pharmacoepidemiology

MDPI

Article

Exploring the Medical Prescription of *Cannabis* sp.-Derived Products in Brazil: A National Cross-Sectional Survey

Caroline Taira Takara [1,†], Beatriz Inacio Gonçalves [1,†], Taynna Tatiane Pereira [1], Tácio de Mendonça Lima [2], Samara Jamile Mendes [1], Gabriel Rocha Martins [1], André Rolim Baby [1] and Marília Berlofa Visacri [1,*]

[1] Department of Pharmacy, School of Pharmaceutical Sciences, University of São Paulo, 580 Lineu Prestes Av., São Paulo 05508-000, SP, Brazil; tkr.carol@usp.br (C.T.T.); biainacio.oz@usp.br (B.I.G.); taynna.tpereira@gmail.com (T.T.P.); samarajm@usp.br (S.J.M.); gabrielrmartins@usp.br (G.R.M.); andrerb@usp.br (A.R.B.)

[2] Department of Pharmacy and Pharmaceutical Administration, Faculty of Pharmacy, Fluminense Federal University, 523 Dr. Mario Vianna St., Niterói 24241-000, RJ, Brazil; taciolima@id.uff.br

* Correspondence: visacri.mb@usp.br; Tel.: +55-11-2648-2368

† These authors contributed equally to this work.

Abstract

Background/Objectives: Patient access to cannabinoid-based therapies in Brazil has expanded with the availability of regulated Cannabis-derived products (CDPs). This study explored CDP prescribing practices among Brazilian physicians. **Methods:** Between September 2024 and March 2025, a national online survey assessed physician characteristics, prescribing status, and reasons for non-prescription. Among prescribers, we analyzed CDP formulations, brands, indications, patient age groups, and time to therapeutic response. Bivariate and multivariable analyses identified factors associated with CDP prescribing. **Results:** A total of 333 physicians participated in the study, including 305 prescribers and 28 non-prescribers. Most CDP prescribers worked in private practice settings (67.9%). Specific training in CDP prescribing was the factor most strongly associated with a higher likelihood of prescribing (adjusted OR, 100.73; 95% CI, 12.77–794.72; $p < 0.001$), while lack of knowledge was the main reason for non-prescription. Although some physicians reported prescribing national products, imported products remained predominant (75.8% vs. 24.2%). Products provided through patient associations were also frequently mentioned. Predominant indications included mental and behavioral disorders, neurological diseases, and pain. Oil-based cannabidiol (CBD) formulations were the most frequently prescribed and were generally administered orally or sublingually. Older patients were the most frequently reported recipients of CDP prescriptions, and most physicians reported observing therapeutic effects within 30 days. **Conclusions:** Despite an evolving regulatory framework, clinical practice remains challenged by gaps in clinical training and disparities in patient access.

Keywords: medicinal Cannabis; drug prescriptions; physician practice patterns; pharmaceutical preparations; health services needs and demand; medication access; pain management; mental disorders; health policy; Brazil

Academic Editor: Elena Y. Enioutina

Received: 9 June 2026
Revised: 23 August 2026
Accepted: 28 August 2026
Published: 31 August 2026

1. Introduction

Cannabis sativa L. is a plant native to Central Asia that has been used for millennia due to its medicinal effects. Global interest in the medical use of Cannabis-derived products (CDPs) has grown significantly in recent years, driven by a growing body of scientific research highlighting their therapeutic potential in various clinical conditions, including

chronic pain, epilepsy, anxiety, and neurodegenerative diseases [1–3]. The prescription of CDPs has progressively become part of mainstream medical practice, though their adoption varies significantly across regions regarding access, regulatory frameworks, and healthcare professional training [4].

In Brazil, the regulatory framework for CDPs has evolved through distinct access pathways. Historically, legal access to CDPs was restricted to formal individual importation authorized by Brazilian Health Regulatory Agency (Agência Nacional de Vigilância Sanitária—ANVISA), judicial rulings for personal domestic cultivation, or non-profit patient associations [5]. These patient associations are civil non-profit organizations composed of patients, legal guardians, and healthcare advocates aimed at facilitating therapeutic access to CDPs. Membership typically requires a formal medical prescription and registration with the association, which provides peer support, legal guidance, and, in specific court-authorized cases, access to non-industrialized formulations [6].

Currently, regulated CDPs are available in pharmacies for the treatment of various clinical conditions, increasing access to treatments with cannabidiol (CBD) and other phytocannabinoids. In 2019, ANVISA approved the Collegiate Board Resolution (Resolução da Diretoria Colegiada—RDC) No. 327/2019 [7], establishing a category for CDPs. Although these products were not classified as medicines because they had not undergone the regulatory studies required for medicine registration, this framework established a legal pathway for their commercialization and use in Brazil [8]. Moreover, under this framework, only physicians registered with the Brazilian Federal Council of Medicine (Conselho Federal de Medicina—CFM) were authorized to prescribe CDPs, and prescription was only permitted after exhausting all conventional treatment alternatives available in the national market [8]. Under RDC No. 327/2019, their use remained subject to strict restrictions, including maximum tetrahydrocannabinol (THC) content (no more than 0.2%, except for patients receiving palliative care) and limitations on administration routes, which were restricted to oral and nasal routes. Additionally, compounding of these products in pharmacies was initially not permitted. In 2022, regulatory progress continued with the approval of RDC No. 660/2022 [9], which authorized individuals to import CDPs for personal use upon prescription by a licensed medical professional.

A historical shift occurred on January 28, 2026, when ANVISA approved new regulations in response to a November 2024 ruling by the Brazilian Superior Court of Justice (Superior Tribunal de Justiça—STJ) [10,11]. This new framework established a special authorization for the domestic production of Cannabis, exclusively granted to legal entities, and restricted production to CDP containing up to 0.3% THC. Furthermore, this update established a new regulatory pathway for non-profit patient associations, providing a specific framework to evaluate the feasibility of small-scale production outside the industrial sector. By monitoring these activities, ANVISA aimed to gather safety and quality data to support future permanent regulations [10].

Despite these regulatory milestones, the integration of CDPs into Brazilian medical practice has faced significant challenges, including longstanding gaps in clinical training and socioeconomic barriers to access. During the study period (September 2024 to March 2025), physicians operated within a regulatory framework characterized by restricted access pathways and substantial reliance on imported products and judicialized access through patient associations [12–14]. Studies have shown that many physicians report inadequate training in cannabinoid pharmacology, which may contribute to uncertainty and hesitation in prescribing practices [12,15]. Socioeconomic disparities may further limit access to CDPs, particularly given the costs associated with imported products and the uneven availability of these products through the public healthcare system. In this context, patient associations have served as an important access pathway for patients with

diverse clinical needs [16]. Subsequent regulatory changes implemented in 2026 established new pathways for domestic production and for production by patient associations. These changes represent the current regulatory landscape but were not in effect when the present survey was conducted. Therefore, the findings of this study should be interpreted as reflecting physician prescribing practices under the regulatory framework in place during the study period and may provide a baseline for evaluating prescribing patterns under the subsequent regulatory framework.

A retrospective study identified epilepsy, chronic pain, and Parkinson's disease as the primary indications for CDP use in Brazil [17]. Nevertheless, comprehensive national data remain unavailable concerning the prescribed products, their therapeutic indications, and the characteristics of prescribers and patients. In light of this, this study aimed to investigate which CDPs were being prescribed by physicians in Brazil at the time of the survey, focusing on their composition and indications, patient age groups, factors associated with CDP prescribing, and reasons for non-prescription.

2. Material and Methods

2.1. Study Design and Sample Size

A national cross-sectional survey was conducted between September 2024 and March 2025 among physicians with an active medical license to practice in Brazil. The study followed the criteria established by the Consensus-Based Checklist for Reporting of Survey Studies (CROSS) and the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines [18,19]. Non-probability convenience sampling was used. Given the absence of a national registry of physicians prescribing CDPs that would allow probability-based sampling and the exploratory nature of the study, no a priori sample size calculation was performed. All eligible participants who completed the questionnaire during the data collection period were included in the analysis.

2.2. Inclusion and Exclusion Criteria

Eligible individuals were aged 18 years or older, held a medical degree, and had an active registration with a Brazilian Regional Council of Medicine (Conselho Regional de Medicina—CRM). Individuals who did not provide informed consent were excluded.

2.3. Data Collection

The data were collected through an online form using the Google Forms platform, which was disseminated to the target audience via social media (WhatsApp, Instagram, and Facebook) and e-mail. The questionnaire was developed by the research team based on the available scientific literature on the prescription of CDPs and the members' experience in this field. Prior to administration, the researchers involved in the study reviewed and discussed the questionnaire content to assess the clarity, relevance, and comprehensiveness of the proposed items. Consensus-based adjustments were made to the wording and organization of the items. No formal assessment of validity and reliability evidence was conducted, as the questionnaire was developed specifically for this exploratory investigation.

The questionnaire was divided into two sections: demographic and professional profile and information on the prescription of CDPs. Submission of responses was completely anonymous, with no personal information such as the participant's name, address, or phone number being required. The form included questions on gender identity, state of practice, year of graduation, medical specialty, predominant practice setting (private, private health insurance, or public), whether respondents had received specific training in CDP prescribing, whether they prescribed CDPs, and, for those who did not, the reasons for not prescribing them. For prescribers, the form also assessed the formulation and

brand of CDPs prescribed for each indication, the age groups of patients receiving CDP prescriptions, and the average time to observe therapeutic effects.

2.4. Data Processing and Categorization

All collected data were stored in Microsoft Excel® (version 2608, Microsoft Corporation, Redmond, WA, USA) spreadsheets. Participants were classified into two groups according to CDP prescribing status: prescribers and non-prescribers. Group 1 comprised physicians who prescribed CDPs, whereas Group 2 comprised those who did not.

The participants' specialties were classified based on the list of medical specialties and fields recognized by CFM [20]. The fields of 'Holistic Medicine' and 'Phytotherapy', although not recognized as medical specialties by the CFM, are included among Integrative and Complementary Health Practices (Práticas Integrativas e Complementares em Saúde—PICS) recognized by the Brazilian Unified Health System (Sistema Único de Saúde—SUS) [21]. 'Cannabinoid Medicine', however, is not recognized as a distinct medical specialty, as the prescription of cannabinoids falls under specific conditions already covered by recognized medical specialties [22]. Some physicians reported more than one specialty.

Responses from Group 2 were reviewed and categorized based on the reasons reported by participants for not prescribing CDPs. The 'Lack of knowledge or specific training' category included responses from physicians who reported insufficient knowledge, training, or experience to prescribe CDPs. The 'Outside specialty or current medical practice' category included responses indicating that CDP prescribing was not relevant to the physician's specialty or current practice. The 'Lack of scientific evidence or legal support' category comprised responses referring to the perceived lack of robust clinical evidence, scientific consensus, or regulatory or legal support. The 'Patient profile or economic feasibility' category included practice-related factors, such as the socioeconomic profile of the patient population, absence of patients considered eligible for cannabinoid therapy, financial constraints, or lack of availability of CDPs in the public healthcare system. The 'Other/Unspecified' category included illegible or insufficiently specific responses, as well as responses from physicians who reported being in the process of obtaining a specialty with the intention of subsequently establishing a private practice.

The indications for CDP prescribing were grouped according to the categories of the International Classification of Diseases (ICD-11) [23]. Regarding the prescribed product formulations, not all responses included complete variables, such as brands, combinations, compositions, routes of administration, and pharmaceutical forms. However, whenever this information was provided, it was accounted for in the study. This study focused only on the most frequent categories. When analyzing the brands, the classification of imported products included companies that supply or assist with the import process of these products.

Additionally, CDP compositions were characterized according to two criteria: the reported spectrum type (Full Spectrum [FS] or Broad Spectrum [BS]) and the predominant cannabinoids identified in the product composition (e.g., FS rich in CBD). Cannabinoid profiles were categorized as CBD+THC, CBD, THC, cannabinol (CBN), or cannabigerol (CBG), according to whether a specific cannabinoid or cannabinoid combination was reported, regardless of whether a predominant cannabinoid was specified.

The time to observe therapeutic effects was categorized into broad intervals, such as 'Up to 30 days', '1–6 months', and 'Up to 6 months', with the latter category including responses that mentioned a range spanning from a few days to six months within a single answer.

2.5. Statistical Analysis

Descriptive statistics were used to summarize the characteristics of the study participants. Categorical variables were presented as absolute and relative frequencies, whereas continuous variables were summarized as medians and interquartile ranges (IQRs). Bivariate analyses were performed to compare physicians who prescribed CDPs with those who did not. Pearson's chi-square test or Fisher's exact test, when appropriate, was used to assess associations between categorical variables. Continuous variables were compared using the Mann–Whitney U test. A two-sided p value < 0.05 was considered statistically significant. To identify factors independently associated with the prescription of CDPs, a multivariable logistic regression model was fitted using CDP prescribing status (yes/no) as the dependent variable. Gender, year of graduation, specific training in CDP prescribing, practice setting, and region of practice were included in the multivariable model. The results were presented as adjusted odds ratios (ORs) with their corresponding 95% confidence intervals (CIs). All statistical analyses were performed using IBM SPSS Statistics (version 28, IBM Corporation, Armonk, NY, USA) [24].

2.6. Ethical Aspects

This study was approved by the Ethics Committee of the School of Pharmaceutical Sciences at the University of São Paulo under registration number 82749724.1.0000.0067. Participants who provided informed consent were allowed to proceed to the questionnaire. All responses were voluntary and anonymous, and data were stored securely to protect participant confidentiality.

3. Results

The survey received a total of 352 responses. Of these, 3 participants did not provide informed consent, 14 did not have an active CRM, and 2 were excluded because they belonged to other health professions, specifically Veterinary Medicine and Dentistry. Thus, 333 responses were included in the analysis. Group 1 comprised 305 participants (91.6%) who prescribed CDPs, whereas Group 2 comprised 28 participants (8.4%) who did not.

3.1. Demographic and Professional Characterization of Participants (Groups 1 and 2)

Regarding gender identity, Group 1 showed a relatively balanced distribution between cisgender men (50.2%) and cisgender women (47.2%), whereas cisgender women predominated in Group 2 (60.7% vs. 39.3% cisgender men).

Geographically, participants were primarily located in the Southeast and Northeast regions, with the Southeast being the predominant region in both groups (Tables 1 and S1 in the Supplementary Material).

In both groups, the most common graduation period was 2010–2019, accounting for 33.6% of the total sample (34.4% in Group 1 and 25.0% in Group 2) (Table 1).

Overall, the most frequently reported specialties were Family and Community Medicine (21.3%), General Practice/No Medical Specialty (15.9%), and Psychiatry (15.0%), which were also the most frequently reported specialties in Group 1. In contrast, Cardiology and Pediatrics were the most common specialties in Group 2 (14.3% each) (Table S2 in the Supplementary Material).

Regarding practice settings, private practice predominated overall (64.9%) and in Group 1 (67.9%), representing the primary practice setting across nearly all Brazilian regions and states. Conversely, public healthcare was the predominant practice setting in Group 2 (35.8%) (Table S3 in the Supplementary Material).

Finally, 76.1% of physicians in Group 1 reported having specific training in CDP prescribing, whereas only one physician in Group 2 reported having such training, although this physician had not yet initiated CDP prescribing.

Table 1. Region, year of graduation, and primary practice setting of participants in each group and overall total.

	Group 1, *n* (%)	Group 2, *n* (%)	Total, *n* (%)
Region			
Southeast	153 (50.2)	24 (85.7)	177 (53.2)
Northeast	59 (19.3)	2 (7.1)	61 (18.3)
South	59 (19.3)	1 (3.6)	60 (18.0)
Midwest	30 (9.9)	1 (3.6)	31 (9.3)
North	4 (1.3)	0 (0.0)	4 (1.2)
Year of graduation			
1960–1969	2 (0.6)	0 (0.0)	2 (0.6)
1970–1979	21 (6.9)	3 (10.7)	24 (7.2)
1980–1989	28 (9.2)	2 (7.1)	30 (9.0)
1990–1999	43 (14.1)	6 (21.4)	49 (14.7)
2000–2009	60 (19.7)	5 (17.9)	65 (19.5)
2010–2019	105 (34.4)	7 (25.0)	112 (33.6)
Setting			
Private	207 (67.9)	9 (32.1)	216 (64.9)
Public	63 (20.6)	10 (35.8)	73 (21.9)
Private health insurance	35 (11.5)	9 (32.1)	44 (13.2)

3.2. Factors Associated with CDP Prescribing (Groups 1 and 2)

Among the participating physicians, training in CDP prescribing was strongly associated with CDP prescribing in the bivariate analysis ($p < 0.001$). This association remained statistically significant in the multivariable logistic regression analysis, with physicians who had received training in CDP prescribing showing substantially higher odds of prescribing CDPs than those without such training (adjusted OR, 100.73; 95% CI, 12.77–794.72; $p < 0.001$). However, the wide confidence interval indicates considerable uncertainty regarding the magnitude of this association, which may be related to the marked imbalance between prescribers and non-prescribers according to training status (Tables S4 and S5 in the Supplementary Material).

Practice setting also differed significantly between prescribers and non-prescribers in the bivariate analysis ($p < 0.001$), with prescribers being more frequently represented among physicians working in private practice. After adjustment, physicians working in public practice (adjusted OR, 0.23; 95% CI, 0.07–0.81; $p = 0.022$) or private health insurance (adjusted OR, 0.17; 95% CI, 0.04–0.61; $p = 0.007$) had a significantly lower likelihood of prescribing CDPs compared to those in private practice (Tables S4 and S5 in the Supplementary Material).

Similarly, the region of practice was associated with prescribing in the bivariate analysis ($p = 0.010$). Although the Southeast had the highest absolute number of prescribers, the multivariable analysis revealed that physicians from the South (adjusted OR, 10.29; 95% CI, 1.16–91.36; $p = 0.036$) and Northeast (adjusted OR, 6.42; 95% CI, 1.06–38.99; $p = 0.043$) regions had a significantly higher likelihood of prescribing CDPs when compared to those from the Southeast. In contrast, no statistically significant difference was observed for the Midwest (Tables S4 and S5 in the Supplementary Material).

No significant differences were observed according to gender or year of graduation in either the bivariate or multivariable analyses (Tables S4 and S5 in the Supplementary Material).

3.3. Reasons for Not Prescribing CDPs (Group 2 Only)

Among the participants who reported not prescribing CDPs (Group 2, n = 28), 13 (46.5%) cited 'Lack of knowledge or specific training', 7 (25.0%) cited 'Outside specialty or current medical practice', 4 (14.3%) cited 'Patient profile or economic feasibility', 2 (7.1%) cited 'Lack of scientific evidence or legal support', and 2 (7.1%) cited 'Other/Unspecified'.

3.4. Indications for CDPs (Group 1 Only)

The most frequently reported indications for prescribing CDPs were mental and behavioral disorders (37.4%), diseases of the nervous system (31.4%), and general symptoms and abnormal clinical signs, including chronic or general pain (16.1%) (Tables 2 and S6 in the Supplementary Material). Unspecified responses (e.g., 'various', 'all') represented 3.9% of the total responses and were excluded from specific categorization.

Table 2. Main indications for Cannabis-derived products.

Indications	*n*	%
Mental and behavioral disorders	**566**	**37.4**
Anxiety/anxious symptoms	184	12.2
Autism Spectrum Disorder	112	7.4
Burnout	75	5.0
Depression	75	5.0
Attention Deficit Hyperactivity Disorder	32	2.1
Substance Use Disorder	15	1.0
Mood disorder	14	0.9
Psychiatric/Mental Disorders *	14	0.9
Generalized Anxiety Disorder	12	0.8
Others	33	2.2
Diseases of the nervous system	**475**	**31.4**
Sleep disorders	110	7.3
Parkinson	86	5.7
Alzheimer	74	4.9
Epilepsy	60	4.0
Dementia/dementia symptoms	47	3.1
Migraine	26	1.7
Neurodegenerative diseases *	20	1.3
Multiple Sclerosis	12	0.8
Convulsion	10	0.7
Others	30	2.0
General symptoms and abnormal clinical signs	**244**	**16.1**
Pain		
Chronic	172	11.4
General/unspecified	49	3.2
Neuropathic	11	0.7
Oncological	3	0.2
Refractory	3	0.2
Nausea	3	0.2
Cachexia	2	0.1
Hyperoxia	1	0.1

* Not specified.

3.5. CDPs Prescribed (Group 1 Only)

Among the 305 participants in Group 1, 14.8% reported prescribing nationally produced CDPs, 35.4% imported CDPs, and 40.7% CDPs produced by patient associations. These categories were assigned based on the information provided in the open-ended

responses; only responses that clearly identified the product, for example, by providing a brand name or identifying a patient association, were classified.

As shown in Table 3, most of the brands mentioned were imported (75.8%), whereas nationally produced brands accounted for 24.2%. A total of eight national and 44 imported brands were mentioned.

Table 3. Most frequently mentioned CDP brands.

Brands	*n* (%)
Imported	**225 (75.8%)**
TegraPharma®	32
Canna River®	29
Lazarus Naturals®	15
USA Hemp®	15
CR wellness®	13
Others	121
National	**72 (24.2%)**
GreenCare Pharma®	18
Mantecorp®	18
Prati-Donaduzzi®	14
Ease Labs®	9
Biolab Sanus®	7
Others	6

The five most frequently mentioned patient associations and their respective frequencies were Associação Brasileira de Apoio Cannabis Esperança (ABRACE), 92 (30.2%); Apoio à Pesquisa e Pacientes de Cannabis Medicinal (APEPI), 24 (7.9%); Maria Flor, 20 (6.6%); Aliança Medicinal, 13 (4.3%); and Santa Gaia, 11 (3.6%). Regarding pharmaceutical forms, the most frequently reported were oil, 26 (8.5%); extract, 24 (7.9%); gummies, 9 (3.0%); ointment, 7 (2.3%); and nasal, oromucosal, or sublingual sprays, 5 (1.6%). The most frequently reported routes of administration were sublingual, 8 (2.6%); oral, 7 (2.3%); topical, 7 (2.3%); nasal, 4 (1.3%); and vaginal, 1 (0.3%). These categories were assigned based on the information provided in the open-ended responses; only responses that clearly identified the pharmaceutical form and route of administration were classified.

As shown in Table 4, the most frequently mentioned cannabinoid compositions were CBD (23.6%), CBD combined with THC (19.0%), and THC (16.7%).

Table 4. Most frequently mentioned product compositions.

Composition	*n*	%
CBD	72	23.6
CBD + THC	58	19.0
THC	51	16.7
Full Spectrum	40	13.1
Full Spectrum rich in CBD	39	12.8
Full Spectrum rich in THC	17	5.6
CBG	15	4.9
Full Spectrum rich in CBD and THC	14	4.6
Broad Spectrum	11	3.6
CBN	11	3.6
Broad Spectrum rich in CBD	10	3.3
Others *	27	8.9

CBD: cannabidiol; THC: tetrahydrocannabinol; CBG: cannabigerol; CBN: cannabinol; * seven other types of composition were mentioned.

3.6. Relationship Between CDP Composition and Indications

The composition of CDPs was also analyzed according to the reported medical indications (Table S7 in the Supplementary Material). The most frequently reported compositions were CBD, THC, and the combination of these two cannabinoids. The indications associated with the greatest number of different compositions were 'Pain', 'Depression', and 'Insomnia/Sleep Disorders', respectively. Only 36 responses (11.8%) provided information linking the CDP composition to the corresponding indication.

3.7. Patient Age Groups and Time to Observe Therapeutic Effects (Group 1 Only)

As shown in Table 5, CDPs were most frequently prescribed to patients aged ≥60 years (83.6%), followed by those aged 50 to 59 years (82.0%) and 40 to 49 years (81.0%). Regarding the time to observe therapeutic effects, most responses (66.9%) indicated a timeframe of up to 30 days. Longer timeframes were reported less frequently (Table 5).

Table 5. Patient age groups and time to observe therapeutic effects.

	n	**%**
Age groups		
60 years and over	255	83.6
50–59 years	250	82.0
40–49 years	247	81.0
30–39 years	232	76.1
20–29 years	188	61.6
11–19 years	125	41.0
0–10 years	107	35.1
Time to observe therapeutic effects		
Up to 30 days	204	66.9
1–6 months	81	26.6
Up to 6 months	11	3.6
Generic answers (it depends, varies. . .)	9	2.9

4. Discussion

This study provides important information for understanding CDP prescribing practices in Brazil. The findings indicate that imported CDPs, particularly oral or sublingual oils containing CBD as the sole or predominant cannabinoid, were prescribed more frequently than nationally produced products. These products were primarily prescribed for mental and behavioral disorders, neurological conditions, and pain. Most prescribers were located in the Southeast and Northeast regions of Brazil, had graduated between 2010 and 2019, and worked in private practice, most commonly as family physicians, general practitioners, or psychiatrists. Patients aged 60 years or older were the most frequently reported recipients of CDP prescriptions, and most physicians reported observing therapeutic effects within 30 days. Among physicians who did not prescribe CDPs, lack of knowledge or specific training was the most frequently reported barrier. Moreover, training in CDP prescribing was the factor most strongly associated with prescribing, followed by practice setting and region, whereas gender and year of graduation were not significantly associated.

It is important to emphasize that the data for this survey were collected between September 2024 and March 2025. Consequently, the reported prescribing practices, product availability, and routes of administration reflect the regulatory environment established by RDC No. 327/2019 and RDC No. 660/2022, before the major regulatory updates implemented in 2026. Therefore, these findings provide a real-world baseline of physician prescribing practices during this period and should not be interpreted as directly reflecting the post-2026 regulatory framework.

These findings are consistent with international data on routes of administration and patient age. Edni et al. [25] reported that oral oils were more frequently used among older patients with neurological conditions, whereas smoking predominated among younger patients. Similarly, Brazilian prescribers predominantly reported prescribing oral oils and extracts to older patients. This cross-national similarity may reflect a preference for administration routes that allow relatively simple dosing and titration in older adults. In contrast, whereas Edni et al. [25] reported substantial variation in prescribed THC doses according to sex and disease, including higher THC doses among male patients and those with gastrointestinal conditions, the present study showed a predominance of CBD-only or CBD-dominant products. This difference may reflect Brazil's regulatory restrictions as well as prescriber caution regarding the psychoactive effects of THC. Nevertheless, the prescription of combined CBD/THC formulations for chronic pain and neurological disorders in this cohort may reflect growing interest in multi-cannabinoid formulations, potentially motivated by the proposed entourage effect.

Among the mental and behavioral disorders, anxiety, Autism Spectrum Disorder (ASD), and depression were the most frequently cited indications. A systematic review and foundational consensus reports have suggested that the evidence supporting the use of cannabinoids for anxiety, depression, psychosis, or post-traumatic stress disorder is limited, of low quality, and subject to important methodological limitations, and therefore does not support their routine clinical use [26,27]. Regarding ASD, some studies have reported potential benefits of CDP use, particularly in reducing symptoms such as hyperactivity and irritability with THC-containing products [28]. Moreover, a recent systematic review identified evidence supporting the use of CDP in ASD, suggesting that whole-plant extracts may improve symptoms according to global assessments [29].

Among nervous system disorders, sleep disorders, Parkinson's disease, Alzheimer's disease, epilepsy, and other forms of dementia were the most frequently reported conditions. While the endocannabinoid system plays a key role in sleep–wake regulation, current evidence on the efficacy of cannabinoids for sleep disorders remains inconclusive [30]. Regarding Alzheimer's disease, studies suggest that dronabinol (synthetic THC) may reduce disruptive behaviors [31]. Similarly, research on Parkinson's disease indicates that CBD use may contribute to improved quality of life, and in dementia cases, dronabinol has been associated with reduced agitation. Despite these findings, evidence remains insufficient to confirm the effectiveness of cannabinoids for these conditions—excluding epilepsy—largely due to methodological limitations in existing research [27,32].

Regarding epilepsy, evidence supports the efficacy of highly purified CBD for specific epileptic syndromes, particularly Dravet syndrome, Lennox–Gastaut syndrome, and tuberous sclerosis complex. Furthermore, a systematic review has provided evidence that CBD is effective in reducing epileptic seizures in patients with these conditions [33].

Regarding chronic pain, evidence suggests that cannabinoids, especially combinations of CBD and THC, can significantly reduce pain intensity, leveraging the analgesic properties of THC [27,34]. These findings support the potential of CDPs as alternatives to opioids. However, further clinical research is required to standardize dosage, safety, and efficacy profiles for chronic pain management.

The use of CDPs in palliative care also warrants attention. A retrospective study observed that THC concentrations exceeding 4.7 mg/day were associated with longer survival among oncology patients in outpatient palliative care [35]. Although evidence supporting cannabinoid use in this setting remains limited, consensus and recent reviews suggest potential benefits for managing cancer-related symptoms—including pain, chemotherapy-induced nausea and vomiting, appetite alterations, and sleep or mood disturbances—thereby supporting the use of CDPs as a therapeutic option in palliative care [27,36].

Participants reported five routes of administration for CDPs: sublingual, oral, topical, nasal, and vaginal. During data collection, RDC No. 327/2019 permitted only oral and nasal routes. However, the questionnaire did not link each reported route to a specific product and brand. Therefore, the reported use of other routes should not automatically be interpreted as regulatory non-compliance. Possible explanations include off-label prescribing of nationally authorized products, the use of products individually imported under RDC No. 660/2022, preparations obtained through patient associations operating under specific judicial authorizations, or differences in how respondents described or classified routes, particularly the distinction between oral and sublingual administration. Differences in prescribers' understanding of the applicable regulatory framework cannot be excluded, although regulatory knowledge was not directly assessed in this study. The regulatory context subsequently changed: RDC No. 1.015/2026 entered into force on May 4, 2026, revoked RDC No. 327/2019, and currently permits inhalational, oral, buccal, sublingual, and dermatological routes for products authorized under this regulatory pathway. Vaginal administration remains outside the routes permitted by the current Resolution.

An investigation into prominent nationally produced products, summarized in Table S8 (Supplementary Material), identified two primary categories: *Cannabis sativa* L. extracts, which comprise a variety of plant-derived compounds, and CBD-based products, defined as isolated phytopharmaceuticals [37]. Regarding other reported compositions, FS products were identified as containing various cannabinoids, terpenes, and flavonoids, with a THC concentration below 0.3%. In contrast, BS products feature a similar profile but contain only trace amounts of THC [38]. Participants also reported the use of minor cannabinoids, such as CBG, noted for its anti-inflammatory properties, and CBN, primarily indicated for sleep induction [39]. In this study, products described as *Cannabis sativa* L. extracts were classified as FS products.

Our findings indicate that a substantial proportion of prescribed products consist of complex, non-isolated formulations. This pattern is consistent with the use of multi-component CDPs and may reflect interest in the proposed 'entourage effect', which posits that the synergistic interaction of various *Cannabis* sp. components—including cannabinoids, terpenes, and flavonoids—may enhance therapeutic efficacy compared to isolated compounds. While research suggests that terpenes may amplify analgesic, anti-inflammatory, and anxiolytic properties [40], empirical evidence demonstrating definitive synergistic or additive interactions among cannabinoids, terpenes, and flavonoids remains limited. Consequently, further investigation is necessary to elucidate the mechanisms underlying these effects and their implications for clinical practice.

The wide variation in product formulations, dosages, and routes of administration observed in this survey raises important considerations for clinical practice. Differences in cannabinoid composition and delivery methods may influence treatment response, as pharmacokinetic characteristics, including bioavailability, can vary significantly across preparations [41]. As demonstrated by Zamarripa et al. [42], the co-administration of CBD and THC and their specific ratios can modify systemic drug exposure and may intensify their overall physiological and cognitive effects. Furthermore, as highlighted by Gallassi et al. [43], the lack of standardized concentrations and the limited availability of essential labeling information, such as precise dose equivalencies and laboratory safety testing, pose significant challenges to dose titration and may increase the risk of adverse events or suboptimal outcomes. Overall, these findings highlight the need for clearer clinical guidelines and greater product standardization to support more consistent, safe, and predictable cannabinoid-based therapies in real-world settings [44].

Only 11.8% of survey responses explicitly linked product compositions to their corresponding clinical indications. This low proportion may be attributed to potential factors

regarding both data collection and medical practice. On the one hand, it could reflect methodological limitations of the survey design, as open-ended fields may have led some participants to omit detailed compositional specifications. On the other hand, this observation might suggest a broader lack of standardization in prescribing practices, where prescribers may report or recommend CDPs without specifying detailed cannabinoid profiles. This potential gap aligns with the educational deficits reported by non-prescribers in the study and points to a possible need for standardized clinical guidelines and expanded medical education in cannabinoid therapy.

The products listed in Table 3 were approved by ANVISA for manufacturing in Brazil, according to RDC No. 327/2019 [7]. Under RDC No. 327/2019, a total of 23 products were authorized, including 14 CBD-based and 9 based on *Cannabis sativa* extracts. The RDC required companies to import the pharmaceutical raw material in the form of plant derivatives, phytopharmaceuticals, bulk material, or industrialized products. This framework was significantly expanded in 2026, when ANVISA enacted specific regulations for the domestic cultivation and production of Cannabis for medicinal purposes by legal entities [10]. These updates aim to establish a complete national production chain, potentially reducing the historical dependence on imported raw materials and enhancing market sustainability. Currently, 49 products are authorized for sale in pharmacies, with new requirements for clinical trials to demonstrate efficacy for future reclassification as medications; moreover, the updated rules expand eligibility to patients with severe debilitating diseases [10].

The imported products mentioned in Table 3 were available through the individual importation pathway established under RDC No. 660/2022 [9]. While it is possible to import or purchase these CDPs in pharmacies, high costs limit patient access. This discrepancy explains why professionals in Group 2 frequently cited financial constraints or limited public system availability as barriers to prescribing, whereas CDP prescribing in Group 1 remains predominantly confined to private practice. While the 2026 regulations for domestic production and associative cultivation seek to democratize access, the transition from a predominantly private, import-dependent market to a more accessible national model is still ongoing [10].

The state of São Paulo, through Decree No. 68,233 (22 December 2023), authorized the distribution of CDPs through the SUS [45]. Despite this, access remains heavily influenced by local policies and legal interventions. Judicialization continues to be a significant access route; an analysis of 1115 lawsuits in Brazil (2019–2022) revealed that epilepsy was the most demanded condition (49.6%), with 28.8% of favorable opinions granted despite a lack of robust scientific evidence, and 26.5% seeking products lacking ANVISA registration [46].

The findings indicate a high proportion of CDP use for the treatment of mental and behavioral disorders. Several studies have reported that over 50% of the Brazilian population may experience some form of common mental disorder [47,48]. It is important to note that in countries with universal healthcare systems, such as the SUS in Brazil, and in contexts marked by significant social inequalities, a substantial portion of the population relies exclusively on the public health system [49], including access to medications [50]. Similarly, chronic pain affects approximately 40% of the Brazilian population and is a leading cause of work absenteeism among individuals aged 16–64 years [51].

This scenario suggests that, despite the potential benefits of CDPs for mental health and chronic pain, the predominance of prescriptions in private healthcare settings may create substantial barriers to access for people who depend on the public healthcare system. These disparities underscore the importance of addressing healthcare equity, particularly in the context of mental health and chronic pain.

Moreover, broader challenges within Brazil's medical education and healthcare systems must be acknowledged. Although initiatives to expand medical training and health-

care access have been implemented, systemic issues—such as limited institutional resources, inadequate infrastructure, and suboptimal professional compensation, particularly within the public healthcare system—persist [52]. These challenges intersect with CDP prescribing practices, as evidenced by a scarcity of qualified prescribers, insufficient academic training on CDPs, limited clinical autonomy, and regulatory restrictions established by the CFM [53,54].

This study adds to the existing literature by providing a national, prescriber-centered characterization of CDP prescribing practices in Brazil. Unlike previous studies that have focused on specific clinical conditions or patient populations, this study provides a broader perspective on the products, formulations, indications, and access pathways reported by physicians.

Several limitations should be considered when interpreting these findings. First, the use of open online recruitment necessitated non-probability convenience sampling, which potentially introduced selection and self-selection bias, as physicians with a greater interest in cannabinoid therapies may have been more inclined to participate. Second, the broad online dissemination of the survey precluded the calculation of a definitive response rate due to the absence of a known denominator. Third, the reliance on self-reported data subjects the study to potential recall and response biases, and its cross-sectional design limits the assessment of longitudinal trends. Finally, the underrepresentation of physicians from the Northern region and the limited sample size of non-prescribing physicians may affect the generalizability of these findings, particularly for these subgroups. Consequently, despite the valuable insights provided regarding the barriers to prescription, these results should be interpreted with caution.

5. Conclusions

This research provides a national mapping of CDP prescribing practices in Brazil, revealing that prescriptions are predominantly reported by physicians working in private practice and were mainly directed toward mental and behavioral disorders, neurological conditions, and pain, with a notable reliance on imported oil-based products for older patients. The findings highlight that, despite the evolving regulatory framework, clinical practice remains challenged by gaps in robust scientific evidence, deficits in clinical training, and unequal access. The predominance of private practice settings and reliance on high-cost products suggest that financial barriers may limit equitable access, particularly among patients dependent on the public healthcare system. In this evolving landscape, patient associations may continue to play an important role in facilitating access as they become integrated into a more regulated and supervised framework. These findings underscore the need for continuous observational and qualitative research to monitor the impact of regulatory and institutional changes, and to support the safe, effective, and equitable use of CDPs in Brazil.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/pharma5030032/s1. Table S1: State/Region of participants in each group and overall total. Table S2: Medical specialties of participants in each group and overall total; Table S3: Main practice setting of participants by region and state. Table S4: Characteristics of participating physicians according to Cannabis-derived product prescribing status and results of bivariate comparisons. Table S5: Multivariable logistic regression analysis of factors associated with prescribing Cannabis-derived products. Table S6: Indications for Cannabis-derived products. Table S7: Relationship between the eleven most frequently reported formulations and their clinical indications. Table S8: National brands, Cannabis-derived products, and their compositions.

Author Contributions: Conceptualization, M.B.V., C.T.T. and T.T.P.; methodology, M.B.V., C.T.T. and T.T.P.; validation, M.B.V.; formal analysis, C.T.T.; investigation, C.T.T.; data curation, C.T.T.; writing—original draft preparation, C.T.T. and B.I.G.; writing—review and editing, M.B.V., B.I.G., G.R.M., T.d.M.L., A.R.B. and S.J.M.; visualization, C.T.T., M.B.V., B.I.G., G.R.M., T.d.M.L. and A.R.B.; supervision, M.B.V.; project administration, M.B.V. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, Brazil (CAPES, Finance Code 001); Conselho Nacional de Desenvolvimento Científico e Tecnológico, Brazil (CNPq, Process 303862/2022-0); and Fundação de Amparo à Pesquisa do Estado de São Paulo, Brazil (FAPESP, grant number 2024/01920-0).

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Research Ethics Committee of the School of Pharmaceutical Sciences at the University of São Paulo (number 82749724.1.0000.0067) on 25 September 2024.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Datasets are available from the corresponding authors upon request.

Acknowledgments: We would like to thank the University of São Paulo (USP). ChatGPT (GPT-5.6 Luna) and Gemini 3.1 Pro were employed for specific adjustments in the English language and to enhance the clarity of sentences. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article. A.R.B. is grateful to CNPq, for the Research Productivity Grant, and to FAPESP.

Conflicts of Interest: The authors declare no conflicts of interest.

Abbreviations

The following abbreviations are used in this manuscript:

ABRACE	Associação Brasileira de Apoio Cannabis Esperança
ANVISA	Brazilian Health Regulatory Agency
APEPI	Apoio à Pesquisa e Pacientes de Cannabis Medicinal
ASD	Autism Spectrum Disorder
BS	Broad Spectrum
CBG	Cannabigerol
CBN	Cannabinol
CDP	Cannabis-derived product
CFM	Brazilian Federal Council of Medicine
CI	Confidence Interval
CRM	Brazilian Regional Council of Medicine
CROSS	Consensus-Based Checklist for Reporting of Survey Studies
FS	Full Spectrum
ICD	International Classification of Diseases
IQR	Interquartile Ranges
OR	Odds Ratio
PICS	Integrative and Complementary Health Practices
RDC	Collegiate Board Resolution
STJ	Brazilian Superior Court of Justice
STROBE	Strengthening the Reporting of Observational Studies in Epidemiology
SUS	Brazilian Unified Health System
THC	Tetrahydrocannabinol

References

1. Legare, C.A.; Raup-Konsavage, W.M.; Vrana, K.E. Therapeutic Potential of Cannabis, Cannabidiol, and Cannabinoid-Based Pharmaceuticals. *Pharmacology* **2022**, *107*, 131–149. [CrossRef]
2. Leinen, Z.J.; Mohan, R.; Premadasa, L.S.; Acharya, A.; Mohan, M.; Byrareddy, S.N. Therapeutic Potential of Cannabis: A Comprehensive Review of Current and Future Applications. *Biomedicines* **2023**, *11*, 2630. [CrossRef]
3. Almuntashiri, N.; El Sharazly, B.M.; Carter, W.G. Are Cannabis-Based Medicines a Useful Treatment for Neuropathic Pain? A Systematic Review. *Biomolecules* **2025**, *15*, 816. [CrossRef]
4. Ruheel, M.A.; Gomes, Z.; Usman, S.; Homayouni, P.; Ng, J.Y. Facilitators and barriers to the regulation of medical cannabis: A scoping review of the peer-reviewed literature. *Harm Reduct. J.* **2021**, *18*, 106. [CrossRef]
5. Silva, H.K.C.; Lourenço, R.F. A terapia com canabinóides e perspectivas em relação ao tratamento da dor no Sistema Único de Saúde. *Braz. J. Pain* **2023**, *6*, S44–S48. [CrossRef]
6. Pereira, P.J.R. Cannabis Patient Associations in Brazil: Mapping and Democratic Contribution. *Emancipação (Online)* **2025**, *25*, 1–26. [CrossRef]
7. Anvisa. Resolução da Diretoria Colegiada RDC Nº 327 de 09 de Dezembro de 2019. Available online: https://archive.is/F7M0f (accessed on 16 March 2025).
8. Anvisa. Entenda: Produtos Derivados de Cannabis. Available online: https://www.gov.br/anvisa/pt-br/assuntos/noticias-anvisa/2019/entenda-produtos-derivados-de-cannabis (accessed on 16 March 2025).
9. Anvisa. Resolução da Diretoria Colegiada RDC Nº 660 de Março de 2022. Available online: https://archive.is/yq8rK (accessed on 16 March 2025).
10. Anvisa. Anvisa Aprova por Unanimidade Regras que Cumprem Decisão do STJ para Produção de Cannabis Medicinal. Available online: https://www.gov.br/anvisa/pt-br/assuntos/noticias-anvisa/2026/anvisa-aprova-por-unanimidade-regras-que-cumprem-decisao-do-stj-para-producao-de-cannabis-medicinal (accessed on 2 February 2026).
11. Superior Tribunal de Justiça. STJ Valida Cultivo Medicinal da Cannabis por Empresas e dá Prazo para Regulamentação. Available online: https://www.stj.jus.br/sites/portalp/Paginas/Comunicacao/Noticias/2024/14112024-STJ-valida-cultivo-medicinal-da-cannabis-por-empresas-e-da-prazo-para-regulamentacao.aspx (accessed on 4 May 2025).
12. de Sousa, S.D.; Gerlack, L.F.; Batista, N.A.; Mantovani, M. Desafios para promoção do acesso ao Canabidiol na Rede Pública de Saúde do Distrito Federal. *J. Assist. Farm. Farm.* **2023**, *1*, 38. [CrossRef]
13. de Souza, M.R.; Henriques, A.T.; Limberger, R.P. Medical cannabis regulation: An overview of models around the world with emphasis on the Brazilian scenario. *J. Cannabis Res.* **2022**, *4*, 33. [CrossRef]
14. Pinto, C.D.B.S.; Esher, Â.; dos Santos Oliveira, C.V.; Osorio-de-Castro, C.G.S. Expansion of the medical cannabis market in Brazil and regulatory challenges. *Cad. Saúde Pública* **2024**, *40*, e00088624. [CrossRef]
15. Oshiro, C.A.; Castro, L.H.M. Cannabidiol and epilepsy in Brazil: A current review. *Arq. Neuropsiquiatr.* **2022**, *80*, 182–192. [CrossRef]
16. Scattone, H.; Gauer, L.E.; Pezzini, J.V.; Tófoli, L.F. Patterns of cannabis use for medical reasons in Brazil: An exploratory latent class analysis study. *Int. J. Drug Policy* **2025**, *143*, 104906. [CrossRef]
17. Mota, D.M.; Souza, R.M.; Silverio, T.B.; Arifa Coelho, A.C.A.; Giudice, G.H.; Rebelo, F.M. Uso terapêutico de produtos à base de canabidiol no Brasil: Estudo descritivo. *Vigil. Sanit. Debate* **2019**, *7*, 26–33. [CrossRef]
18. Sharma, A.; Minh Duc, N.T.; Luu Lam Thang, T.; Nam, N.H.; Ng, S.J.; Abbas, K.S.; Huy, N.T.; Marušić, A.; Paul, C.L.; Kwok, J.; et al. A Consensus-Based Checklist for Reporting of Survey Studies (CROSS). *J. Gen. Intern Med.* **2021**, *36*, 3179–3187. [CrossRef]
19. von Elm, E.; Altman, D.G.; Egger, M.; Pocock, S.J.; Gøtzsche, P.C.; Vandenbroucke, J.P. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: Guidelines for reporting observational studies. *J. Clin. Epidemiol.* **2008**, *61*, 344–349. [CrossRef]
20. CFM. CFM Atualiza Lista de Especialidades. Available online: https://portal.cfm.org.br/noticias/cfm-atualiza-lista-de-especialidades (accessed on 1 August 2024).
21. Ministério da Saúde. Práticas Integrativas e Complementares em Saúde (PICS). Available online: https://www.gov.br/saude/pt-br/composicao/saps/pics (accessed on 30 September 2024).
22. Conselho Regional de Medicina do Estado de Pernambuco. Orientações Acerca do Exercício de Telemedicina e Prescrição de Fitocanabinoides. Available online: https://archive.is/ohtV4. (accessed on 21 April 2025).
23. World Health Organization. CID-11 para Estatísticas de Mortalidade e de Morbidade. Available online: https://icd.who.int/browse/2025-01/mms/pt (accessed on 30 September 2024).
24. IBM Corp. *IBM SPSS Statistics for Windows*, version 28.0; IBM Corp.: Armonk, NY, USA, 2021. Available online: https://www.ibm.com/products/spss-statistics (accessed on 5 August 2026).
25. Edni, O.; Naamany, E.; Izhakian, S.; Shiber, S. Patterns of medicinal cannabis prescriptions in diverse patient populations: A retrospective analysis. *J. Cannabis Res.* **2025**, *12*, 43. [CrossRef]

26. Black, N.; Stockings, E.; Campbell, G.; Tran, L.T.; Zagic, D.; Hall, W.D.; Farrell, M.; Degenhardt, L. Cannabinoids for the treatment of mental disorders and symptoms of mental disorders: A systematic review and meta-analysis. *Lancet Psychiatry* **2019**, *6*, 995–1010. [CrossRef]
27. National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Committee on the Health Effects of Marijuana: An Evidence Review and Research Agenda. *The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research*; National Academies Press: Washington, DC, USA, 2017.
28. Agarwal, R.; Burke, S.L.; Maddux, M. Current state of evidence of cannabis utilization for treatment of autism spectrum disorders. *BMC Psychiatry* **2019**, *19*, 328. [CrossRef]
29. Riera, R.; Porto, I.; Farinasso, C.M.; Pacheco, R.L.; Silva, R.B.; Colpani, V.; Luiza, A.; Cruz, C.M.; Parreira, S.; Latorraca, C.O.C. Therapeutic Use of Cannabis Derivatives and Their Analogs for Autism Spectrum Disorder: A Systematic Review. *J. Clin. Pharmacol.* **2025**, *65*, 1339–1349. [CrossRef]
30. Lavender, I.; McGregor, I.S.; Suraev, A.; Grunstein, R.R.; Hoyos, C.M. Cannabinoids, Insomnia, and Other Sleep Disorders. *Chest* **2022**, *162*, 452–465. [CrossRef]
31. Lim, K.; See, Y.M.; Lee, J. A Systematic Review of the Effectiveness of Medical Cannabis for Psychiatric, Movement and Neurodegenerative Disorders. *Clin. Psychopharmacol. Neurosci.* **2017**, *15*, 301–312. [CrossRef]
32. Lattanzi, S.; Trinka, E.; Striano, P.; Rocchi, C.; Salvemini, S.; Silvestrini, M.; Brigo, F. Highly Purified Cannabidiol for Epilepsy Treatment: A Systematic Review of Epileptic Conditions Beyond Dravet Syndrome and Lennox-Gastaut Syndrome. *CNS Drugs* **2021**, *35*, 265–281. [CrossRef]
33. Silvinato, A.; Floriano, I.; Bernardo, W.M. Use of cannabidiol in the treatment of epilepsy: Lennox-Gastaut syndrome, Dravet syndrome, and tuberous sclerosis complex. *Rev. Assoc. Med. Bras.* **2022**, *68*, 1345–1357. [CrossRef]
34. Matos, C.; Pereira, A.T.; Dias, M.J.; Sousa, C.; Vinha, A.F.; Moutinho, C.; Carvalho, M. Cannabis for Chronic Pain: Mechanistic Insights and Therapeutic Challenges. *Stresses* **2025**, *5*, 7. [CrossRef]
35. Gastmeier, K.; Gastmeier, A.; Schwab, F.; Herdegen, T. The Use of Tetrahydrocannabinol Is Associated with an Increase in Survival Time in Palliative Cancer Patients: A Retrospective Multicenter Cohort Study. *Med. Cannabis Cannabinoids* **2024**, *7*, 59–67. [CrossRef]
36. Troyer, J.; Tanco, K. Review of the Use of Medicinal Cannabis Products in Palliative Care. *Cancers* **2024**, *16*, 1412. [CrossRef]
37. WeCann. Cannabis Medicinal e Anvisa: Conheça os 35 Produtos já Registrados. Available online: https://wecann.academy/cannabis-medicinal-e-anvisa-os-35-produtos-registrados/ (accessed on 4 May 2025).
38. Coelho, S.; Osborne, H.; Iavarone, K. What to know about types of CBD: A guide. *Medical News Today*, 21 August 2025. Available online: https://archive.is/HbRWb (accessed on 4 May 2025).
39. Palladini, M.C. Indications for the use of cannabinoids. *Braz. J. Pain* **2023**, *6*, 142–145. [CrossRef]
40. André, R.; Gomes, A.P.; Pereira-Leite, C.; Marques-da-Costa, A.; Rodrigues, L.M.; Sassano, M.; Rijo, P.; Maria. The Entourage Effect in Cannabis Medicinal Products: A Comprehensive Review. *Pharmaceuticals* **2024**, *17*, 1543. [CrossRef]
41. Bergeria, C.L.; Spindle, T.R.; Cone, E.J.; Sholler, D.; Goffi, E.; Mitchell, J.M.; E Winecker, R.; E Bigelow, G.; Flegel, R.; Vandrey, R. Pharmacokinetic Profile of Δ9-Tetrahydrocannabinol, Cannabidiol and Metabolites in Blood following Vaporization and Oral Ingestion of Cannabidiol Products. *J. Anal. Toxicol.* **2022**, *46*, 583–591. [CrossRef]
42. Zamarripa, C.A.; Spindle, T.R.; Surujunarain, R.; Weerts, E.M.; Bansal, S.; Unadkat, J.D.; Paine, M.F.; Vandrey, R. Assessment of Orally Administered Δ9-Tetrahydrocannabinol When Coadministered with Cannabidiol on Δ9-Tetrahydrocannabinol Pharmacokinetics and Pharmacodynamics in Healthy Adults. *JAMA Netw. Open* **2023**, *6*, e2254752. [CrossRef]
43. Gallassi, A.D.; Oliveira, A.W.C.; Mendes, N.S.; Filev, R.; Nakano, E.Y. Evaluation of cannabidiol-based products in Brazil: How can current regulations influence their labeling quality? *J. Cannabis Res.* **2025**, *7*, 12. [CrossRef]
44. Bhaskar, A.; Bell, A.; Boivin, M.; Briques, W.; Brown, M.; Clarke, H.; Cyr, C.; Eisenberg, E.; Silva, R.F.d.O.; Frohlich, E.; et al. Consensus recommendations on dosing and administration of medical cannabis to treat chronic pain: Results of a modified Delphi process. *J. Cannabis Res.* **2021**, *3*, 22. [CrossRef]
45. Conselho Federal de Farmácia. Medicamentos à Base de Cannabis Estarão Disponíveis para Pacientes do SUS no Estado de São Paulo. Available online: https://site.cff.org.br/noticia/Noticias-gerais/08/01/2024/medicamentos-a-base-de-cannabis-estarao-disponiveis-para-pacientes-do-sus-no-estado-de-sao-paulo#top (accessed on 4 May 2025).
46. Portela, R.; Mota, D.M.; Ferreira, P.J.G.; Lula, M.D.; Reis, B.B.; de Oliveira, H.N.; Ruas, C.M. Judicialização de produtos à base de canabidiol no Brasil: Uma análise de 2019 a 2022. *Cad. Saúde Pública* **2023**, *39*, e00024723. [CrossRef]
47. Salgado, M.A.; Fortes, S.L.C.L. Indicadores de saúde mental na atenção primária à saúde: Avaliando a qualidade do acesso através da capacidade de detecção de casos. *Cad. Saúde Pública* **2021**, *37*, e00178520. [CrossRef]
48. Häfele, V.; Nobre, M.L.; Siqueira, F.V. Prevalência de transtornos mentais e fatores associados em usuários da Atenção Primária. *Cad. Saúde Colet.* **2023**, *31*, e31030473. [CrossRef]

49. Paim, J.; Travassos, C.; Almeida, C.; Bahia, L.; Macinko, J. The Brazilian health system: History, advances, and challenges. *Lancet* **2011**, *377*, 1778–1797. [CrossRef]
50. Rodrigues, P.S.; Francisco, P.M.S.B.; Fontanella, A.T.; Borges, R.B.; Costa, K.S. Uso e fontes de obtenção de psicotrópicos em adultos e idosos brasileiros. *Ciênc Saúde Coletiva* **2020**, *25*, 4601–4614. [CrossRef]
51. Ministério da Saúde. Protocolo Clínico e Diretrizes Terapêuticas da Dor Crônica. Available online: https://www.gov.br/conitec/pt-br/midias/consultas/relatorios/2022/20221101_pcdt_dor_cronica_cp74.pdf/view (accessed on 3 May 2025).
52. Garcia-Rosa, B.S.; Urmenyi, L.G.; Santana, G.C.; Marques, J.V.M.; Miguez-Pinto, J.P.; Ramalho, C.; Boczar, D.; Andrade, B.B. Understanding the USMLE journey of Brazilian medical students and graduates: A narrative review. *Front Med.* **2024**, *17*, 1484772. [CrossRef]
53. Lira, C.C.; Araújo, E.L.; de Almeida, R.C.C.; Vieira, V.B. Ambulatório de Cannabis Medicinal: Conquistas, Desafios e Perspectivas. *Rev. Bras. Cannabis* **2025**, *4*, 105–127. [CrossRef]
54. Farias, C.R.; Lamy, M. Prescription of Medical Cannabis in Brazil: Between medical autonomy and the restrictions imposed by the Federal Council of Medicine. *Rev. Bras. Dir. Const.* **2025**, *25*, 326–349. [CrossRef]