuana and Medicinal Marijuana: A Global Perspective," *Journal of Addictions Nursing* 30, no. 2 (2019): 125–27, <https://doi.org/10.1097/JAN.0000000000000280>.

the world, particularly in Europe.¹¹ Even so, in particular public debates, marijuana is frequently referred to as a “remedy” rather than a hazardous chemical or “poison.”¹² Marijuana and other marijuana derivatives have been (re) medicalized and have become the subject of scientific and political discussions since the 1990s.¹³

Marijuana takes on different connotations in public discourses, including “illicit drug,” “crime,” “soft recreational substance,” “natural plant,” and even “medical substance.”¹⁴ This vagueness, volatility, and diversity of interpretations demonstrate that the marijuana problem can be understood differently according to various views. This argument resulted in a change and broadening of the scope of the marijuana problem. Instead of being viewed solely as a criminal issue, medicinal marijuana has given the issue a new dimension in the form of cannabinoid-based medications licensed for medical use.¹⁵

WBO'Shaughnessy, a British physician stationed in India who also recorded the usage of hemp for religious and recreational activities, brought the use of marijuana for medicinal purposes into the Western pharmacopoeia in 1839.¹⁶ As a result, the use of marijuana as a pharmaceutical element in Indonesia has a long history.¹⁷ It may be found in the *Mujarabat* and *Tajul Muluk* texts from the 16th century, written in ancient Malay.¹⁸ In this book, the marijuana plant is described as a herbal medication used in Aceh to cure ailments like diabetes. It is also frequently used as an ingredient or spice in cooking and repelling pests for coffee and tobacco plants, where cannabis trees are placed between coffee and tobacco trees to minimize bugs that attack coffee and tobacco crops.¹⁹ Then, marijuana has been utilized by various people who are not only exclusively from Aceh but also historically utilized for religious rites and medicinal.

¹¹ Amir Englund et al., “Can We Make Cannabis Safer?,” *The Lancet Psychiatry* 4, no. 8 (2017): 643–48, [https://doi.org/https://doi.org/10.1016/S2215-0366\(17\)30075-5](https://doi.org/https://doi.org/10.1016/S2215-0366(17)30075-5).

¹² Beatriz Acevedo, “Creating the Cannabis User: A Post-Structuralist Analysis of the Re-Classification of Cannabis in the United Kingdom (2004–2005),” *International Journal of Drug Policy* 18, no. 3 (2007): 177–86, <https://doi.org/10.1016/j.drugpo.2006.11.008>.

¹³ Sharon R Sznitman and Nehama Lewis, “Is Cannabis an Illicit Drug or a Medicine? A Quantitative Framing Analysis of Israeli Newspaper Coverage,” *International Journal of Drug Policy* 26, no. 5 (2015): 446–52, <http://dx.doi.org/10.1016/j.drugpo.2015.01.010>.

¹⁴ Sveinung Sandberg, “Cannabis Culture: A Stable Subculture in a Changing World,” *Criminology & Criminal Justice* 13, no. 1 (2013): 63–79, <https://doi.org/10.1177/1748895812445620>.

¹⁵ Piotr Kępski, “Defining ‘the Marijuana Problem’: An Analysis of the Polish Daily Press, 2015–2016,” *Nordic Studies on Alcohol and Drugs* 38, no. 4 (2021): 361–76, <https://doi.org/10.1177/1455072520936807>.

¹⁶ Tod H Mikuriya, “Marijuana in Medicine: Past, Present and Future,” *California Medicine* 110, no. 1 (1969): 34.

¹⁷ Gunawan Widjaja Idham, “Legal Politics of Medical Cannabis in Indonesia,” *Multicultural Education* 7, no. 6 (2021): 297–300, <https://doi.org/10.5281/zenodo.4975526>.

¹⁸ Dania Putri and Tom Blickman, “Cannabis in Indonesia,” *Drug Policy Briefing* 44 (2016): 1–24.

¹⁹ J S Murdomo et al., “Pandangan Hukum Pidana Terhadap Legalisasi Ganja Di Indonesia,” *Jurnal Kajian Hukum* 6, no. 1 (2021): 12–19.

Furthermore, Rumphius, in Ambon's research, discovered that marijuana might treat gonorrhoea and hernia, and its leaves can be utilized in conjunction with tea to treat asthma.²⁰ Medical studies have also focused on cannabinoids extracted from the marijuana plant. Some studies suggest that cannabinoids found in marijuana may have neuroprotective properties, potentially slowing the progression of neurodegenerative diseases such as Alzheimer's and Parkinson's.²¹ For patients with conditions causing muscle spasms, such as multiple sclerosis or spinal cord injuries, marijuana's ability to induce muscle relaxation can lead to improved mobility and reduced discomfort.

Other research has found that marijuana can inhibit tumor development in animal models of cancer by altering the signaling pathways involved in cell proliferation.²² Preliminary research suggests that cannabinoids may possess antioxidant properties and inhibit certain tumor growth types. Because of its anti-emetic properties, cannabinoids can also be utilized in palliative care, notably in chemotherapy-induced nausea and vomiting.²³ Previous research found that marijuana has a minor effect on multiple sclerosis patients, notably in the treatment of spasticity.²⁴

Thus, medical marijuana has many advantages. Most importantly, it benefits pain management, where it has been shown to effectively alleviate chronic pain, including neuropathic pain, which is often resistant to conventional treatments. This can significantly improve the quality of life for patients with multiple sclerosis or arthritis. It also has seizure control, where cannabidiol (CBD), a compound derived from marijuana, has demonstrated remarkable effectiveness in reducing seizures in patients with epilepsy, including those who have not responded well to other treatments.²⁵

The medicinal advantages of marijuana are becoming more known, while considerable study has to be done, and the majority of work in this field has been conducted with adults.²⁶ Notwithstanding all of the above-mentioned medical benefits of marijuana, the legality of medical

²⁰ E J Buenz et al., "Bioprospecting Rumphius's Ambonese Herbal: Volume I," *Journal of Ethnopharmacology* 96, no. 1–2 (2005): 57–70, <https://doi.org/10.1016/j.jep.2004.08.016>.

²¹ Michael J Rieder, Canadian Paediatric Society, and Drug Therapy and Hazardous Substances Committee, "Is the Medical Use of Cannabis a Therapeutic Option for Children?," *Paediatrics & Child Health* 21, no. 1 (2016): 31–34, <https://doi.org/10.1093/pch/21.1.31>.

²² Ester Aso and Isidre Ferrer, "Cannabinoids for Treatment of Alzheimer's Disease: Moving toward the Clinic," *Frontiers in Pharmacology* 5 (2014): 37, <https://doi.org/10.3389/fphar.2014.00037>.

²³ G Velasco, C Sánchez, and M Guzmán, "Anticancer Mechanisms of Cannabinoids," *Current Oncology* 23, no. s1 (2016): 23–32, <http://dx.doi.org/10.3747/co.23.3080>.

²⁴ Gunawan Widjaja, "Should Cannabis as Medicine Be Specifically Regulated?," *Genus* 3, no. 3 (2018), <https://doi.org/10.15416/pcpr.v3i3.19979>.

²⁵ Mahardian Putranto and Yovita Arie Mangesti, "Penggunaan Ganja Medis Dalam Pengobatan Dan Pengaturannya Di Indonesia," *Journal Evidence Of Law* 3, no. 1 (2024): 10–19, <https://doi.org/10.59066/jel.v3i1.582>.

²⁶ Elizabeth J D'Amico et al., "Understanding Rates of Marijuana Use and Consequences among Adolescents in a Changing Legal Landscape," *Current Addiction Reports* 4, no. 4 (2017): 343–49, <https://doi.org/10.1007/s40429-017-0170-y>.

marijuana still presents serious scientific, legal, and ethical problems.²⁷ Even though numerous authors have demonstrated the marijuana benefits in the health sector, medical marijuana usage is still prohibited in many jurisdictions. This is due to a variety of potential issues, including illicit substance use among adolescents, marijuana reliance and problematic use in the overall population, illegal supply by criminal organizations, and recreational marijuana legalization regulations.²⁸

3.2. The Regulation of Marijuana Possession and Utilization within Indonesian Laws

Indonesia ratified two narcotics and psychotropics treaties following its independence: the 1961 Single Convention on Narcotic Drugs and the 1971 Convention on Psychotropic Substances. The Single Convention was approved by Law No. 8 of 1976 concerning the Ratification of the Single Convention on Narcotics Drugs 1961, including the Amending Protocol. Indonesia was one of the treaty's initial 73 signatories.²⁹ Meanwhile, the 1971 Convention was ratified by Law No.8 of 1996 concerning the Ratification of the 1971 Convention on Psychotropic Substances. The ratification and adoption of both conventions into Indonesia's Narcotics Law may serve as the foundation for legal politics in dealing with narcotics concerns.

Law No. 35 of 2009 (shortened as the Narcotics Law) outlines the current legal stance on drugs. This narcotics statute has been revised three times. The first is Narcotics Law No. 9 of 1976. It was later revised by Narcotics Law No. 22 of 1997. It was most recently revised by Narcotics Law No. 35 of 2009. Narcotics are classified into three types based on their level of hazard and addictive potential. Narcotics group I are the deadliest and have a strong addictive potential. Marijuana, heroin, cocaine, shabu-shabu, morphine, and opium are examples of narcotics in this category. Narcotics group II, such as pethidine, benzethidine, and betamethidol, exhibit significant addiction yet are beneficial for therapy. Meanwhile, codeine and its derivatives are examples of narcotics group III, which have a low addictive potential but are beneficial for therapy.

Marijuana usage is restricted in Indonesia under this law. It is included on the list of narcotics group I in Narcotics Law, as modified. According to the most recent Narcotics Law list, the use of all genera of marijuana and all parts of the plant, including its derivatives (seeds, fruit, straw, and processed marijuana plants or portions of the marijuana plant) as therapy in health services is

²⁷ Larissa Hines et al., "Medical Marijuana for Minors May Be Considered Child Abuse," *Pediatrics* 142, no. 4 (2018), <https://doi.org/10.1542/peds.2017-4310>.

²⁸ Ashley C Bradford and W David Bradford, "Medical Marijuana Laws May Be Associated with a Decline in the Number of Prescriptions for Medicaid Enrollees," *Health Affairs* 36, no. 5 (2017): 945–51, <https://doi.org/10.1377/hlthaff.2016.1135>.

²⁹ David Bewley-Taylor and Martin Jelsma, "Fifty Years of the 1961 Single Convention on Narcotic Drugs: A Reinterpretation," *Series on Legislative Reform of Drug Policies* 12 (2011): 1–20.

prohibited because they are classified as narcotics group I. This categorization is based on the 1961 United Nations Single Convention on Narcotic Drugs, which classifies marijuana among other psychoactive chemicals such as cocaine, heroin, and methamphetamine.³⁰

Hence, according to Section 8 point (1) of the Narcotics Act, narcotics in group I are forbidden from being used for medicinal purposes due to their high dependency potential. This is because the use of “narcotics group I” for medications has a significant potential for addiction, and therefore, they can only be utilized for scientific research rather than medicinal purposes. Moreover, according to the BNN, marijuana is a plant that contains the chemical THC (Tetrahydrocannabinol), a narcotic substance that generates physical intoxication (poisoning), heart palpitations, and a 50% increase in pulse rate, in addition to coloring the eyeball red due to capillary blood vessel dilation.³¹

The Indonesian government’s policy of dismissing the WHO advice on the use of marijuana for medical purposes was discovered to have several underlying reasons, including the fact that studies show that the substance of marijuana in Indonesia has a high THC (content in marijuana plants that is exceptionally dangerous because it is highly addictive) of 18% compared to CBD of 1%, which is not in connection with the proper use of marijuana.³² Marijuana for therapeutic purposes should be cultivated using genetically altered procedures that produce high CBD and low THC levels.³³ Moreover, if medical marijuana is legalized, the risk of marijuana abuse increases; persons who want to use marijuana recreationally might argue for medical therapy. Additionally, it has been noted that legalizing medicinal marijuana will have a detrimental influence on the availability of marijuana and perceived harmfulness among critical demographics, notably youth.³⁴

3.3. The Importance of Indonesian Medical Marijuana Laws Based on Medical Aspects

Even though Narcotics Law prohibits the use of marijuana for medicinal and research purposes, many scholars say that the legal policy of medical marijuana in Indonesia is still unfavorable to allowing the use of medical marijuana. This, however, should be in line with the fact that the text of the 1961 Single Convention on Narcotics, including the Amending Protocol,

³⁰ David Bewley-Taylor and Martin Jelsma, “Regime Change: Re-Visiting the 1961 Single Convention on Narcotic Drugs,” *International Journal of Drug Policy* 23, no. 1 (2012): 72–81, <https://doi.org/10.1016/j.drugpo.2011.08.003>.

³¹ Mohammad Darry Abbiyyu, “Strategi Gerakan Lingkar Ganja Nusantara Dalam Memperjuangkan Legalisasi Ganja Di Indonesia,” *Jurnal Politik Muda* 5, no. 3 (2016): 300–310.

³² Aristo Marisi Adiputra Pangaribuan and Kelly Manthovani, “Causes and Consequences of the War on Marijuana in Indonesia,” *Indonesia Law Review* 9, no. 2 (2019): 22, <https://doi.org/10.15742/ilrev.v9n2.502>.

³³ Nandakumara D Sarma et al., “Cannabis Inflorescence for Medical Purposes: USP Considerations for Quality Attributes,” *Journal of Natural Products* 83, no. 4 (2020): 1334–51, <https://dx.doi.org/10.1021/acs.jnatprod.9b01200>.

³⁴ Bettina Friese and Joel W Grube, “Legalization of Medical Marijuana and Marijuana Use among Youths,” *Drugs: Education, Prevention and Policy* 20, no. 1 (2013): 33–39, <https://doi.org/10.3109/09687637.2012.713408>.

demonstrated that, under certain situations, marijuana might be used for study and medicine.³⁵ It is challenging to comprehend why such Narcotics Law forbids this; as demonstrated below, narcotics can be used for medical treatment as well.

Considering marijuana is classified as narcotics group I in the Narcotics Act, it is forbidden for healthcare services.”³⁶ The Narcotics Law, however, stated that “in a minimal amount, narcotics group I may be utilized for developing science and technology and diagnostic reagents, as laboratory reagents with the permission of the Minister of Health pursuant to the recommendation of the Head of the Food and Drug Supervisory Agency.”³⁷ Additionally, Section 37 stated that the Ministry of Health will further regulate Group II and Group III Narcotics.

Besides that, Section 4 point (1) of the Narcotics Act states that the law exists “to assure the supply of narcotics for the benefit of health services and/or the advancement of research and technology.” Meaning that the provision allows for the use of narcotics in health care and/or the advancement of research and technology. As a result, the Law also declared that “narcotics can only be used for medical treatment and or research purposes.”³⁸ Furthermore, the Law explicitly states that the Minister of Health may license scientific institutes and or educational institutions to acquire, cultivate, store, possess, stock, or control marijuana plants for medical treatment and scientific study.³⁹

However, under the recent Narcotics Law, even though marijuana research has been open since 2015, it has not been carried out until now.⁴⁰ Nonetheless, the Ministry of Health issued a statement, decree, and regulations in support of marijuana research for medicinal purposes, including the Ministry of Health Decree No.132/Menkes/SK/III/2012, which controlled permission to purchase, plant, store, and cultivate papaver, marijuana, and coca plants. Furthermore, Ministry of Health Regulation No. 26 of 2014 governs the annual demand plan for narcotics, psychotropic drugs, and precursors in order to assure the supply of narcotics and psychotropics for the benefit of health services and/or the advancement of research and technology.

³⁵ Recognized in the Preamble of the 1961 Single Convention on Narcotic Drugs, which was explained further in the Convention.

³⁶ Section 8 point (1) of the Narcotics Act 2009.

³⁷ Section 8 point (2) of the Narcotics Act 2009.

³⁸ Section 3 point (1) of the Narcotics Act 2009.

³⁹ Section 4 point (1) of the Narcotics Act 2009.

⁴⁰ Viku Paoki and Haniah Hanafie, “LGN Sebagai Kelompok Kepentingan (Studi Upaya Lingkar Ganja Nusantara (LGN) Dalam Perubahan UU No. 3 Tahun 2009 Tentang Narkotika),” *Independen* 2, no. 1 (2021): 33–40, <https://doi.org/10.24853/independen.2.1.33-40>.

As such, marijuana use in Indonesia has increased, particularly in the previous five years. There have recently been several reports of marijuana use for therapeutic purposes in Indonesia. Fidellis used marijuana to heal his wife, who had syringomyelia, in Kalimantan in 2017.⁴¹ According to material from the case file No.111/Pid.Sus/2017/PN. Sag at the Sanggau Court of First Instance; the wife had been in great agony for many years owing to syringomyelia, which required her to be hospitalized every two weeks.⁴² After being exposed to marijuana treatment in 2016, the wife felt better and could sleep without pain. Aside from that, another case occurred in 2020 where Reyndhart utilized marijuana to relieve nerve pain.⁴³ Though all of the parties used marijuana for therapeutic purposes for their family members, they were all arrested and sent to jail since the law prohibited it.

To provide a larger perspective on the urgency of marijuana usage in Indonesian law, one shall consider the application of medicinal marijuana legislation among states. Marijuana laws and attitudes have altered over the previous 20 years, and marijuana regulation has changed globally. Although the Controlled Substances Act (ACT), a legal declaration that regulates narcotics with a high potential for misuse, remains in effect in the United States, numerous states have regulated the possibility of using marijuana for medicinal purposes.⁴⁴ California was the first state to legalize medical marijuana in 1996, and other states and the District of Columbia have followed suit since then.⁴⁵

As of September 2016, twenty-five states and the District of Columbia had passed various legislation allowing patients to consume marijuana.⁴⁶ Recently, constitutional amendments in Florida, North Dakota, Arkansas, and Montana allowed the use of medicinal marijuana.⁴⁷ The authorized diagnoses vary by country but most frequently include cancer, glaucoma, HIV/AIDS, cachexia, severe chronic pain, severe nausea, seizures, and severe muscular spasms.⁴⁸ While adults

⁴¹ Jerome Wirawan and Oke Budhi, "'Ganja Untuk Obat,' Terbukti Atau Sekadar Akal-Akalan? - BBC News Indonesia," May 3, 2017, <https://www.bbc.com/indonesia/indonesia-39780294>.

⁴² Case No.111/Pid.Sus/2017/PN.Sag of the Republic of Indonesia.

⁴³ Ivany Atina Arbi, "Kupang Court Sends Man to Jail for Consuming Marijuana for Medical Use - The Jakarta Post," June 23, 2020, <https://www.thejakartapost.com/news/2020/06/22/kupang-court-sends-man-to-jail-for-consuming-marijuana-for-medical-use.html>.

⁴⁴ Alice Mead, "Legal and Regulatory Issues Governing Cannabis and Cannabis-Derived Products in the United States," *Frontiers in Plant Science* 10 (2019): 697, <https://doi.org/10.3389/fpls.2019.00697>.

⁴⁵ Steve P Calandrillo and Katelyn Fulton, "High Standards: The Wave of Marijuana Legalization Sweeping America Ignores the Hidden Risks of Edibles," *Ohio State Law Journal* 80, no. 2 (2019): 201.

⁴⁶ Julie Johnson, Dominic Hodgkin, and Sion Kim Harris, "The Design of Medical Marijuana Laws and Adolescent Use and Heavy Use of Marijuana: Analysis of 45 States from 1991 to 2011," *Drug and Alcohol Dependence* 170 (2017): 1–8, <https://doi.org/10.1016/j.drugalcdep.2016.10.028>.

⁴⁷ Ji-Yeun Park and Li-Tzy Wu, "Prevalence, Reasons, Perceived Effects, and Correlates of Medical Marijuana Use: A Review," *Drug and Alcohol Dependence* 177 (2017): 1–13, <https://doi.org/10.1016/j.drugalcdep.2017.03.009>.

⁴⁸ Diane E Hoffmann and Ellen Weber, "Medical Marijuana and the Law," *New England Journal of Medicine* 362, no. 16 (2010): 1453–57.

with qualifying diseases have legal access to medicinal marijuana, teenagers (those under the age of 18) can only consume it under certain conditions with the approval of a parent or guardian.⁴⁹

This legislation permits doctors to suggest (rather than prescribe) marijuana to patients and protects those who have obtained a recommendation from being convicted of marijuana possession.⁵⁰ To become a legal patient and get a medical marijuana card in most states, individuals must first register with the state medical marijuana program. Prior to 2009, the number of registered patients was minimal, but the landscape of marijuana availability and usage in the United States has altered. By the end of 2019, 33 states and the District of Columbia had legalized medical marijuana, while 11 states and the District of Columbia had legalized recreational marijuana and marijuana possession.⁵¹

As a result, the worldwide landscape of medicinal marijuana regulations is fast evolving. Canada, Australia, the Netherlands, Chile, Jamaica, the United Kingdom, Uruguay, Germany, the Czech Republic, and Colombia were among the 11 nations that officially permitted the use of marijuana for medicinal purposes.⁵² The Marijuana Medical Access Regulations (MMAR) were implemented in Canada in 2001, allowing the use of medical marijuana for serious diseases upon permission.⁵³ To replace the MMAR, the new Marijuana for Medical Purposes Regulations were passed in 2014, allowing medicinal practitioners to prescribe medical marijuana regardless of the patient's medical problems or the failure of conventional therapies.⁵⁴ Meanwhile, in Australia, the New South Wales Government approved the Terminal Illness Cannabis Scheme in 2014, which allowed adults with terminal illnesses who met the scheme's requirements to use medical marijuana.⁵⁵ The Narcotic Drugs Amendment Bill of 2016, which legalizes marijuana growing for medicinal and scientific uses, entered into effect in November 2016.

Further, Thailand was once the most potent marijuana country in the world among Southeast Asian countries. The marijuana plant was still prohibited in Thailand until 1979. Thailand

⁴⁹ Stacy Salomonsen-Sautel et al., "Medical Marijuana Use among Adolescents in Substance Abuse Treatment," *Journal of the American Academy of Child & Adolescent Psychiatry* 51, no. 7 (2012): 694–702, <https://doi.org/10.1016/j.jaac.2012.04.004>.

⁵⁰ Yu-Wei Luke Chu and Wilbur Townsend, "Joint Culpability: The Effects of Medical Marijuana Laws on Crime," *Journal of Economic Behavior & Organization* 159 (2019): 502–25.

⁵¹ Yi Li and Guang Guo, "Heterogeneous Peer Effects on Marijuana Use: Evidence from a Natural Experiment," *Social Science & Medicine* 252 (2020): 112907, <https://doi.org/10.1016/j.socscimed.2020.112907>.

⁵² Nora D Volkow et al., "Adverse Health Effects of Marijuana Use," *New England Journal of Medicine* 370, no. 23 (2014): 2219–27, <https://doi.org/10.1056/NEJMra1402309>.

⁵³ Benedikt Fischer, Sharan Kuganesan, and Robin Room, "Medical Marijuana Programs: Implications for Cannabis Control Policy—Observations from Canada," *International Journal of Drug Policy* 26, no. 1 (2015): 15–19, <https://doi.org/10.1016/j.drugpo.2014.09.007>.

⁵⁴ Mary-Ann Fitzcharles and Shahin Jamal, "Expanding Medical Marijuana Access in Canada: Considerations for the Rheumatologist," *The Journal of Rheumatology* 42, no. 2 (2015): 143–45, <https://doi.org/10.3899/jrheum.131514>.

⁵⁵ Jennifer H Martin and Yvonne A Bonomo, "Medicinal Cannabis in Australia: The Missing Links," *Medical Journal of Australia* 204, no. 10 (2016): 371–73, <https://doi.org/10.5694/mja16.00234>.

Parliament, on the other hand, has always supported the amending of it into the Thailand Narcotics Act B.E 2562 on 1 January 2019, which ultimately authorized medicinal marijuana.⁵⁶ Through manufacturing and sales permits, the Thai government closely regulates marijuana as a medicinal interest. Individual marijuana possession in specific amounts is permitted, but it must be accompanied by a prescription and certification recognized by the government. In 2018, the Thai government began to open universities and health professionals to investigate marijuana, resulting in the recognition that the marijuana plant has clinical value. As a result, the utilization of marijuana as a medicinal element may cure ailments that many Thais suffer from, such as cancer, driver syndrome, and epilepsy. Thai citizens can also obtain treatment at a lesser cost because it is manufactured in their nation.

Thus, several findings demonstrated above that there was sufficient evidence-based data proving marijuana may be utilized for medicinal purposes. There were also some ongoing clinical trials evaluating marijuana's usage in medicinal therapy. As a result, the medicinal marijuana rules in Indonesia should be addressed. Even as recently as July 3, 2022, Health Minister Budi Gunadi Sadikin told reporters in Jakarta that a rule legalizing the use of marijuana for medical research will be approved soon.⁵⁷ As a result, the public expects this approach to provide guarantees to researchers that marijuana use is worthy of being allowed for therapeutic purposes.

Despite the absence of considerable progress in this medical marijuana research policy, it is hoped that the government will take suitable and timely steps to legalize the use of medicinal marijuana in the Indonesian health sector. As a result of this medicinal marijuana research permit, researchers will presumably gain assurances that the plants utilized for the study will be simpler to obtain with Ministry of Health clearance. Furthermore, the patient's access to medical marijuana is eased and improved.

If research indicates that marijuana plant products might be used as medicine, the Indonesian government must approach regulatory reforms with an open mind. It is desirable to have a specialized medical marijuana law that would allow it to be used as an alternate treatment to improve patient care. It is expected that if the study findings are favorable, rules authorizing its use will be issued. It should be noted that the section on criminalizing those who require drugs for medicine directly opposes the right to medical care as a core human right, as stated in Article 28 H of the 1945 Constitution.

⁵⁶ Idham, "Legal Politics of Medical Cannabis in Indonesia," *Op.Cit.*

⁵⁷ BBC News, "Menteri Kesehatan Akan Izinkan Riset Ganja, Bagaimana Dampaknya Terhadap Upaya Legalisasi Untuk Keperluan Medis? - BBC News Indonesia," July 4, 2022, <https://www.bbc.com/indonesia/indonesia-61977271>.

Under the discussion on the benefit of marijuana, the author explained above, marijuana has been shown in several studies to have medicinal benefits in a range of countries. Marijuana components may help certain people with specific medical ailments.⁵⁸ As a result, it is hoped that the government would emphasize fundamental justice and legal usefulness for Indonesians by reevaluating the restriction on type-1 drugs in medical sectors and doing research on specific narcotics, including marijuana. The use of medical marijuana holds significant promise in evidence-based medicine. The limited medical marijuana research in Indonesia is founded upon insufficient legal framework rules. Furthermore, it is critical to decriminalize marijuana for medicinal usage since individuals who use medical marijuana are classified as having an emergency because the marijuana effectively addresses their illness. Considering Article 48 of the Criminal Code states that people who commit a criminal act due to an emergency cannot be penalized, it is hoped that no more parties will get themselves behind bars as a result of their possession and use of medicinal marijuana.

Given several data indicating that marijuana may be a potential option for other prescription treatments, the authors acknowledge that additional study is required to grasp the advantages of marijuana as a therapy completely. As the use of marijuana for medical purposes grows in popularity, state lawmakers, public health authorities, the marijuana industry, the general public, and healthcare practitioners must consider the unexpected effects when legalizing marijuana. More study is needed to establish the need for a change in laws and legislation to implement medical marijuana laws. Furthermore, because news framing can impact public views of medical marijuana legalization, it is critical to form public perceptions that can influence substance use patterns and, in turn, public attitudes toward medical marijuana.⁵⁹

4. Conclusion

Based on the established framework where marijuana remains classified under Group I of Narcotics Law, thereby prohibiting its use for medical research and treatment, it is crucial to highlight the international context. The ratification of the Single Convention on Narcotic Drugs in 1961, along with subsequent amendments permitting medicinal marijuana research and use, underscores the evolving regulatory landscape. These regulations, subject to adjustments by

⁵⁸ Penny F Whiting et al., “Cannabinoids for Medical Use: A Systematic Review and Meta-Analysis,” *Jama* 313, no. 24 (2015): 2456–73, <https://doi.org/10.1001/jama.2015.6358>.

⁵⁹ Stella M Resko et al., “Perceptions of Public Health Consequences of Marijuana Legalization,” *Addiction Research & Theory* 29, no. 3 (2021): 255–62, <https://doi.org/10.1080/16066359.2020.1823971>.

Ministry of Health regulations, reflect a growing body of evidence supporting the therapeutic benefits of medical marijuana.

Drawing insights from countries that have implemented medical marijuana legislation, continued research and dialogue are essential. These efforts could pave the way for legal reforms favoring the legalization of medical marijuana, aligning with patients' rights to access essential healthcare. Given its demonstrated therapeutic potential, there is merit in considering dedicated legislation that ensures the supervised use of marijuana for medicinal purposes, possibly overseen by a specialized governmental entity formed through collaboration between the National Narcotics Agency and the Ministry of Health. Such measures would contribute to a balanced approach that addresses medical needs while upholding regulatory control over marijuana's use.

References

- 1961 Single Convention on Narcotic Drugs. Accessed October 9, 2022. https://www.unodc.org/pdf/convention_1961_en.pdf.
- Abbiyyu, Mohammad Darry. "Strategi Gerakan Lingkar Ganja Nusantara Dalam Memperjuangkan Legalisasi Ganja Di Indonesia." *Jurnal Politik Muda* 5, no. 3 (2016): 300–310.
- Acevedo, Beatriz. "Creating the Cannabis User: A Post-Structuralist Analysis of the Re-Classification of Cannabis in the United Kingdom (2004–2005)." *International Journal of Drug Policy* 18, no. 3 (2007): 177–86. <https://doi.org/10.1016/j.drugpo.2006.11.008>.
- Arbi, Ivany Atina. "Kupang Court Sends Man to Jail for Consuming Marijuana for Medical Use - National - The Jakarta Post," June 23, 2020. <https://www.thejakartapost.com/news/2020/06/22/kupang-court-sends-man-to-jail-for-consuming-marijuana-for-medical-use.html>.
- Aso, Ester, and Isidre Ferrer. "Cannabinoids for Treatment of Alzheimer's Disease: Moving toward the Clinic." *Frontiers in Pharmacology* 5 (2014): 37. <https://doi.org/10.3389/fphar.2014.00037>.
- Baird, Carolyn. "Marijuana and Medicinal Marijuana: A Global Perspective." *Journal of Addictions Nursing* 30, no. 2 (2019): 125–27. <https://doi.org/10.1097/JAN.0000000000000280>.
- BBC News. "Legalisasi Ganja Untuk Keperluan Medis Ditolak MK - BBC News Indonesia," July 20, 2022. <https://www.bbc.com/indonesia/articles/c19m3k9wvmvo>.
- . "Menteri Kesehatan Akan Izinkan Riset Ganja, Bagaimana Dampaknya Terhadap Upaya

- Legalisasi Untuk Keperluan Medis? - BBC News Indonesia,” July 4, 2022. <https://www.bbc.com/indonesia/indonesia-61977271>.
- Bewley-Taylor, David, and Martin Jelsma. “Fifty Years of the 1961 Single Convention on Narcotic Drugs: A Reinterpretation.” *Series on Legislative Reform of Drug Policies* 12 (2011): 1–20.
- . “Regime Change: Re-Visiting the 1961 Single Convention on Narcotic Drugs.” *International Journal of Drug Policy* 23, no. 1 (2012): 72–81. <https://doi.org/10.1016/j.drugpo.2011.08.003>.
- Bradford, Ashley C, and W David Bradford. “Medical Marijuana Laws May Be Associated with a Decline in the Number of Prescriptions for Medicaid Enrollees.” *Health Affairs* 36, no. 5 (2017): 945–51. <https://doi.org/10.1377/hlthaff.2016.1135>.
- Buenz, E J, H E Johnson, E M Beekman, T J Motley, and B A Bauer. “Bioprospecting Rumphius’s Ambonese Herbal: Volume I.” *Journal of Ethnopharmacology* 96, no. 1–2 (2005): 57–70. <https://doi.org/10.1016/j.jep.2004.08.016>.
- Calandrillo, Steve P, and Katelyn Fulton. “High Standards: The Wave of Marijuana Legalization Sweeping America Ignores the Hidden Risks of Edibles.” *Ohio State Law Journal* 80, no. 2 (2019): 201.
- Case No.111/Pid.Sus/2017/PN.Sag.
- Caulley, Lisa, Benjamin Caplan, and Edgar Ross. “Medical Marijuana for Chronic Pain.” *The New England Journal of Medicine* 379, no. 16 (2018): 1575–77.
- Chu, Yu-Wei Luke, and Wilbur Townsend. “Joint Culpability: The Effects of Medical Marijuana Laws on Crime.” *Journal of Economic Behavior & Organization* 159 (2019): 502–25.
- D’Amico, Elizabeth J, Joan S Tucker, Eric R Pedersen, and Regina A Shih. “Understanding Rates of Marijuana Use and Consequences among Adolescents in a Changing Legal Landscape.” *Current Addiction Reports* 4, no. 4 (2017): 343–49. <https://doi.org/10.1007/s40429-017-0170-y>.
- Englund, Amir, Tom P Freeman, Robin M Murray, and Philip McGuire. “Can We Make Cannabis Safer?” *The Lancet Psychiatry* 4, no. 8 (2017): 643–48. [https://doi.org/10.1016/S2215-0366\(17\)30075-5](https://doi.org/10.1016/S2215-0366(17)30075-5).
- Ferdinan. “BNN Rejects Legalization Of Marijuana, Affirms Narcotics Category 1 Is Not Allowed For Drug Purposes,” July 5, 2022. <https://voi.id/en/berita/186713/bnn-tolak-legalisasi-ganja-tegaskan-narkotika-golongan-1-tak-diperbolehkan-untuk-kepentingan-obat>.
- Fischer, Benedikt, Sharan Kuganesan, and Robin Room. “Medical Marijuana Programs:

- Implications for Cannabis Control Policy—Observations from Canada.” *International Journal of Drug Policy* 26, no. 1 (2015): 15–19. <https://doi.org/10.1016/j.drugpo.2014.09.007>.
- Fitzcharles, Mary-Ann, and Shahin Jamal. “Expanding Medical Marijuana Access in Canada: Considerations for the Rheumatologist.” *The Journal of Rheumatology* 42, no. 2 (2015): 143–45. <https://doi.org/10.3899/jrheum.131514>.
- Friese, Bettina, and Joel W Grube. “Legalization of Medical Marijuana and Marijuana Use among Youths.” *Drugs: Education, Prevention and Policy* 20, no. 1 (2013): 33–39. <https://doi.org/10.3109/09687637.2012.713408>.
- Gondokesumo, Marisca Evalina, and Nabbilah Amir. “Legality Of Marijuana Use In The Need For Medical Treatment In Indonesia (Judging From Law Number 36 Of 2009 Concerning Health And Law Number 35 Of 2009 Concerning Narcotics).” *Journal Equity of Law and Governance* 1, no. 2 (2021): 119–26. <https://doi.org/10.55637/elg.1.2.3938.119-126>.
- Hines, Larissa, Jill Glick, Kristin Bilka, and John D Lantos. “Medical Marijuana for Minors May Be Considered Child Abuse.” *Pediatrics* 142, no. 4 (2018). <https://doi.org/10.1542/peds.2017-4310>.
- Hoffmann, Diane E, and Ellen Weber. “Medical Marijuana and the Law.” *New England Journal of Medicine* 362, no. 16 (2010): 1453–57.
- Idham, Gunawan Widjaja. “Legal Politics of Medical Cannabis in Indonesia.” *Multicultural Education* 7, no. 6 (2021): 297–300. <https://doi.org/10.5281/zenodo.4975526>.
- Johnson, Julie, Dominic Hodgkin, and Sion Kim Harris. “The Design of Medical Marijuana Laws and Adolescent Use and Heavy Use of Marijuana: Analysis of 45 States from 1991 to 2011.” *Drug and Alcohol Dependence* 170 (2017): 1–8. <https://doi.org/10.1016/j.drugalcdep.2016.10.028>.
- Kępski, Piotr. “Defining ‘the Marijuana Problem’: An Analysis of the Polish Daily Press, 2015–2016.” *Nordic Studies on Alcohol and Drugs* 38, no. 4 (2021): 361–76. <https://doi.org/10.1177/1455072520936807>.
- Law No 35 of 2009 concerning Narcotics of the Republic of Indonesia.
- Li, Yi, and Guang Guo. “Heterogeneous Peer Effects on Marijuana Use: Evidence from a Natural Experiment.” *Social Science & Medicine* 252 (2020): 112907. <https://doi.org/10.1016/j.socscimed.2020.112907>.
- Llewellyn, Aisyah. “Indonesian Mothers Fight for Medical Marijuana for Their Children | Health News | Al Jazeera,” August 10, 2022. <https://www.aljazeera.com/news/2022/8/10/indonesian-mothers-fight-for-medical->

marijuana-for-their-children.

- Martin, Jennifer H, and Yvonne A Bonomo. "Medicinal Cannabis in Australia: The Missing Links." *Medical Journal of Australia* 204, no. 10 (2016): 371–73. <https://doi.org/10.5694/mja16.00234>.
- Mead, Alice. "Legal and Regulatory Issues Governing Cannabis and Cannabis-Derived Products in the United States." *Frontiers in Plant Science* 10 (2019): 697. <https://doi.org/10.3389/fpls.2019.00697>.
- Mikuriya, Tod H. "Marijuana in Medicine: Past, Present and Future." *California Medicine* 110, no. 1 (1969): 34.
- Murdomo, J S, Vidya Ratri Ramadhani, Jovan Ramadhan Gomang, Dery Yoga Wibiyanto, and Lanjar Jalu Nugroho. "Pandangan Hukum Pidana Terhadap Legalisasi Ganja Di Indonesia." *Jurnal Kajian Hukum* 6, no. 1 (2021): 12–19.
- Pangaribuan, Aristo Marisi Adiputra, and Kelly Manthovani. "Causes and Consequences of the War on Marijuana in Indonesia." *Indonesia Law Review* 9, no. 2 (2019): 22. <https://doi.org/10.15742/ilrev.v9n2.502>.
- Paoki, Viku, and Haniah Hanafie. "LGN Sebagai Kelompok Kepentingan (Studi Upaya Lingkar Ganja Nusantara (LGN) Dalam Perubahan UU No. 3 Tahun 2009 Tentang Narkotika)." *Independen* 2, no. 1 (2021): 33–40. <https://doi.org/10.24853/independen.2.1.33-40>.
- Park, Ji-Yeun, and Li-Tzy Wu. "Prevalence, Reasons, Perceived Effects, and Correlates of Medical Marijuana Use: A Review." *Drug and Alcohol Dependence* 177 (2017): 1–13. <https://doi.org/10.1016/j.drugalcdep.2017.03.009>.
- Putranto, Mahardian, and Yovita Arie Mangesti. "Penggunaan Ganja Medis Dalam Pengobatan Dan Pengaturannya Di Indonesia." *Journal Evidence Of Law* 3, no. 1 (2024): 10–19. <https://doi.org/10.59066/jel.v3i1.582>.
- Putri, Dania, and Tom Blickman. "Cannabis in Indonesia." *Drug Policy Briefing* 44 (2016): 1–24.
- Resko, Stella M, Kathryn A Szechy, Theresa J Early, Jennifer D Ellis, Danielle Hicks, and Elizabeth Agius. "Perceptions of Public Health Consequences of Marijuana Legalization." *Addiction Research & Theory* 29, no. 3 (2021): 255–62. <https://doi.org/10.1080/16066359.2020.1823971>.
- Rieder, Michael J, Canadian Paediatric Society, and Drug Therapy and Hazardous Substances Committee. "Is the Medical Use of Cannabis a Therapeutic Option for Children?" *Paediatrics & Child Health* 21, no. 1 (2016): 31–34. <https://doi.org/10.1093/pch/21.1.31>.
- Salomonsen-Sautel, Stacy, Joseph T Sakai, Christian Thurstone, Robin Corley, and Christian

- Hopfer. "Medical Marijuana Use among Adolescents in Substance Abuse Treatment." *Journal of the American Academy of Child & Adolescent Psychiatry* 51, no. 7 (2012): 694–702. <https://doi.org/10.1016/j.jaac.2012.04.004>.
- Sandberg, Sveinung. "Cannabis Culture: A Stable Subculture in a Changing World." *Criminology & Criminal Justice* 13, no. 1 (2013): 63–79. <https://doi.org/10.1177/1748895812445620>.
- Sarma, Nandakumara D, Andrew Wayne, Mahmoud A ElSohly, Paula N Brown, Sytze Elzinga, Holly E Johnson, Robin J Marles, Jeremy E Melanson, Ethan Russo, and Lawrence Deyton. "Cannabis Inflorescence for Medical Purposes: USP Considerations for Quality Attributes." *Journal of Natural Products* 83, no. 4 (2020): 1334–51. <https://dx.doi.org/10.1021/acs.jnatprod.9b01200>.
- Sarvet, Aaron L, Melanie M Wall, David S Fink, Emily Greene, Aline Le, Anne E Boustead, Rosalie Liccardo Pacula, Katherine M Keyes, Magdalena Cerdá, and Sandro Galea. "Medical Marijuana Laws and Adolescent Marijuana Use in the United States: A Systematic Review and Meta-analysis." *Addiction* 113, no. 6 (2018): 1003–16.
- Sznitman, Sharon R, and Nehama Lewis. "Is Cannabis an Illicit Drug or a Medicine? A Quantitative Framing Analysis of Israeli Newspaper Coverage." *International Journal of Drug Policy* 26, no. 5 (2015): 446–52. <http://dx.doi.org/10.1016/j.drugpo.2015.01.010>.
- United Nations. "CND Votes on Recommendations for Cannabis and Cannabis-Related Substances." Accessed October 9, 2022. <https://www.unodc.org/unodc/en/frontpage/2020/December/cnd-votes-on-recommendations-for-cannabis-and-cannabis-related-substances.html>.
- Velasco, G, C Sánchez, and M Guzmán. "Anticancer Mechanisms of Cannabinoids." *Current Oncology* 23, no. s1 (2016): 23–32. <http://dx.doi.org/10.3747/co.23.3080>.
- Volkow, Nora D, Ruben D Baler, Wilson M Compton, and Susan R B Weiss. "Adverse Health Effects of Marijuana Use." *New England Journal of Medicine* 370, no. 23 (2014): 2219–27. <https://doi.org/10.1056/NEJMr1402309>.
- Whiting, Penny F, Robert F Wolff, Sohan Deshpande, Marcello Di Nisio, Steven Duffy, Adrian V Hernandez, J Christiaan Keurentjes, Shona Lang, Kate Misso, and Steve Ryder. "Cannabinoids for Medical Use: A Systematic Review and Meta-Analysis." *Jama* 313, no. 24 (2015): 2456–73. <https://doi.org/10.1001/jama.2015.6358>.
- Widjaja, Gunawan. "Should Cannabis as Medicine Be Specifically Regulated?" *Genus* 3, no. 3 (2018). <https://doi.org/10.15416/pcpr.v3i3.19979>.
- Wirawan, Jerome, and Oke Budhi. "'Ganja Untuk Obat,' Terbukti Atau Sekadar Akal-Akalan? -

BBC News Indonesia,” May 3, 2017. <https://www.bbc.com/indonesia/indonesia-39780294>.
Yankey, B, R Rothenberg, S Strasser, K White, and I Okosun. “Relationship between Years of Marijuana Use and the Four Main Diagnostic Criteria for Metabolic Syndrome among United States Adults.” *Journal of Addiction Research & Therapy* 11, no. 1 (2017): 22–34. <https://doi.org/10.4172/2155-6105.1000S11-017>.