

Research Paper

Use of cannabidiol products in Canada, United States, Australia, Aotearoa New Zealand, United Kingdom and Germany: products, sources and reasons for use

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ABSTRACT

Background: Cannabidiol (CBD) has attracted scientific, clinical, and public interest due to its perceived therapeutic benefits and favourable safety profile. However, a gap remains in understanding how different CBD-only regulatory frameworks shape consumers interaction with the CBD-only market. The study aimed to compare across jurisdictions: 1) CBD-only product use; 2) use for mental/physical symptom management; 3) socio-demographic correlates; and 4) sources of purchase; and 5) to estimate associations between CBD-only product use and perceived access to medical cannabis in jurisdictions without legal recreational cannabis.

Methods: Data were from the 2024 International Cannabis Policy Study, national cross-sectional surveys among participants aged 16–65 in Canada (CA), United States (US), Australia (AU), Aotearoa New Zealand (NZ), United Kingdom (UK), and Germany (DE) (n=79,644). Weighted estimates of CBD-only product use and behaviours were calculated, and multivariable regression analyses were conducted to examine correlates.

Findings: Lifetime, past 12-month and past month CBD-only product use was the highest in the US and lowest in AU and NZ. Sources of purchase varied by jurisdiction but generally reflected legal access pathways. Oils (between US27.1% and NZ46.8%) and/or edibles (between AU19.8% and US34.2%) were the most reported product types. Pain (between UK32.3% and NZ49.3%), anxiety (between DE30.4% and US46.5%), and depression (between UK24.2% and AU31.1%) were the most reported reasons for use. The use of cannabis for medical purposes with a prescription had the strongest association with past 12-month use of CBD-only products (range: UKARR=3.42–NZARR=14.73). In UK, AU, and NZ, close to a third of respondents who had ever used a CBD-only product reported to do so because they could not legally access medical cannabis (UK28.4% and AU/NZ39.6%).

Conclusion: There is wide cross-jurisdictional variation in CBD-only product use and retail access pathways reflecting distinct regulatory environments, alongside consistent patterns in products, and reasons for use. Variation in the relationship between CBD-only product use and medical cannabis systems, combined with the use of CBD-only products for managing anxiety, depression, and pain, underscores the need for clearer public health messaging, consumer guidance, and stronger evidence to guide policy and practice.

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Introduction

Cannabidiol (CBD) is one of over 100 cannabinoids found in the *Cannabis Sativa* plant and is present at different levels in intoxicating cannabis products that contain delta-9-tetrahydrocannabinol (delta-9-THC). However, CBD, when extracted from the plant and delivered alone is non-intoxicating. CBD has gained interest recently in the scientific, clinical, and public space due to its potential therapeutic properties, primarily derived from laboratory and animal studies, and favourable safety profile (Chesney et al., 2020; Machado Bergamaschi et al., 2011). To date, there is clinical trial evidence to support efficacy of CBD in treatment resistant childhood epilepsy syndromes (Lattanzi et al., 2018; Lawson et al., 2022; Samanta, 2019; Talwar et al., 2023). Given this evidence, pharmaceutical regulatory authorities in the United States (US), the European Union (EU) and Australia, have all approved the plant-based CBD-only pharmaceutical product, Epidiolex®/Epidyolex®, for rare forms of childhood epileptic syndromes. While there have been trials for CBD for other conditions in the US, EU and Australia, CBD has not been approved/licensed for other indications, but there are some studies showing that CBD may have therapeutic properties such as alleviating symptoms of anxiety (Han et al., 2024; Tang et al., 2022), with more limited evidence for pain and sleep. For instance, some studies indicated pain reduction after CBD use and some demonstrated no significant improvement (Mohammed et al., 2024; Moore et al., 2024). Similarly for sleep, some studies demonstrated improvement in some sleep outcomes after CBD, whereas other studies did not find a significant difference from placebo (Lavender et al., 2024; Narayan et al., 2024).

Products that only contain CBD (hereafter: CBD-only products) exist outside of those that are approved as medicines, and these are regulated differently depending on the jurisdiction or the CBD content (i.e., dose). CBD-only products may fall under several different regulatory frameworks: as an illegal substance, as an “unregistered” medicine (i.e. one that has not gone through traditional pharmaceutical regulatory pathways, perhaps because they are part of a dedicated medical cannabis program), as a cosmetic or wellness product, and as a food product. For instance, CBD-only products that are regulated as novel foods or wellness products in the EU contain much lower doses of CBD (approximately 20-25mg per dose) than CBD used in clinical trials for medicines (300-1500mg) (Freeman et al., 2019; Millar et al., 2019).

Regulations of CBD-only products that are not approved, registered or licensed medicines by a national drug agency vary widely across jurisdictions, such as Canada, the US, Australia, Aotearoa New Zealand (NZ), the United Kingdom (UK), and Germany (see Table 1).

Despite only one CBD-only product (Epidiolex®/Epidyolex®) being approved as a medicine in the six countries mentioned above and presented in Table 1, prior research has demonstrated that the most common physical and mental health conditions which CBD-only products are taken for include anxiety, depression, pain, and sleeping problems, including insomnia (Corroon & Phillips, 2018; Krowartz et al., 2025; Moltke & Hindocha, 2021; Nguyen et al., 2023; Wheeler et al., 2020). A recent systematic review and meta-analysis of the prevalence of cannabidiol use in North America and Europe demonstrated higher prevalence in North America than in Europe: lifetime prevalence in North America and Europe was 28.9% and 12.8%, 19.5% and 17.6% in the past year, and 12.0% and 7.2% in the past month, respectively (Weidberg et al., 2026). In the same review, the most common mode of administration was sublingual, followed by vaping, smoking, oral consumption (e.g., edibles and drinks), and topical use (Weidberg et al., 2026).

Previous cross-country policy analyses have been conducted on CBD-only product use (Arjun et al., 2025; McGregor et al., 2020) and a cross-country systematic review on prevalence and modes of administration (Weidberg et al., 2026); however, a gap remains in understanding how different CBD-only regulatory frameworks shape consumers interaction with the CBD-only market, including where

Table 1
Summary of CBD-only product regulations that are not approved, registered or licensed medicines by a national drug agency across jurisdictions.

Jurisdiction	Summary of CBD-only product regulations	References
Canada	CBD-only products are subject to the rules and requirements that apply to cannabis under the <i>Cannabis Act</i> . This means, CBD-only products must comply with the same restrictions on labelling, promotion, and point-of-sale as conventional cannabis products containing delta-9-THC. For example, these CBD-only products can be found in physical and online cannabis retail stores.	Government of Canada, 2018, 2025
US	Federally, the 2018 Farm Bill removed hemp from the definition of ‘marijuana’ in the <i>Controlled Substances Act</i> by defining hemp as <i>Cannabis Sativa L</i> and derivatives of cannabis with low concentrations of delta-9-THC, defined as <0.3% delta-9-THC by dry weight. This, in effect, created a hemp ‘loophole’ whereby cannabinoid products made from hemp, including those synthesised from the CBD found in hemp, were no longer illegal. This gave states without prior CBD-specific medical laws, medical cannabis or recreational cannabis laws, access to CBD-only products (as well as other hemp-derived products). Products purported to be CBD-only in the US can be found in gas stations, grocery stores, pharmacies in all states as well as cannabis stores in legal states.	Arjun et al., 2025; Federal Drug Administration, 2019, 2024; Gammon et al., 2021; Mead, 2019; Weedmaps, n.d.
Australia and Aotearoa New Zealand	CBD-only products are subject to all the rules and requirements that apply to medical cannabis products, in that they are available for prescription by a medical doctor or nurse practitioner and are considered unregistered medicines. Consumers can access CBD-only products from pharmacies, after they obtain a prescription from their general practitioner (GP), a specialist or a doctor/nurse practitioner at a cannabis clinic. Many cannabis clinics in Australia and NZ operate a telehealth model of care, with online consultations and the products are delivered to the consumers’ home. There are provisions for the supply of low dose CBD-only products over the counter in pharmacies in both Australia and NZ; however, it is a dormant provision as no	Australian Government Therapeutic Goods Administration, 2020, 2025, 2026; Ministry of Health, 2022, 2023

(continued on next page)

Table 1 (continued)

Jurisdiction	Summary of CBD-only product regulations	References
EU and Germany	product has been approved through this route to date. Germany is subject to broader EU regulations; low-dose CBD-only ingestible products are classified as ‘novel foods’ and must be authorised by the European Food Safety Authority. However, there are no regulated low-dose CBD products on the EU ‘novel foods’ list at the time of writing. Following a landmark 2020 European Court of Justice ruling that CBD is not a narcotic, sales vary across the region. Unregulated over-the-counter CBD-only products are available in retail stores and online in many EU countries, often being marketed via social media with unverified health claims. Since the legalisation of non-medical cannabis in 2024, Germany permits the sale of CBD-only dried flower, provided it is derived from approved industrial hemp strains and does not exceed the delta-9-THC limit of 0.3%. CBD-only products are also sold as isolated CBD, processed into oil or incorporated into food and beverages.	Arjun et al., 2025; Engeli et al., 2025; European Court of Justice, 2020; Lachenmeier, 2020; Legal Clarity, 2025; McGregor et al., 2020; Soleymanpour et al., 2021; von Lukas Beckmann, 2025
UK	The UK’s laws surrounding CBD-only products mirror those of the EU above, i.e., unless the CBD-only product is a registered medicine then it has novel food status and is subject to regulation by the UK Food Standards Agency. There are many regulated CBD-only products in the UK, such as beverages, edibles, and oils, and are widely available in grocery stores, health food stores, gas stations.	Arjun et al., 2025; Holland and Barratt, 2026; UK Food Standards Agency, 2020

consumers source CBD-only products and whether there is a relationship between CBD-only product use and medical cannabis use, and access to medical cannabis. The current study used data from the International Cannabis Policy Study (ICPS), which includes data from six high-income countries in North America, Oceania and Europe with differing regulatory frameworks for CBD-only products: Canada, the US, Australia, NZ, the UK, and Germany. The aims of the study were to estimate by jurisdiction: 1) the use of CBD-only products; 2) the use of CBD-only products for mental/physical symptom management; 3) the associations between CBD-only product use and socio-demographic characteristics and cannabis use status; and 4) the sources used to purchase CBD-only products; and 5) the association between the use of CBD-only products and access to medical cannabis in jurisdictions without access to legal recreational cannabis.

Methods

Data were from the 2024 ICPS, which consists of national, repeat cross-sectional surveys conducted annually in Canada (CA), US,

Australia (AU), NZ, UK and Germany (DE). Data were collected via self-completed web-based surveys in September-October 2024 from respondents aged 16-65. Non-probability samples of respondents were recruited through the Nielsen Consumer Insights Global Panel and their partners’ panels. Nielsen panels are recruited using a variety of probability and non-probability sampling methods. Nielsen draws stratified random samples from the online panels, with quotas based on sex, age and state/province of residence. Nielsen email panellists an invitation to access the ICPS survey via a unique link; respondents were unaware of the survey topic before accessing the link. For the AU, NZ, UK and DE sample, people who had used cannabis in the past 12 months were oversampled to ensure sufficient power for analyses among people who use cannabis. Upon completion, respondents received remuneration in accordance with their panel’s usual incentive structure. The American Association for Public Opinion Research (AAPOR) cooperation rate (American Association for Public Opinion Research, 2016), which is the percentage of respondents who completed the survey among all eligible respondents who accessed the survey link, was 39.1%. A total of 470, 941 panellists were invited, 237,152 accessed the survey link, and 92, 763 completed the survey for a response rate of 19.7%. Surveys were conducted in English in the US, AU, NZ and the UK, in English or French in CA, and in German in DE. Median survey time was 22 minutes.

The study was reviewed by and received ethics clearance through the University of Waterloo (ORE#31330) and the University of Bath (10400-12327). Informed consent was obtained from all respondents and/or their legal guardian(s). A full description of the study methods can be found in the ICPS Technical Reports and methodology paper (Fataar et al., 2025; Hammond et al., 2020; Iraniparast et al., 2023).

Measures

Socio-demographic measures

Sex-at-birth, age, ethnicity/race, highest education level, perceived income adequacy, and region (Table 2). For “perceived income adequacy” and “race/ethnicity” those who answered, “Don’t know” or “Refuse to answer” were categorised to “Unstated”.

Cannabis use

Past 12-month cannabis use status was created from two questions. First, “Do you use cannabis for medical reasons, recreational reasons or both? By medical cannabis user, we mean someone who uses cannabis only to manage a medical condition.” (1=Medical use only, 2=Recreational use only, 3=Both recreational and medical use, 4=Don’t know). Second, “Did you receive a prescription to use medical cannabis at any time in the past 12 months?” (5=Yes, 6=No, 7=Don’t know). Responses to these questions were combined to create four exclusive categories: “Use of cannabis for medical purposes with a prescription” [5], “Use of cannabis for medical purposes without a prescription” [1,3,6,7], “Use of cannabis for recreational purposes only” [2,4], and “Non-consumers” for respondents who did not report using cannabis in the past 12 months.

CBD measures

The ICPS has specific questions for CBD-only products separate from cannabis products that make people feel high and intoxicating hemp products (e.g., delta-8-THC). The ICPS provides a preamble to describe and distinguish each type of products for the respondent. These preambles used can be found in the survey documentation (Hammond & International Cannabis Policy Study Team, 2024) and Supplemental File 1.

CBD use

Lifetime CBD use. All respondents were asked “Have you ever used a CBD-only product?” With response options “Yes” and “No” (No/Don’t

Table 2

Sample characteristics among all respondents in Canada, US, Australia, A/New Zealand, UK, Germany in 2024.

	Canada (n=19,231)	US (n=44,772)	Australia (n=2,943)	New Zealand (n=3,053)	UK (n=6,129)	Germany (n=3,516)
Weighted % (unweighted n)						
Age						
16-25	19.0% (2168)	20.3% (4797)	19.9% (511)	19.3% (610)	18.2% (985)	16.9% (724)
26-35	22.8% (3469)	21.2% (7143)	22.9% (620)	22.3% (644)	21.6% (1730)	18.4% (912)
36-45	20.8% (4613)	20.4% (10683)	21.3% (677)	20.0% (752)	20.3% (1477)	20.7% (812)
46-55	18.2% (4269)	18.7% (10408)	18.7% (539)	19.6% (592)	20.0% (1016)	20.6% (573)
56-65	19.2% (4712)	19.4% (11741)	17.2% (596)	18.8% (455)	19.9% (921)	23.5% (495)
Sex-at-birth						
Female-at-birth	49.4% (11799)	49.9% (29411)	50.1% (1549)	50.2% (1553)	50.5% (2973)	49.3% (1650)
Male-at-birth	50.6% (7432)	50.1% (15361)	49.9% (1394)	49.8% (1500)	49.5% (3156)	50.7% (1866)
Gender						
Woman	50.0% (7360)	49.3% (15219)	49.2% (1379)	49.7% (1487)	48.2% (3111)	49.8% (1843)
Man	48.3% (11614)	49.0% (28960)	49.2% (1525)	49.2% (1537)	50.1% (2921)	48.9% (1624)
Gender Diverse	1.2% (173)	1.0% (380)	0.6% (18)	0.5% (12)	0.9% (44)	0.6% (28)
Other	0.6% (84)	0.7% (213)	0.9% (21)	0.6% (17)	0.8% (53)	0.7% (21)
Race/ethnicity*						
The most prevalent group	62.8% (13047)	74.8% (33277)	74.3% (2326)	53.8% (1773)	81.6% (4691)	67.6% (2728)
All other groups	37.2% (6184)	25.2% (11495)	25.7% (617)	46.2% (1280)	18.4% (1438)	32.4% (788)
Highest level of education						
Less than high school	13.6% (1174)	6.8% (2120)	16.3% (399)	4.2% (75)	20.1% (743)	2.5% (61)
High school diploma	25.9% (3041)	27.3% (10551)	22.7% (572)	47.1% (850)	14.8% (783)	15.9% (293)
Some college or technical vocation	30.6% (7672)	32.3% (15575)	26.1% (797)	18.3% (809)	35.7% (2192)	61.0% (2120)
Bachelor's degree or higher	28.5% (7134)	32.8% (16297)	33.9% (1147)	29.3% (1285)	27.0% (2298)	19.8% (1016)
Unstated	1.4% (210)	0.8% (229)	1.0% (28)	1.1% (34)	2.4% (113)	0.8% (26)
Income adequacy						
Very difficult or difficult	34.9% (6738)	35.9% (17135)	32.9% (972)	36.7% (1061)	27.2% (1556)	26.8% (884)
Neither easy nor difficult	33.8% (6433)	30.7% (13678)	31.9% (916)	35.5% (1085)	33.9% (2010)	38.8% (1278)
Very Easy or easy	28.2% (5611)	30.5% (12924)	33.1% (996)	25.3% (833)	35.8% (2411)	31.4% (1265)
Unstated	3.1% (449)	2.9% (1035)	2.1% (59)	2.5% (74)	3.1% (152)	3.1% (89)
General health						
Excellent/very good	43.7% (8397)	44.5% (18686)	40.0% (1189)	38.3% (1245)	43.2% (2816)	13.2% (508)
Good	35.0% (6918)	32.7% (15572)	34.5% (1009)	37.0% (1115)	31.9% (1910)	34.1% (1288)
Fair	16.1% (2942)	17.7% (8161)	19.6% (571)	17.5% (499)	16.8% (984)	36.3% (1207)
Poor	4.5% (861)	4.3% (2071)	5.2% (152)	6.5% (176)	7.7% (394)	15.1% (471)
Unstated	0.8% (113)	0.8% (282)	0.8% (22)	0.7% (18)	0.3% (25)	1.4% (42)

* For harmonisation across countries, race/ethnicity category was collapsed into a binary variable of the most prevalent group versus all other groups, depending on how race/ethnicity was captured. For Canada, the US, and the UK, the most prevalent group was 'White'. For Australia the most prevalent group was 'Only English spoken in the home'. For New Zealand the most prevalent group was NZ European/Pākehā. For Germany, the most prevalent group was 'Both parents born in Germany'.

^ Germany had different options to all other countries. For 'Excellent/very good', Germany had 'Really good'. For 'Fair', Germany had 'Average'. For 'Poor', Germany had 'Bad/Really bad'.

know). The preamble to this question changed between 2023 and 2024, as such, a split sample viewed the previous preamble and the new preamble. The average (mean) was taken of "Yes" for the lifetime CBD use. See Supplemental File 1, and Supplemental Figs. 1-3 for further detail and lifetime use by sample.

Last use of CBD-only product. Respondents who had ever used a CBD-only product were asked "When was the last time you used a CBD-only product?" with response options categorised to non-exclusive categories: "Ever" (More than 12 months ago/More than 30days ago but less than 12 months ago/Within past 30 days), "Past 12 months" (More than 30days ago but less than 12 months ago/Within past 30 days) and "Past 30 days" (Within past 30 days).

CBD product use. Respondents who had used CBD-only products in the past 12 months were asked "In the past 12 months, what type of CBD-only products did you use?" With response options "Oil or liquid drops", "Oil or liquid capsules", "Oil or liquid for vaping", "edibles/food", "Drinks", "topical ointments", "tinctures", "concentrates", "hash or kief", "dried flower", "hemp oil", and "Other". All were binary questions whereby selecting the source is "Yes" and the absence is "No". "Other" was recategorised to existing options if provided in open text.

Purchase of CBD products. Respondents who had used CBD-only products in the past 12 months were asked "In the past 12 months, did you

buy or pay for any CBD-only products?" with response options "Yes" and "No" (No/Don't know).

Purchase source of CBD products. Respondents who had purchased CBD-only products were asked "The last time you bought a CBD-only product, where did you buy it?" with response options "Family member or friend"; "Dealer in person"; "Internet"; "Pharmacy"; "Store"; "cannabis club"; "Other". "Other" was recategorised to existing options if provided in open text. Please note that the question did not specify whether these sources were legal or illegal.

Use of CBD-only products for mental health and/or physical health conditions. Respondents who had used a CBD-only product were asked: Have you ever used CBD-only products with no THC to improve or manage symptoms for any of the following." See Table 3 for list of conditions. All were binary questions whereby selecting the source is "Yes" and the absence is "No". "Other" was recategorised to existing options if provided in open text.

Main reason for using CBD-only products. Respondents who reported that they used CBD-only products for their [physical/mental] health were asked "Is improving or managing [physical/mental] health one of the main reasons you use CBD-only products?" With response options "Yes" and "No" (No/Don't know).

Table 3
CBD-only product use and behaviours among past 12-month consumers.

	Canada (n=2,957)	US (n=9,412)	Australia (n=266)	New Zealand (n=203)	UK (n=1,668)	Germany (n=738)
	Weighted % (95% CI)					
CBD-only products used in past 12 months (% Yes)						
Edibles/Food	31.6% (29.5, 33.6)	34.2% (32.5, 35.9)	19.8% (14.5, 25.0)	21.3% (14.1, 28.4)	22.2% (18.7, 25.6)	20.3% (14.0, 26.6)
Oil or liquid drops	31.0% (28.9, 33.0)	27.1% (25.4, 28.7)	42.3% (35.7, 49.0)	46.8% (38.2, 55.3)	34.0% (30.1, 37.9)	46.4% (39.2, 53.5)
Topical ointments	22.7% (20.9, 24.5)	28.7% (27.0, 30.3)	14.3% (9.6, 19.0)	21.8% (14.6, 29.1)	19.0% (15.9, 22.2)	12.4% (7.8, 17.1)
Oil or liquid capsules	15.1% (13.4, 16.7)	12.4% (11.1, 13.7)	20.8% (15.4, 26.2)	15.5% (8.8, 22.2)	19.1% (15.9, 22.2)	12.8% (9.2, 16.5)
Dried flower	13.2% (11.5, 14.9)	11.0% (9.8, 12.2)	9.6% (5.5, 13.7)	11.1% (5.5, 16.7)	6.3% (4.6, 8.0)	12.4% (8.8, 16.0)
Oil or liquid for vaping	11.2% (9.6, 12.7)	15.7% (14.3, 17.1)	16.4% (11.3, 21.4)	13.3% (7.6, 19.0)	21.4% (18.0, 24.7)	13.3% (8.7, 17.9)
Drinks	11.1% (9.6, 12.5)	11.9% (10.7, 13.1)	18.6% (13.4, 23.9)	12.6% (6.8, 18.3)	27.3% (23.6, 31.0)	11.7% (7.1, 16.2)
Tinctures	4.9% (3.9, 5.9)	8.3% (7.2, 9.4)	5.4% (2.4, 8.4)	8.1% (3.6, 12.6)	4.4% (2.9, 5.8)	6.0% (2.9, 9.2)
Concentrates	3.0% (2.1, 3.8)	4.9% (4.0, 5.7)	4.1% (1.3, 7.0)	4.5% (0.9, 8.2)	4.3% (2.6, 6.0)	3.9% (1.5, 6.3)
Hash or kief	3.6% (2.7, 4.5)	3.8% (3.0, 4.6)	2.5% (0.5, 4.5)	5.9% (1.8, 10.0)	3.0% (1.8, 4.3)	8.2% (5.4, 11.0)
Hemp oil	2.2% (1.5, 2.8)	4.7% (4.0, 5.4)	7.5% (3.9, 11.1)	4.4% (1.3, 7.5)	4.7% (2.9, 6.6)	11.0% (5.3, 16.7)
Purchase of CBD-only products in past 12 months						
Yes	59.4% (57.2, 61.7)	60.6% (58.7, 62.4)	59.8% (53.2, 66.4)	51.5% (42.9, 60.1)	72.1% (68.4, 75.8)	61.3% (54.6, 68.0)

Replacement for medical cannabis. Respondents in UK/AU/NZ who had ever used a CBD-only product were asked “Have you ever used a CBD-only product because you could not legally access medical cannabis?” with response options “Yes” and “No” (No/Don’t know).

All questions included “Don’t know” and “Refuse to answer” options and were excluded unless specified within the measures above.

Analysis

A total of 92,763 respondents completed the 2024 survey. After removing respondents due to dishonesty (n=2,802), poor data quality (n=7,821), those who identified as intersex and an ‘other’/unstated gender identity (due to insufficient cell counts for weighting) (n=117), speeding (n=183), duplicate entries (n=1,213), and unstated region/state/territory (n=36), 80,591 respondents were retained. The remaining 80,591 comprised the 2024 analytic sample. Case-wise deletion was used to remove missing data (i.e., respondents who selected ‘refuse to answer’) for variables used in regression analyses: highest level of education (n=640; 0.8%), general health (n=502; 0.6%), income adequacy (n=1858; 2.3%), ever use of CBD-only products (n=23; 0.03%), Last use of CBD-only products (n=408; 0.5%), Purchase of a CBD-only product (n=67; 0.1%), Purchase source of CBD-only product (n=268; 0.3%), main reason for CBD-only product (n=19; 0.02%), and replacement of medical cannabis (n=25; 0.03%).

Data were weighted with post-stratification sample weights constructed using a raking algorithm to calibrate to known population proportions of age group, sex, region, ethnicity (except in CA), education, smoking status (CA/US), and cannabis use status (AU/NZ/UK/DE) from the census and other national surveys in each country (Fataar et al., 2025). A raking algorithm was applied to compute weights that are calibrated to these groupings. The SAS macro “RAKE_AND_TRIM_G4_V5” was used, with trimming to 5 (rescaled) if necessary. Finally, the weights were rescaled to sum to the sample size in the country. Estimates were weighted unless otherwise specified. As previously mentioned, cannabis consumers were intentionally oversampled in AU, NZ, UK and DE, resulting in unweighted samples that contain a higher proportion of cannabis consumers than would be true of the population. The weighting process ensures that when the weights are applied, these high proportions are adjusted down to the cannabis use estimates from national benchmark surveys. Further details are provided in the 2024 Technical Report (www.cannabisproject.ca/methods).

First, weighted descriptive statistics were used to estimate the percentage of lifetime, past 12 month, and past month use of CBD-only products as well as CBD-only product use behaviours across jurisdiction, including products used, sources used, and use of CBD-only products for physical and mental health symptoms. Second, multivariable regression models were used to estimate the association between past 12-month use of CBD-only products and socio-demographic characteristics, stratified by jurisdiction. Third, univariate and multivariable regression models were used to estimate the association between ever use of CBD-only product due to perceived inaccessibility of medical cannabis and the restrictiveness of medical cannabis access, controlling for socio-demographic characteristics.

All models were adjusted for region, age groups, sex-at-birth, highest level of education, ethnicity/race, income adequacy, and device used to complete survey. Adjusted risk ratios (ARR) were reported with 95% confidence intervals (95% CI). We used quasi-Poisson regression analyses with a log link function to obtain adjusted risk ratios (Norton et al., 2018). Analyses were conducted using R version 4.5.1, with survey weighting and svyglm for models.

Results

Table 2 displays the sample characteristics of respondents in all six countries.

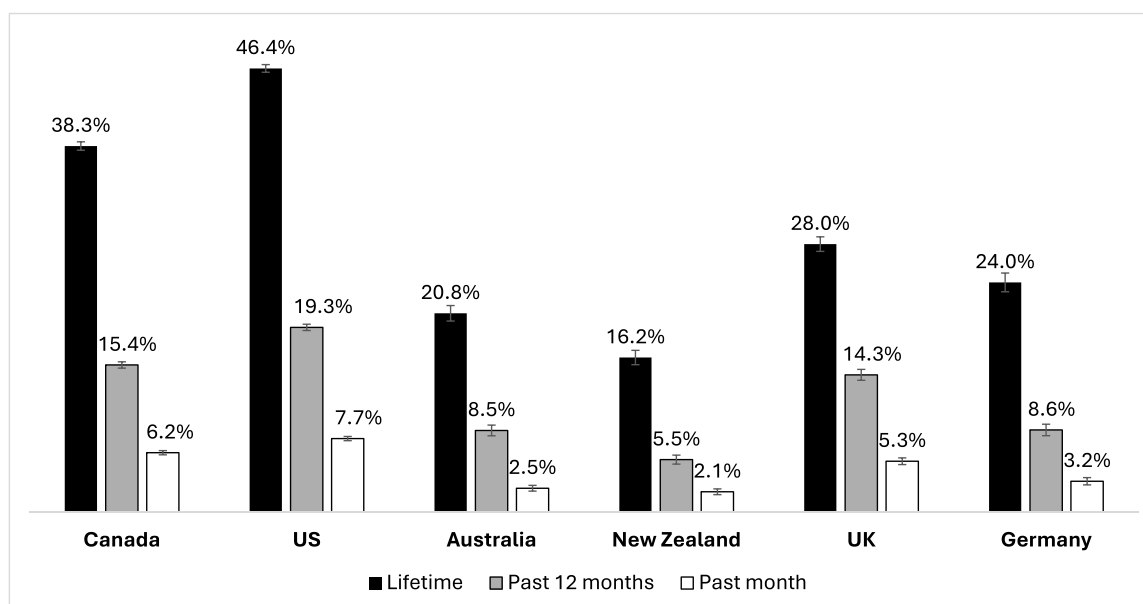


Fig. 1. Lifetime use, past 12-month use, and past month use of CBD-only products in 2024 by jurisdiction.

CBD-only product use

Fig. 1 displays the percentage of those who reported using CBD-only products in their lifetime, in the past 12 months, and in the past month by jurisdiction. Lifetime use of CBD-only products ranged from 16.2% (NZ) to 46.4% (US). Past 12-month use of CBD-only products ranged from 5.5% (NZ) to 19.3% (US) and past month use of CBD-only products ranged from 2.1% (NZ) to 7.7% (US).

Among respondents that reported using CBD-only products in the past 12-months, the type of products used varied (Table 3). In Canada and US, the most commonly reported products were edibles (CA31.6%, US34.2%). In Australia, NZ, the UK and Germany, the most commonly reported product was oils or liquid drops (AU42.3%, NZ46.8%, UK34.0% and DE46.4%, respectively).

CBD-only products for mental and physical health conditions

Respondents most commonly reported using CBD-only products to improve or manage anxiety (CA41.8%, US46.5%, AU42.3%, NZ39.6%, UK44.5%, DE30.4%) and depression (CA26.6%, US30.8%, AU31.1%, NZ31.1%, UK24.2%, DE29.4%) in the past 12 months (Table 4). Among those that reported using CBD-only products to improve or manage a mental health condition, approximately three-quarters reported that it was the main reason why they use CBD-only products (CA70.2%, US76.4%, AU72.4%, NZ70.8%, UK79.0%, DE71.8%).

Respondents most commonly reported using CBD-only products to improve or manage pain (CA46.7%, US46.2%, AU39.8%, NZ49.3%, UK32.3%, DE32.6%), problems sleeping (CA27.7%, US24.3%, AU24.4%, NZ34.5%, UK20.7%, DE25.8%) and headaches/migraines (CA24.6%, US26.9%, AU29.3%, NZ28.2%, UK19.8%, DE35.1%) in the past 12 months (Table 4). Among those that reported using CBD-only products to improve or manage a physical health condition, over three-quarters reported that it was the main reason why they use CBD-only products (CA82.1%, US83.2%, AU79.6%, NZ85.3%, UK78.9%, DE74.2%).

Characteristics of people who use CBD-only products

Supplemental Tables 1-6 display the regression analyses of the association between CBD-only product use and demographics in each individual country. In all jurisdictions, people who reported using cannabis in the past 12 months for any purpose, but strongest for those

with a medical prescription, had a higher probability of past 12-month CBD-only product use (CA, US, AU, NZ, UK, DE). In addition, people who had a higher probability of past 12-month CBD-only product use were those assigned female-at-birth (CA), younger (CA, US, AU, UK, DE), educated to high school or above (US, UK) or college/technical vocation or above (CA), identified as Native Hawaiian or Pacific Islander (US), and those who reported that it was easy or very easy to make ends meet (US). People who had a lower probability of past 12-month CBD-only product use were those who identified as South Asian (CA), or Asian or Asian British (UK), and those who resided in states with medical cannabis laws (US). For a full breakdown, please see Supplemental Tables 1-6.

Sources of CBD-only products

Among respondents that reported purchasing CBD-only products in the past 12-months, the sources of CBD-only products varied by jurisdiction (Fig. 2). In Canada, the most commonly reported sources were 'other type of store' (34.9%) and online (22.1%). In the US, the most commonly reported sources were online (24.0%) and a grocery store, gas station or mall (20.8%). In Australia, the most commonly reported sources were a pharmacy or clinic (38.5%) and online (20.8%). In NZ, the most commonly reported sources were a pharmacy or clinic (42.3%) and a dealer in person (13.7%). In the UK, the most commonly reported sources were a pharmacy or clinic (27.8%) and a grocery store, gas station or mall (23.4%). In Germany, the most commonly reported sources were online (29.6%) and a pharmacy or clinic (19.3%).

Medical cannabis access

Table 5 displays the regression analyses determining the association between permissiveness of medical cannabis laws and whether the respondent had ever used a CBD-only product because they could not legally access medical cannabis among those who had ever used a CBD-only product. In the UK, 28.4% of people who had ever used a CBD-only product reported ever using a CBD-only product because they could not legally access medical cannabis, with 39.4% in AU and NZ reporting the same. While respondents in AU and NZ had a higher probability of ever using a CBD-only product because they could not legally access medical cannabis compared to respondents in the UK (ARR=0.72, 0.59-0.86), the association was no longer statistically significant after controlling

Table 4

Percentage of past 12-month CBD-only product consumers reporting use for mental and physical health symptoms by jurisdiction.

	Canada (n=2,957)	US (n=9,412)	Australia (n=266)	New Zealand (n=203)	UK (n=1,668)	Germany (n=738)
Weighted % (95% CI)						
Use of CBD-only products to improve or manage the following mental health conditions						
Anxiety	41.8% (39.6, 44.1)	46.5% (44.7, 48.4)	42.3% (35.7, 48.9)	39.6% (31.1, 48.1)	44.5% (40.4, 48.6)	30.4% (24.2, 36.6)
Depression	26.6% (24.5, 28.7)	30.8% (29.1, 32.5)	31.1% (24.9, 37.3)	31.1% (22.8, 39.3)	24.2% (20.7, 27.6)	29.4% (23.3, 35.5)
Post-traumatic stress disorder	14.8% (13.1, 16.5)	15.8% (14.5, 17.1)	20.2% (14.9, 25.6)	15.3% (8.8, 21.7)	12.0% (9.5, 14.5)	13.8% (8.9, 18.7)
ADD/ADHD	8.7% (7.3, 10.1)	7.9% (6.9, 9.0)	7.4% (4.0, 10.9)	2.1% (0.2, 4.0)	4.4% (2.9, 5.9)	7.7% (3.0, 12.4)
Bipolar disorder, mania, or borderline personality disorder	8.1% (6.7, 9.5)	9.7% (8.5, 10.8)	10.1% (6.0, 14.2)	6.0% (2.0, 10.0)	6.5% (4.5, 8.4)	7.7% (4.7, 10.7)
Psychosis or dissociative identity disorder	5.4% (4.2, 6.6)	6.5% (5.6, 7.5)	9.1% (5.3, 12.9)	6.7% (2.9, 10.4)	5.6% (4.0, 7.3)	8.2% (4.9, 11.5)
Alcohol or other drug use	5.2% (4.1, 6.2)	6.3% (5.3, 7.2)	6.1% (2.9, 9.4)	8.4% (3.7, 13.1)	5.7% (3.9, 7.4)	7.1% (4.2, 10.0)
Eating disorder	4.4% (3.4, 5.4)	5.1% (4.3, 5.9)	4.0 (1.4, 6.7)	3.3% (1.1, 5.6)	5.0% (3.4, 6.7)	7.7% (4.4, 10.9)
Schizophrenia	1.8% (1.1, 2.5)	3.5% (2.8, 4.2)	2.8% (0.3, 5.3)	2.9% (0.5, 5.2)	1.9% (0.9, 2.8)	2.2% (0.3, 4.1)
I have never used CBD-only products for any of the stated conditions	31.3% (29.3, 33.3)	28.3% (26.7, 30.0)	20.4% (15.1, 25.6)	29.6% (21.8, 37.4)	29.7% (25.9, 33.5)	6.9% (3.8, 10.1)
Improving or managing mental health conditions was the main reason why CBD-only products were used						
Yes (among those who answered yes to using CBD-only products for a mental health condition)	70.2% (66.9, 73.6)	76.4% (73.9, 78.8)	72.4% (64.4, 80.4)	70.8% (59.4, 82.2)	79.0% (74.0, 84.1)	71.8% (62.8, 80.8)
Use of CBD-only products to improve or manage the following physical health conditions						
Pain	46.7% (44.4, 48.9)	46.2% (44.4, 48.1)	39.8% (33.3, 46.3)	49.3% (40.7, 57.8)	32.3% (28.4, 36.1)	32.6% (25.8, 39.4)
Problems sleeping	27.7% (25.8, 29.7)	24.3% (22.8, 25.9)	24.4% (18.8, 30.0)	34.5% (26.1, 42.9)	20.7% (17.4, 24.0)	25.8% (19.1, 32.5)
Headaches/migraines	24.6% (22.6, 26.6)	26.9% (25.3, 28.6)	29.3% (23.1, 35.6)	28.2% (20.4, 36.1)	19.8% (16.6, 22.9)	35.1% (28.5, 41.6)
General wellbeing	13.1% (11.5, 14.6)	11.6% (10.5, 12.7)	14.2% (9.5, 18.8)	10.7% (5.2, 16.2)	13.8% (11.0, 16.6)	7.7% (4.5, 11.0)
Lack of appetite	11.1% (9.6, 12.7)	10.4% (9.3, 11.6)	15.7% (10.9, 20.6)	9.3% (5.0, 13.6)	10.7% (8.4, 13.0)	9.2% (6.2, 12.3)
Muscle spasms	10.4% (9.0, 11.7)	12.0% (10.7, 13.2)	10.4% (6.0, 14.7)	12.4% (5.9, 18.9)	9.3% (6.9, 11.6)	7.5% (3.5, 11.5)
Nausea/vomiting or chemotherapy symptoms	8.9% (7.5, 10.4)	10.4% (9.2, 11.5)	18.7% (13.2, 24.2)	13.5% (7.8, 19.3)	5.6% (3.9, 7.4)	9.5% (5.3, 13.8)
Digestion/gastrointestinal issues	6.0% (4.8, 7.1)	6.1% (5.2, 7.0)	5.9% (2.8, 9.1)	7.1% (2.5, 11.7)	3.6% (2.3, 4.9)	3.6% (1.8, 5.4)
Fibromyalgia	4.9% (4.0, 5.8)	4.2% (3.5, 4.8)	2.9% (0.6, 5.3)	6.4% (0.8, 12.0)	5.5% (3.6, 7.4)	3.9% (0.4, 7.4)
Seizures/epilepsy	3.4% (2.4, 4.3)	5.5% (4.6, 6.4)	6.0% (2.9, 9.2)	3.8% (1.6, 6.0)	4.0% (2.6, 5.4)	5.4% (2.8, 7.9)
Cancer treatment	2.0% (1.4, 2.7)	3.2% (2.5, 3.8)	2.6% (0.9, 4.4)	7.3% (2.5, 12.0)	3.5% (2.2, 4.9)	1.0% (0.1, 1.8)
I have never used CBD-only products for any of the stated conditions	14.5% (12.9, 16.1)	15.0% (13.6, 16.3)	15.7% (11.1, 20.4)	11.7% (6.7, 16.7)	23.5% (19.9, 27.1)	9.1% (6.0, 12.3)
Improving or managing physical health conditions was the main reason why CBD-only products were used						
Yes (among those who answered yes to using CBD-only products for a mental health condition)	82.1% (79.6, 84.6)	83.2% (81.3, 85.1)	79.6% (72.3, 86.8)	85.3% (77.3, 93.3)	78.9% (74.2, 83.5)	74.2% (66.5, 81.8)

for sociodemographic and cannabis use status (ARR=0.82, 0.68-1.00).

Supplemental Table 7 displays respondents past 12-month cannabis use among CBD-only consumers. The percentage of CBD-only consumers that reported receiving a prescription for medical cannabis use varied by jurisdiction (CA37.3%, US33.0%, AU15.1%, NZ24.3%, UK7.3%, DE12.5%), with the highest percentage in Canada and the lowest in the UK. The greatest ‘cross-over’ of cannabis and CBD-only consumers was in Canada, with 71.8% of CBD-only consumers reporting past 12 months cannabis use (for any purpose). The lowest ‘cross-over’ was in the UK, where only 17.5% of CBD-only consumers reported past 12-month cannabis use (for any purpose).

Discussion

The study makes two primary contributions to the literature: first, we demonstrate cross-jurisdictional variation in the sources used to obtain CBD-only products, that closely align to each jurisdiction’s distinct regulations. Second, we provide evidence on the relationship between

CBD-only product use, medical cannabis use, and access to medical cannabis in jurisdictions without recreational cannabis regulations. In addition, the study provides estimates using harmonised measures across jurisdictions on the use of CBD-only products, the types of CBD-only products commonly used, reasons for use, and associated socio-demographics with CBD-only product use, including novel data from Australia and NZ where evidence remains limited.

Popular sources of CBD-only products aligned with what is permitted by CBD regulations in each jurisdiction. Indeed, while people still reported accessing CBD-only products from social sources such as friends, family members or dealers, the most commonly reported sources aligned with the legal route(s) to access CBD-only products in examined jurisdictions, even though the question itself did not specify whether the sources were legal. In Canada, consumers purchased their CBD-only products from another type of store and online. The ICPS did not provide a specific response of ‘dispensaries’ but responses to ‘other’ indicated that this is how people in Canada responded to the question. Indeed, these are the legal routes for how consumers purchase CBD-only

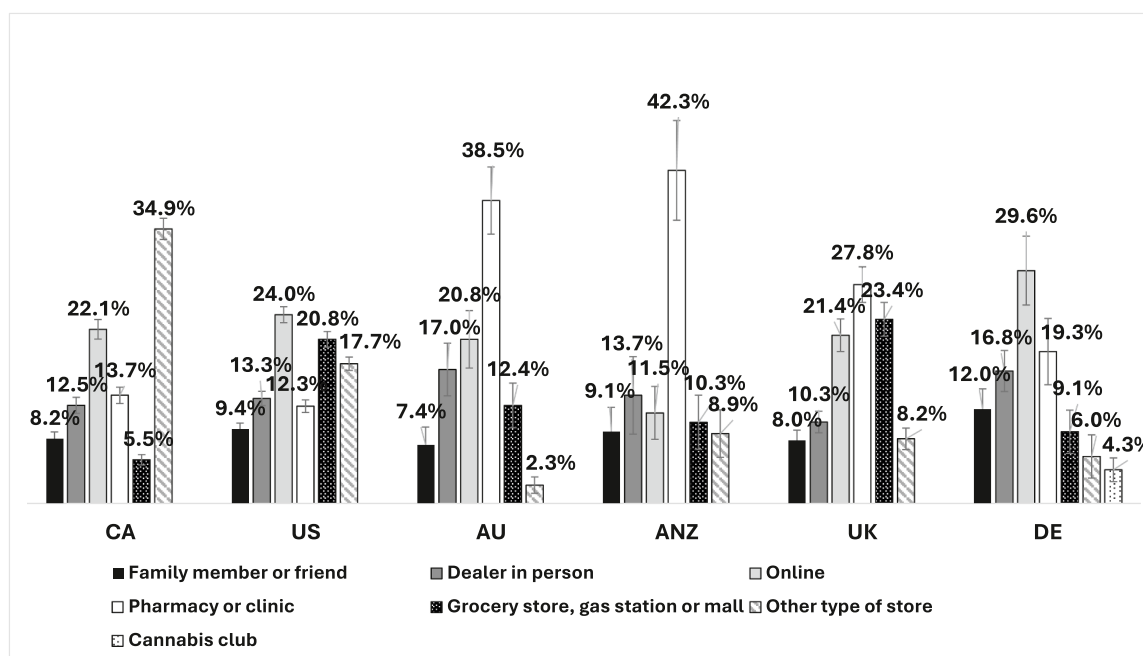


Fig. 2. Sources used the last time they purchased CBD-only products in 2024, by jurisdiction.

Table 5

Regression analyses on the association between CBD-only product use and medical cannabis access in 2024 among people who had ever used a CBD-only product.

	Have you ever used a CBD-only product because you could not legally access medical cannabis? Yes (versus No/Don't know)		
	Yes % (95% CI)	RR (95% CI)	ARR (95% CI)
Medical cannabis access			
Restrictive (UK)	28.4 (24.7, 32.1)	0.72 (0.59, 0.86)	0.82 (0.68, 1.00)
Permissive (AU, NZ)	39.6 (34.3, 45.0)	REF	REF

ARR models adjusted for cannabis use status, age, sex, highest level of education, ethnicity/race and income adequacy, device used to complete survey. Bolded values are statistically significant at the 5% level. REF = Reference category.

products in Canada – through physical or online cannabis stores. In the US, consumers purchased their CBD-only products from online stores, grocery stores, gas stations or malls as well as another type of store. Similar to Canada, these sources align with where cannabis products can be purchased, and the use of grocery stores, gas stations or malls reflects the sources where hemp-derived products are accessible (Cannabis Regulators Association [CANNRA], 2023; Federal Drug Administration, 2024). In Australia and NZ, the dominating source was a pharmacy or clinic, which speaks to the alignment of the medical cannabis market and the inaccessibility of CBD-only products through other legal routes (Australian Government Therapeutic Goods Administration, 2020; Ministry of Health, 2023). It is worth highlighting that the second most commonly reported source used in NZ were dealers in person, perhaps signifying the illegal market of ‘green fairies’ that provide medical cannabis, including CBD-only products (Raymond et al., 2021). In the UK, retail sources were the most popular sources, reflecting the accessibility of purchasing CBD-only products in major retail outlets and pharmacies (Barton, 2023; Freeman et al., 2019; Holland and Barratt, 2026). In Germany, CBD-only products can be purchased from CBD specific online stores, mirroring the most commonly reported source in this study as well as previously literature

(Alayli et al., 2022; Geppert et al., 2023; McGregor et al., 2020). These findings indicate that where people obtain CBD-only products is largely consistent with legal sources within their jurisdiction, as consumers primarily rely on legally sanctioned sources while supplementing with informal channels where access may be more restricted.

Close to a third of respondents in the UK, Australia and NZ who had ever used a CBD-only product reported to do so because they could not legally access medical cannabis. However, there was no statistically significant association between the restrictiveness of a medical cannabis policy and reporting CBD-only product use. This finding may be explained by differences in CBD-only product availability, marketing and consumer perceptions. People in the UK have wider access to CBD-only products independent of the prescribed medical cannabis market, with products available over the counter in major chain pharmacies and grocery stores alongside everyday items. This market context is consistent with CBD-only products potentially being viewed as distinct from medical cannabis in consumers’ minds. Comparing this market landscape to Australia and NZ, there are no CBD-only products currently available to legally purchase outside of the prescribed medical cannabis market. As such, CBD-only products are available through more restricted channels and are defined as medical cannabis products from a regulatory perspective.

The interpretation that UK respondents are not necessarily perceiving CBD-only products as medical products is reflected in the jurisdiction-specific analyses. In Canada, Australia, and NZ, whose policy frameworks closely link CBD-only products to the broader legal cannabis market (i.e., CBD-only products can only be purchased or prescribed through the same channels as cannabis in Canada, and medical cannabis in Australia and NZ) there was between a five- and 14-fold higher probability of medical cannabis consumers (with and without a prescription) reporting past year CBD-only use. In the UK and the US, this was a relatively lower but still statistically significant two- to three-fold higher probability. The US aligning with the UK in this finding is also consistent with the relative separation of the CBD-only market from the medical cannabis market through the expansion of hemp-derived products in retail stores after the Farm Bill in 2018, of which many of the hemp-derived products are synthesised from CBD. Taken together, these findings suggest that in jurisdictions where CBD-only products can be obtained from the same sources as legal medical

cannabis, consumers may view CBD only products as equivalent therapeutic products. Given the cross-sectional design, causal conclusions regarding the effects of regulation are not possible, but the findings highlight a need for clearer labelling, messaging, and public health guidance about CBD-only products, as well as what constitutes a CBD-only product and how these differ from medical cannabis.

Other sociodemographic characteristics were associated with a higher probability of past year CBD-only product use, such as young age (specifically 25–36), and a higher education, consistent with previous research (Alayli et al., 2022; Corroon & Phillips, 2018; Geppert et al., 2023; Goodman et al., 2022). However, we only found sex-at-birth to be associated with past year CBD-only product use in Canada, whereas females have been consistently found to be associated with a higher likelihood of CBD-only use in other samples (Alayli et al., 2022; Choi et al., 2024; Corroon & Phillips, 2018; Goodman et al., 2022; Wheeler et al., 2020). To the authors knowledge, this is the first study to examine socio-demographic association with the use of CBD-only products in an Australian and NZ sample beyond clinical context.

The current study's estimates of lifetime, past 12-month, and past-month use of CBD-only products were within the range of prevalence estimates found in a systematic review and meta-analysis on CBD use in North America and Europe (Weidberg et al., 2026). For instance, the past 12-month use of CBD-only products was 15.4% and 19.3% in Canada and the US and 14.3% and 8.6% in the UK and Germany, aligning with the ranges of 2.7% to 49.9% in North America with a pooled prevalence of 19.5% and 8.8% to 38.3% in Europe with a pooled prevalence of 17.6% (Weidberg et al., 2026). Australia and NZ have the lowest rates of CBD-only product use in the current study. Further research is needed on CBD-only product use in Australia and NZ as to our knowledge there is sparse research estimating the prevalence of CBD use in Australia and NZ exists that is separate from prescribed delta-9-THC containing medical cannabis (Mills et al., 2022; Rychert & Wilkins, 2024).

The most popular products (oils or liquid drops or edibles) across all jurisdictions tended to be those that were more 'medical' or 'therapeutic' products, aligning with previous literature (Bhamra et al., 2021; Corroon & Phillips, 2018; Geppert et al., 2023; Goodman et al., 2022). However, there were some popular products that were reported by UK respondents that were not as popular in the other countries surveyed and not typically seen as 'medical', namely drinks. The popularity of these products aligns with their greater availability in the UK market. CBD-only drinks are widely available and accessible, being sold alongside other sugar-sweetened beverages in major chain grocery stores, health food stores, and pharmacies (Barton, 2023). These findings indicate that patterns of CBD-only product use differ across jurisdictions and align with availability of product types across the different markets.

Anxiety, depression, and pain were the most commonly reported conditions that CBD-only products were used to improve or manage. These conditions are also found in previous studies examining reasons for CBD-only use (Corroon & Phillips, 2018; Geppert et al., 2023; Nguyen et al., 2023) as well as the reasons stated for medical cannabis use (Dawson et al., 2026; Kosiba et al., 2019). There was a substantial percentage of people using CBD-only products that reported managing or improving their mental or physical health was the main reason that they used CBD-only products; however, there is little or no evidence of efficacy for many conditions that the respondents in this study report using CBD-only products for (Wilson et al., 2026). Moreover, commercially available CBD-only products have doses considerably lower than those in clinical trials, and they lack data on efficacy and safety (Freeman et al., 2019). Further research is needed on the efficacy and safety of CBD-only products for medical use, considering the reported self-medication among respondents in all countries, especially as the interpretation of medical use of cannabis products, including CBD-only products, can differ across jurisdictions (Graham et al., 2025). Consumer guidance and public health messaging is also needed to communicate the current limitations of clinical efficacy and potential for drug- and

disease-state interactions with these products (Graham et al., 2022).

Limitations

This study is subject to limitations common to survey research. Respondents were recruited using non-probability-based sampling; therefore, the findings do not necessarily provide nationally representative estimates. The data were weighted by age, sex, region, ethnicity, education and cannabis use (in AU/NZ/UK/DE) to align with national distributions. However, compared to the national population, the US sample had fewer respondents with low education levels and Hispanic ethnicity. The NZ sample had fewer respondents with less than high school education and more with a high school diploma or equivalent compared to the national population. Cannabis use estimates were generally similar to or lower than national estimates for youth/young adults, and higher than national estimates for adults in Canada and the US. In the US, the ICPS sample also had poorer self-reported general health compared to the national population, which is a feature of many non-probability samples (Fahimi et al., 2018), and may be partly due to the use of web surveys, which provide greater perceived anonymity than in person or telephone-assisted interviews often used in national surveys (Hays et al., 2015).

Self-reported data are subject to social desirability biases. However, the survey included a data integrity question wherein those who reported not answering questions honestly were excluded. In addition, this survey was self-administered online, which compared to interviewer assisted surveys, can reduce social desirability biases by providing anonymity (Hays et al., 2015).

The sample sizes between countries varied in this study (i.e., 9,412 US respondents who used CBD-only products in the past 12 months versus 203 respondents in NZ). Given that the estimates for the smaller sample sizes (e.g., AU, NZ) are less precise than the larger sample sizes (e.g., US), comparisons that involve AU and NZ should be interpreted with appropriate caution.

The 2024 ICPS survey changed the survey text describing and distinguishing cannabis products that make people feel high from CBD-only products prior to asking respondents about use of CBD-only products. The difference in percentage of past 12-month CBD-only product use between those who were exposed to the previous text and the new text were only notable in the UK. Further analyses demonstrated that interpretations of outcomes in the study did not change in the UK between groups. We conclude that the change in survey text did not make any meaningful difference to the interpretation of the findings in this study.

Conclusion

This study demonstrates strong evidence for cross-jurisdictional variation in CBD-only product use and sources. This aligns with the differences in regulatory environments and consumer interactions with the CBD-only market, alongside consistent patterns in products and reasons for use. This study suggests general adherence to retail policy across all jurisdictions, whereby common retail sources of CBD-only products aligned with what is permitted in each jurisdiction. Further, this study provides insights into how CBD-only product use is positioned in relation to medical cannabis systems. Although restrictiveness of medical cannabis access was not associated with using CBD-only products because medical cannabis could not be legally accessed, patterns of association between CBD-only use and medical cannabis use varied considerably across jurisdictions. Indeed, CBD-only products were most commonly used to manage anxiety, depression, and pain—conditions for which there is limited to no robust clinical evidence of CBD efficacy. Therapeutic use of CBD-only products occurred both under medical supervision and – more frequently – without it. This misalignment between consumer use and clinical evidence highlights an urgent need for clearer public health messaging and stronger evidence to guide policy and practice.

Ethics declaration

Written informed consent to take part in the study and to publish the article has been obtained from all participants or their legal representatives. The privacy rights of participants have been observed.

This study was performed in compliance with relevant laws, regulatory frameworks and guidelines where the research took place. This study was approved by the University of Waterloo; University of Bath. (Approval No. ORE#31330; 10400-12327).

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CRediT authorship contribution statement

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Declaration of competing interest

The authors have no conflicts of interest to declare. DH has served as a paid Expert Witness on behalf of public health authorities in response to industry legal challenges to cannabis regulations in Canada. MG is an appointed member of the Australian Therapeutic Goods Administration's Medicinal Cannabis Expert Working Group. This publication does not represent the views of the TGA or the Expert Working Group.

Supplementary materials

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