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Medical Cannabis Regulation in East and Southeast Asia: A Scoping Review and Policy Insights for Malaysia

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Abstract

Introduction: A global shift towards legalising cannabis for therapeutic use has sparked significant debate in East and Southeast Asia, a region historically defined by stringent anti-narcotics laws. As nations navigate the tension between therapeutic evidence and public health concerns, regulatory responses have diverged, ranging from progressive legalisation to the continuation of strict prohibition. **Methods**: This scoping review examines the regulatory frameworks across Indonesia, Malaysia, Thailand, the Philippines, South Korea, Singapore, and Japan to identify divergent models, persistent challenges, and potential policy insights for Malaysia. **Results**: The findings reveal a fragmented landscape. Thailand is a regional outlier, having legalised medical cannabis through a controlled system integrating pharmaceutical and traditional medicine. Japan permits only cannabidiol products with negligible tetrahydrocannabinol. Conversely, countries like Indonesia, Singapore, and the Philippines maintain strict prohibition with severe penalties, despite ongoing debates and legislative proposals. This regulatory diversity highlights the tension between public health concerns, economic opportunities, and treaty obligations. For Malaysia, a cautious, incremental policy reform guided by scientific evidence is recommended. **Conclusion**: Adopting a regulated CBD-only framework could offer Malaysia a low-risk entry point, balancing therapeutic potential with strict controls. The study underscores the need for evidence-based strategies and stakeholder engagement to facilitate safe patient access while minimising risks of misuse.

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Introduction

Medical cannabis, which involves the therapeutic use of cannabis and its derivatives, has garnered increasing attention for managing a variety of medical conditions (NSDUH Annual National Report, 2024). The primary bioactive compounds in cannabis are tetrahydrocannabinol (THC) and cannabidiol (CBD). THC is responsible for the psychoactive effects associated with cannabis, whereas CBD is non-psychoactive and has been extensively studied for its potential anti-inflammatory, analgesic, and anxiolytic benefits (Expert Committee on Drug Dependence, 2023). In recent years, there has been a global trend towards the legalisation and regulation of medical cannabis, as countries seek to harness the potential therapeutic benefits while mitigating the risks associated with uncontrolled access and use.

The term medical cannabis encompasses a broad array of products derived from the *Cannabis sativa* plant or synthesised to mimic its bioactive compounds. These include the raw plant material, extracts, and isolated or synthetic cannabinoids used for therapeutic purposes. Regulatory agencies in various jurisdictions have approved specific cannabinoid-based medications such as dronabinol and nabiximols for conditions including chronic pain, multiple sclerosis-related spasticity, epilepsy, and chemotherapy-induced nausea (Silva & Carvalho, 2022). However, the definitions and legal status of medical cannabis vary significantly across countries, contributing to regulatory complexity and inconsistent research methodologies (Solís Sánchez et al., 2024).

In the Asia-Pacific region, the regulatory landscape for medical cannabis is diverse and rapidly evolving. Thailand was the first country in Southeast Asia to legalise medical cannabis in 2019, marking a significant milestone for the region. Australia and New Zealand have also approved the medical use of cannabis, while other countries in the region, such as South Korea and Singapore, have more limited or restrictive policies (Areesantichai et al., 2020). The regulation of medical cannabis typically involves a range of considerations, including the types of cannabis products allowed, the conditions for which they can be prescribed, the process for obtaining a prescription, and the oversight and quality control measures in place.

The regulatory approaches employed by different countries can be broadly categorised into two models: the medicalised model and the commercial model (Rehm et al., 2019). The medicalised model emphasises the treatment of specific medical conditions using cannabis-based products, with strict controls and oversight from healthcare professionals and regulatory authorities. In contrast, the commercial model aims to create a more open market for cannabis products, often with less stringent requirements for medical conditions and prescriptions, as seen in some North American jurisdictions (Souza et al., 2022; Rehm et al., 2019).

Malaysia, however, maintains one of the region's most stringent stances. Under the Dangerous Drugs Act 1952, cannabis is classified as a Schedule I drug with severe penalties, including capital punishment for trafficking (Dangerous Drugs Act 1952, 2012). Although the country currently permits cannabis only for government-sanctioned research, recent debates on the potential medical benefits of cannabis have spurred discussions on regulatory reforms (Dapari et al., 2022). This review seeks to compare medical cannabis policies across selected East Asia and Southeast Asia countries with Malaysia's policies, aiming to identify opportunities and challenges for reform. The study is justified by the global momentum toward medical cannabis legalisation and the need for Malaysia to re-examine its policies in light of emerging scientific and economic opportunities. The existing policy tension in Malaysia, between its research-only allowance and the broader regional and global shifts towards medical cannabis access, forms a central motivation for this comparative review.

Methods

This scoping review follows the methodology outlined by the Joanna Briggs Institute (JBI) for conducting systematic evidence syntheses (Santos et al., 2018). The review process consisted of

formulating the research question, systematically identifying relevant literature, selecting studies based on eligibility criteria, and extracting and synthesising key findings to map existing knowledge on medical cannabis regulations in East Asia and Southeast Asia.

The study conducted a systematic literature search using PubMed and Google Scholar to identify relevant peer-reviewed studies, policy documents, and government reports. This scoping review employed a broad search strategy that allowed for reproducibility, transparency, and reliability in mapping the current state of the literature. The PubMed search was performed using a structured query with MeSH terms and Boolean operators to enhance precision. The following search string was used in PubMed:

("Cannabis"[MeSH] OR "Cannabis"[TIAB] OR "medical marijuana"[TIAB] OR "medicinal cannabis"[TIAB] OR "cannabinoid therapy"[TIAB] OR "cannabis-based medicine"[TIAB] OR "THC"[TIAB] OR "CBD"[TIAB] OR "cannabidiol"[TIAB] OR "hemp"[TIAB] OR "cannabis-derived products"[TIAB])

AND

("Legislation as Topic"[MeSH] OR "Health Policy"[MeSH] OR "regulation"[TIAB] OR "law"[TIAB] OR "policy"[TIAB] OR "drug control"[TIAB] OR "regulatory framework"[TIAB] OR "government strategy"[TIAB] OR "legalisation"[TIAB] OR "controlled substances"[TIAB])

AND

("East Asia"[MeSH] OR "Southeast Asia"[MeSH] OR "East Asia"[TIAB] OR "Southeast Asia"[TIAB] OR "Far East"[TIAB] OR "Asia-Pacific"[TIAB] OR "China"[TIAB] OR "Japan"[TIAB] OR "South Korea"[TIAB] OR "Mongolia"[TIAB] OR "Thailand"[TIAB] OR "Vietnam"[TIAB] OR "Indonesia"[TIAB] OR "Malaysia"[TIAB] OR "Philippines"[TIAB] OR "Singapore"[TIAB] OR "Myanmar"[TIAB] OR "Cambodia"[TIAB] OR "Laos"[TIAB] OR "Brunei"[TIAB] OR "Timor-Leste"[TIAB])

Additionally, Google Scholar was used to manually hand-pick relevant articles, allowing for the inclusion of grey literature, government policy papers, and regulatory reports that may not be indexed in traditional academic databases. The Google Scholar search used a broader set of keyword terms, including "medical cannabis", "cannabis regulation", and country names of East Asia and Southeast Asia. This dual approach ensured a comprehensive and diverse dataset covering both academic and policy perspectives.

Identification of Relevant Studies

The search was restricted to peer-reviewed articles published in English within the past decade. All identified studies were transferred to a reference management tool, and duplicates as well as titles in other languages were removed. Two authors independently screened the titles and abstracts to assess relevance and then conducted full-text reviews to ensure alignment with the inclusion criteria. Any discrepancies in the selection process were resolved through discussion. Articles were included if they explored the regulatory frameworks, policies, and governance structures surrounding medical cannabis in East Asia and Southeast Asia. Studies were excluded if they focused solely on recreational cannabis or discussed regulations outside the target regions.

Data Extraction and Synthesis

Key information was extracted and synthesised into a narrative format, focusing on country-specific regulatory frameworks, enforcement mechanisms, and stakeholder perspectives. The thematic synthesis aimed to identify common patterns, regulatory challenges, and policy gaps across different jurisdictions. The findings were then critically analysed in relation to existing policies and emerging trends in medical cannabis regulation within the region.

Results and Discussion

Characteristics of Included Studies

The initial search identified 351 articles. Following the screening of titles and abstracts, 118 articles were

deemed eligible for full-text review. After a comprehensive full-text assessment, 34 articles met the inclusion criteria and were included in this scoping review. These studies examine the regulatory environments for medical cannabis in seven selected countries across East and Southeast Asia: Indonesia, Malaysia, Thailand, the Philippines, South Korea, Singapore, and Japan. The study selection process is illustrated in the PRISMA flow diagram (Figure 1).

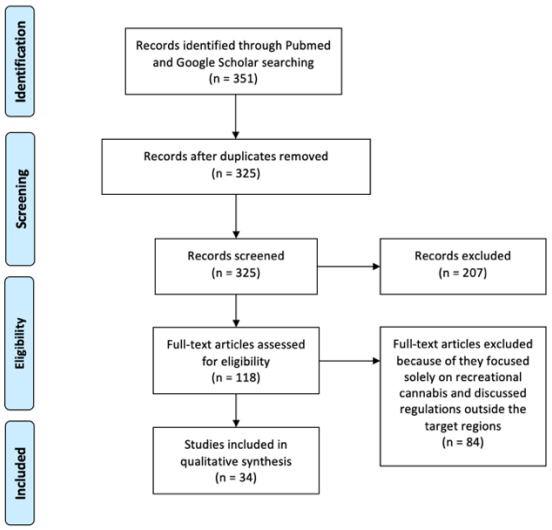

Figure 1: Prisma flow diagram of study selection

The geographical distribution of the 34 included studies indicates a notable concentration of research on specific countries. The majority of studies focused on Indonesia (n=17) and Thailand (n=15). Malaysia (n=6), Japan (n=4), and South Korea (n=3) were also represented. Fewer studies focused primarily on the Philippines (n=2) and Singapore (n=2) within the final selection, although these countries were often discussed in broader regional reviews. It is important to note that several studies addressed the regulatory landscape in multiple countries from this list; consequently, the sum of these country-specific mentions exceeds the total number of unique articles (n=34) included in this review. This concentration suggests that academic and policy discourse may be heavily influenced by the experiences of Indonesia, with its strict prohibition and ongoing debate, and Thailand, a regional pioneer in legalisation. Such a focus might inadvertently create knowledge gaps for other nations, including Malaysia, which is the primary focus for policy insights in this review.

A diverse range of methodological approaches was employed across the included studies, with many researchers utilising multiple research methods. Normative legal research was particularly prevalent in Indonesia-focused studies, reflecting a strong emphasis on analysing legal frameworks and their implications for medical cannabis regulation. The studies examined key policy issues such as legal classification, enforcement mechanisms, medical access models, and the potential socio-economic impact of cannabis reform. Table 1 summarises the key characteristics of the included studies.

Definition of Medical Cannabis

A clear and consistent definition of "medical cannabis" is often elusive in the diverse regulatory and research landscape. The articles included in this review demonstrate this variability. Generally, medical cannabis refers to the use of the *Cannabis sativa* plant, its components (cannabinoids like THC and CBD), or derived products for therapeutic purposes to treat or alleviate symptoms of medical conditions, under some form of regulatory oversight or medical guidance. This use is typically distinguished from recreational consumption, which lacks a therapeutic intent and regulatory control for medical application.

The scope of products considered medical cannabis varies significantly. Some frameworks, like Japan's, are highly restrictive, focusing almost exclusively on imported, pharmaceutical-grade CBD products with negligible THC content (less than 0.3%). Other contexts, such as Thailand, encompass a broader array of products. These can include pharmaceutical-grade cannabis-based medicines, which are standardised products, often with defined THC/CBD ratios like Sativex or Epidiolex, that have undergone clinical trials and received regulatory approval in various countries. Additionally, some regulatory systems or research studies consider the use of whole-plant cannabis or cannabis extracts, such as dried cannabis flower or broader extracts containing a wider spectrum of cannabinoids and terpenes.

Table 1: Key characteristics of the included studies

No	Author	Year Published	Country Focus	Study Type
1	Joni et al.	2023	Malaysia	Thematic review
2	Aditya & Al-Fatih	2022	Indonesia	Policy analysis
3	Areesantichai et al.	2020	Thailand, South Korea, Singapore, Asia-Pacific*	Systematic review
4	Pribowo et al.	2024	Indonesia	Normative legal research
5	Dalmacion et al.	2021	Philippines	Policy analysis
6	Fauziah et al.	2023	Indonesia	Narrative review, policy analysis
7	Fransiska	2022	Indonesia	Normative legal research
8	Guntara et al.	2024	Indonesia	Normative legal research
9	Han et al.	2016	South Korea	Narrative review
10	Indriani and Madjid	2022	Thailand, Indonesia	Normative legal research
11	Kalayasiri et al.	2019	Thailand	Narrative review, policy analysis
12	Kartika et al.	2024	Indonesia, Canada*, Italy*, Australia*	Normative legal research
13	Lestari	2024	Indonesia	Normative legal research
14	Matsushita	2020	Japan, Thailand, Germany*, USA*, Canada*	Policy analysis, systematic review
15	McGregor et al.	2020	Japan, USA*, Canada*, Germany*, Ireland*, UK*, Switzerland*, Australia* & New Zealand*	Policy analysis, systematic review
16	Nasir	2024	Indonesia	Normative legal research
17	Mohamed et al.	2022	Malaysia	Narrative review
18	Ransing et al.	2021	Thailand, Malaysia	Narrative review
19	Rehm et al.	2019	Thailand, Canada, Germany	Policy analysis
20	Risano & Ningtias	2023	Indonesia	Normative legal research, policy analysis
21	Aristiani & MH	2024	Indonesia	Normative legal research
22	Tomiyama and Funada	2020	USA, Japan	Narrative review, policy analysis
23	Triyatna et al.	2024	Indonesia, Netherlands, Thailand	Normative legal research
24	Vorapani et al.	2024	Thailand	Qualitative research
25	Widjaja	2018	Indonesia, global comparison*	Normative legal research, policy analysis
26	Yustina et al.	2023	Indonesia, Thailand, Malaysia, Singapore	Normative legal research, comparative method
27	Dapari et al.	2022	Malaysia	Cross-sectional study
28	Deng et al.	2023	Thailand	Media narrative analysis
29	Ehambaranathan et al.	2023	Thailand, Southeast Asia	Conceptual analysis
30	Jensema	2025	Thailand	Policy analysis
31	Karen	2022	Global including Southeast Asia	Narrative review
32	Mokwena	2019	Global including Southeast Asia	Narrative review
33	Razali et al.	2019	Malaysia	Normative legal research
34	Zinboonyahgoon et al.	2020	Thailand	Narrative review

*Countries or regions not included in the analysis

Thailand's model also uniquely incorporates traditional and folk medicine formulations, reflecting an integration of cultural practices by utilising cannabis in traditional Thai medicine (TTM) and folk remedies. Furthermore, beyond CBD-only products, research and some regulatory discussions involve cannabinoid-specific products, including THC-containing products or those with other minor cannabinoids, for conditions where THC's psychoactive or therapeutic properties are deemed necessary. Table 2 summarises common themes and variations in how "medical cannabis" is defined within the reviewed articles.

Table 2: Definitions and Scope of "Medical Cannabis" in Reviewed Literature

Definition/ Scope	Description
Pharmaceutical Preparations	Approved, standardised medicines containing specific cannabinoids (natural or synthetic) subject to rigorous clinical trials and regulatory approval.
CBD-Dominant Products	Products primarily containing cannabidiol (CBD) with very low or non-detectable levels of THC (e.g., <0.3% as per Japanese regulation). Often derived from hemp.
Whole-Plant/ Broad-Spectrum Extracts	Use of the cannabis plant flower or extracts containing a wider range of cannabinoids and terpenes, potentially offering an "entourage effect."
Traditional/ Folk Medicine Formulations	Cannabis preparations based on traditional medical systems or folk practices, often with less standardisation than pharmaceutical products.
General Therapeutic Use of Cannabis and its Derivatives	Broad term referring to any use of cannabis or its chemical components for managing medical conditions or symptoms, often without specifying product type.

The lack of a uniform definition of medical cannabis across the reviewed literature complicates direct cross-country comparisons of regulatory frameworks and their outcomes. This definitional variance means that legalisation of medical cannabis can imply very different practical realities regarding patient access, economic opportunities, and public health risks. This nuance is critical for Malaysian policymakers, as the choice of definition and product scope will fundamentally shape any future regulatory framework.

Legal Classification and Control Frameworks

The regulatory frameworks governing medical cannabis in East and Southeast Asia vary significantly, reflecting the region's diverse political, legal, and socio-cultural contexts. According to the findings of this review, medical cannabis laws in the region can be broadly categorised into three groups: prohibited (Singapore, Malaysia, the Philippines, Indonesia, and South Korea), limited approval (Japan), and legalised for medical use (Thailand). Table 3 summarises the legal status of medical cannabis in each country.

Table 3: Legal status of medical cannabis

Country	Legal Status	Recent Changes
Indonesia	Prohibited	No significant changes; ongoing debates
Malaysia	Prohibited	Discussions on potential authorisation for therapeutic purposes
Thailand	Legalised	Legalised in 2019; further liberalisation in 2022
Philippines	Prohibited	Proposal for a new bill
South Korea	Prohibited	Discussions on potential authorisation for therapeutic purposes
Singapore	Prohibited	No significant changes; ongoing debates
Japan	Limited approval	Discussions on potential authorisation for therapeutic purposes

Most countries maintain strict prohibitionist policies, particularly Singapore, Malaysia, the Philippines, Indonesia, and South Korea, where zero-tolerance drug laws impose severe criminal penalties for cannabis-related offences. However, pharmaceuticals derived from cannabis, such as Epidiolex or Sativex, may be allowed in some cases if they comply with national drug regulatory frameworks governing psychotropic substances. Even so, domestic research and development of cannabis-based treatments remain highly restricted. Japan represents a middle-ground approach, permitting CBD-only products with THC content below 0.3%, but maintaining strict bans on all other cannabis-related substances. This reflects a highly cautious, pharmaceutical-driven approach.

Thailand is the only country in the region to have fully legalised medical cannabis, implementing a structured framework for production, distribution, and patient access (Jensema, 2025; Areesantichai et al., 2020). The Thai

model categorises medical cannabis into three product classes: pharmaceutical-grade cannabis-based medicines (CBMs), Traditional Thai Medicine (TTM) formulations, and folk medicine products. Thailand's state-controlled system aims to prevent misuse while expanding legal access, with cannabis increasingly integrated into public healthcare services.

Divergent Legal Approaches: Public Health, Criminalisation, and Sociocultural Context in Malaysia

The stark contrast in regulatory approaches across East and Southeast Asia raises critical legal and ethical questions regarding the justification of strict cannabis prohibition in light of growing evidence supporting its medical use. Countries such as Indonesia, Malaysia, the Philippines, and historically South Korea and Singapore, largely uphold stringent drug laws, often classifying cannabis as a dangerous narcotic. While the dominant legal interpretation in these jurisdictions has historically minimised or denied its legitimate medical value, it is noteworthy that some of the reviewed literature, even when discussing these prohibitionist regimes, acknowledges the growing body of international scientific evidence for cannabis's therapeutic applications. This classification has been increasingly contested by medical research and policy shifts in other regions, where cannabis is now recognised for therapeutic applications in managing conditions such as epilepsy, multiple sclerosis, and chemotherapy-induced nausea (Freeman et al., 2019).

The rationale for maintaining prohibitionist policies often stems from concerns over public health risks, the potential for abuse, and the lack of standardised dosing guidelines. However, emerging global trends suggest that a more nuanced approach, differentiating between recreational and medical cannabis use, is becoming increasingly viable. The World Health Organisation (WHO) has recommended rescheduling cannabis in international drug treaties to reflect its therapeutic potential while maintaining controls to prevent misuse (Bennett, 2017). Thailand's decision to legalise medical cannabis demonstrates that strict prohibition is not the only viable approach; by implementing a government-controlled programme, Thailand has expanded patient access while maintaining oversight to prevent recreational misuse (Jensema, 2025). This suggests that carefully regulated medical cannabis programmes, supported by scientific research and legal safeguards, may offer a more balanced approach.

In Malaysia, any reform must navigate complex sociocultural terrain. Islamic principles heavily influence law and policy, particularly regarding intoxicants. However, the concept of *darurah* (necessity) in Islamic jurisprudence permits the use of otherwise prohibited substances for essential medical purposes if prescribed by a qualified Muslim physician. Supporting this, a 2022 fatwa by Malaysia's National Fatwa Council allowed medical cannabis use under strict conditions: expert medical recommendation, official authorisation, and exclusive medical application (Ismail et al., 2023).

Cultural attitudes also play a significant role. Cannabis is strongly stigmatised and associated with criminality and social decay. This perception stems from decades of framing drug abuse as a national security threat, with severe legal penalties. Nonetheless, there are signs of change. A 2022 survey by Dapari et al. found that 64.7% of adults in Selangor conditionally accepted medical cannabis, particularly when presented with educational materials or reassured of low risk (Dapari et al., 2022).

Institutionally, Malaysia remains cautious but is gradually engaging with the issue of medical cannabis. While the Ministry of Health (MOH) has not formally adopted a policy, it has expressed openness to clinical trials for cannabis-derived products, emphasising the need for scientific validation and adherence to regulatory frameworks to prevent misuse (Astro Awani, 2022). The National Pharmaceutical Regulatory Agency (NPRA) continues to stress the importance of rigorous, evidence-based assessments before permitting any medical cannabis applications. Simultaneously, national security bodies like the Majlis Keselamatan Negara (MKN) remain critical stakeholders, as Malaysia's longstanding anti-drug stance frames narcotics, including cannabis, as threats to national security and societal stability.

The Role of Government Control in Medical Cannabis Regulation

The degree of government oversight is a defining feature of medical cannabis regulation across East and Southeast Asia. Even in countries where some form of cannabis legalisation exists, state control remains highly centralised, ensuring that access is tightly regulated, and misuse is minimised. In Thailand and Japan, governments have direct

control over cannabis production, distribution, and prescribing practices, demonstrating that strict regulation and legalisation are not mutually exclusive (Areesantichai et al., 2020; Indriani & Madjid, 2022). However, the effectiveness of these models varies, as excessive state control may restrict access, delay licensing processes, and limit patient eligibility.

Thailand's centralised model is notable for its emphasis on state supervision over cultivation and distribution (Zinboonyahgoon et al., 2020). The government has retained full authority over licensing, ensuring that only registered entities can legally grow and supply medical cannabis. This approach minimises the risk of illicit diversion, maintaining strict oversight while gradually expanding legal access. However, early reports suggest that high regulatory barriers and slow licensing processes have limited patient access, indicating that over-regulation may undermine the intended public health benefits of medical cannabis legalisation (Rehm et al., 2019; Zinboonyahgoon et al., 2020). Policymakers considering medical cannabis reform must therefore balance tight regulatory controls with patient accessibility, ensuring that legal pathways to medical cannabis use are not overly restrictive.

Japan's CBD-only approach offers another example of strict regulatory oversight, where only cannabis products containing less than 0.3% THC are legally permitted (Areesantichai et al., 2020; McGregor et al., 2020). This 0.3% THC threshold is a widely adopted international standard to differentiate industrial hemp (with negligible psychoactive properties) from marijuana varieties with higher THC concentrations (Sgro et al., 2021). Japan's adoption of this limit aligns with a cautious drug policy focused on minimising psychoactive risks while allowing potential therapeutic applications of non-psychoactive cannabinoids. The government allows imported pharmaceutical-grade CBD, ensuring that no domestic cannabis cultivation occurs. This policy framework is extremely restrictive, limiting the availability and affordability of CBD products while preventing any progression toward full medical cannabis legalisation.

While Japan's model effectively minimises regulatory risks, it also restricts medical cannabis's therapeutic potential, as many conditions require THC-containing formulations for effective treatment (Martin et al., 2020; McGregor et al., 2020). This highlights an important regulatory dilemma. Overly restrictive policies can hinder the development of medical cannabis programmes, reducing their effectiveness for patients who need them most.

Both Thailand and Japan illustrate different approaches to government control, but their experiences highlight a common challenge of balancing regulatory oversight with accessibility. Strict state regulation is necessary to prevent misuse, but excessive control can undermine the very purpose of legalisation which is to enable patients to safely and effectively access medical cannabis. Future cannabis policies should focus on streamlining regulatory processes to make medical cannabis more accessible without compromising public health and legal safeguards.

Economic and Public Health Considerations in Cannabis Policy Reform

The economic and public health implications of medical cannabis legalisation have been a key driving force behind policy changes in several countries. Thailand's decision to legalise cannabis was not solely based on medical necessity, but also on its potential economic benefits (Deng et al., 2023; Ehambaranathan et al., 2023). By establishing a domestic cultivation and production industry, Thailand has positioned itself as a regional leader in medical cannabis exports, aiming to supply international markets while also developing its domestic medical cannabis industry. This economic motivation underscores an important reality. Medical cannabis legalisation is not just a public health issue, but it is also a significant economic opportunity.

For countries considering cannabis reform, economic benefits must be weighed against public health concerns. One major concern is that legalising medical cannabis could lead to increased recreational use, especially in markets where regulatory enforcement is weak (Karen, 2022). Thailand has implemented strict safeguards to mitigate this risk, requiring prescriptions from licensed medical professionals and restricting cultivation licenses to government-approved entities. However, even with these safeguards, some critics argue that the commercialisation of medical cannabis could pave the way for a broader push towards recreational legalisation, potentially leading to higher rates of misuse (Mohamed et al., 2022; Zinboonyahgoon et al., 2020).

In contrast, countries that maintain strict prohibitionist policies argue that the potential risks of cannabis use outweigh any economic benefit. Governments in Malaysia, South Korea, and Singapore have repeatedly emphasised public health risks associated with cannabis legalisation, particularly regarding adolescent use, dependence, and impaired cognitive function (Mohamed et al., 2022; Mokwena, 2019; Ransing et al., 2021; Razali et al., 2019). However, emerging research suggests that well-regulated medical cannabis programmes do not necessarily increase rates of recreational use, provided that strict age restrictions, licensing systems, and enforcement measures are in place (Švrakić et al., 2012; Tomar et al., 2024). These findings suggest that economic incentives and public health concerns are not mutually exclusive. Governments can pursue a controlled medical cannabis industry while maintaining strong safeguards against misuse.

Malaysia's established pharmaceutical manufacturing sector, coupled with its agro-biotech capabilities and tropical climate, provides a strong foundation for domestic cultivation and production. Legalisation could stimulate local job creation, particularly in agriculture, processing, logistics, and research and development sectors. A 2023 regional market analysis projected that Southeast Asia's medical cannabis industry could be worth over USD 2 billion by 2027 (Deng et al., 2023). Moreover, export potential to regulated international markets offers an opportunity for foreign revenue and international partnerships.

A Cautious Path Forward for Malaysia

The debate over medical cannabis reform in Malaysia remains highly contentious, with strong opposing views from policymakers, law enforcement, and public health officials. While there is growing discourse on cannabis-derived pharmaceuticals, full-scale legalisation remains a distant prospect. Given Malaysia's historical stance on drug enforcement and its commitment to international drug control treaties, any move toward medical cannabis legalisation must be approached cautiously, incrementally, and with strong regulatory oversight.

Recent developments indicate a carefully measured willingness from the Malaysian government to explore avenues for cannabis-derived products for medical use. The former Health Minister announced in 2022 intentions to develop a framework for the registration of prescription drugs containing Cannabidiol (CBD) (Malay Mail, 2022). This sentiment has been echoed by the current Health Minister, who has invited applications for the registration of cannabis-based products with the Drug Control Authority (DCA), contingent upon sufficient scientific evidence of safety and efficacy (New Straits Times, 2025). The National Pharmaceutical Regulatory Agency (NPRA) would be the key body overseeing such registrations, applying existing drug approval pathways, although specific guidelines tailored to CBD or cannabis-derived medicines are not yet publicly detailed beyond these general statements of intent. This "policy in progress" situation suggests that while the door is ajar for pharmaceutical-standard CBD products, the translation of this intent into a fully functional and transparent regulatory pathway is a complex and ongoing process.

One possible pathway is for Malaysia to adopt a limited CBD-only framework, similar to Japan's, as a first step toward broader cannabis reform. CBD has minimal abuse potential and moderate therapeutic benefits, making it a low-risk entry point for medical cannabis regulation. However, regulating CBD alone may not fully address patient needs, as many medical conditions require THC-containing formulations for effective treatment. To avoid regulatory loopholes and enforcement difficulties, Malaysia must implement clear quality control measures, ensuring that CBD products contain THC below a legally defined threshold.

A research-based approach should guide Malaysia's policy decisions, ensuring that any regulatory changes are grounded in scientific evidence rather than political or economic motivations. Establishing pilot medical cannabis programmes, supporting clinical trials, and collaborating with international regulatory bodies could help Malaysia develop a controlled, evidence-based medical cannabis framework. Ultimately, a cautious, research-driven approach would allow Malaysia to evaluate the risks and benefits of medical cannabis before making any major policy shifts.

Limitations

This scoping review has several notable limitations that must be considered when interpreting its findings. Firstly, the review's focus on English-language publications potentially excludes relevant literature published in local languages, introducing a language bias. Important policy documents or academic studies written in regional languages may

have been overlooked, limiting the comprehensiveness of the findings. Second, the scope was restricted to East and Southeast Asian countries, focusing on only seven nations: Indonesia, Malaysia, Thailand, the Philippines, South Korea, Singapore, and Japan.

Consequently, the review may not fully capture the broader regulatory landscape or reflect nuanced regional variations and policy developments in countries outside this selection. Third, a significant portion of the included literature comprised normative legal analyses and policy documents, with fewer empirical studies assessing the practical impacts or effectiveness of medical cannabis policies. The limited empirical data available in the included studies restricts the ability to draw firm conclusions regarding the real-world outcomes and the overall effectiveness of regulatory models. Additionally, the rapidly evolving nature of medical cannabis regulation poses a challenge to the temporal validity of this review, as the findings presented may quickly become outdated due to ongoing legislative changes and shifting sociopolitical attitudes towards cannabis legalisation.

Conclusion

The regulatory landscape for medical cannabis in East and Southeast Asia remains highly fragmented, with a clear divide between prohibitionist and reformist policies. For Malaysia, the most prudent approach would be to proceed cautiously, focusing on CBD regulation, research-based policymaking, and strict enforcement measures to balance public health concerns with economic opportunities. A measured, evidence-based approach will be crucial in shaping Malaysia's medical cannabis policy in the years ahead.

Authors Contributions

Conceptualisation, FH; methodology, FH and RMZ; data curation, FH and RMZ; writing—original draft preparation, FH; writing—review and editing, RMZ; visualisation, FH; project administration, FH. All authors contributed equally to data extraction, analysis, manuscript preparation, and have read and agreed to the published version of the manuscript.

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The authors declare no conflict of interest.

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During the preparation of this manuscript, ChatGPT (OpenAI) was used to enhance readability and language. The authors reviewed, edited, and validated all content generated by the AI tool and take full responsibility for the final manuscript.

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