

# Understanding Cannabidiol | CBD

*Industry Expert Report*



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# Introduction – Why study CBD?

**CBD**, known for the medical relief it provides for a plethora of conditions without the psychoactive effects or “high” caused by THC, makes up a growing<sup>1</sup> part of the cannabis market. Despite the potential of CBD products, there is little being done to better understand this market, its users, product varieties and growth potential, due to the challenges imposed by federal policy.

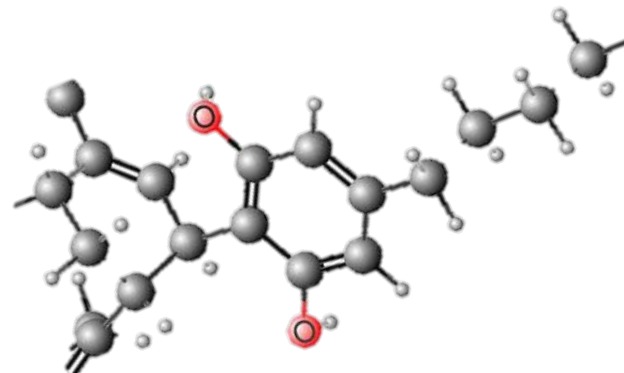
The legal circumstances and history surrounding CBD are complicated and unique due to its multiple compositions and sources. **While many marijuana-derived CBD products work in combination with varying amounts of THC<sup>2</sup>, others have only negligible amounts, but regardless can only be sold where cannabis has been medically or recreationally legalized.<sup>3</sup>**

There has been some legal progress in the industrial hemp industry since the Farm Bill was signed in 2014<sup>4</sup> distinguishing hemp from marijuana. However, hemp – including hemp-derived CBD – is still designated as “marihuana” today by the U.S. Drug Enforcement Agency (DEA), which continues to treat it as a controlled substance.<sup>5</sup>

The confusion and disagreement resulting from federal inconsistencies have led to **today’s reality, in which hemp-derived products continue being sold across state lines, online, and through mainstream retailers, but the industry must operate in a legal grey area.**

Two additional barriers to understanding and approaching the CBD market are **misinformation and lack of information among potential and current cannabis consumers.**

For example, a reason often cited for not using CBD products is because doing so will deliver a psychoactive effect or will lead the user to fail a drug test – neither of which is true in the case of CBD-only products, but rather only with CBD-dominant products that contain THC.<sup>6</sup> Furthermore, in a recent general U.S. population survey<sup>7</sup>, up to 47% of those polled were not familiar with hemp-derived CBD. **Even among regular cannabis users, knowledge and understanding of CBD – particularly the benefits of its various formulations – is often hazy**, as is discussed in more detail below.



# Study Partners and Subjects

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In an effort to shed light on this opaque market, **Brightfield Group**, in partnership with **HelloMD**, has collected data from over 2,400 HelloMD medicinal cannabis community members from the United States (primarily California) and abroad. The resulting analysis provides insight into their experiences and perceptions of CBD products - both hemp-derived and marijuana-derived. The insights that follow provide further context for those looking to better understand, invest or expand in the CBD market.



**HelloMD** is one of the nation's largest online community of medical cannabis patients, experts, brands and trusted retailers, offering today's cannabis patient a full turnkey experience. At HelloMD.com medical cannabis consumers can consult with a doctor via real-time video, obtain answers to questions from a network of doctors and experts, as well as research then buy cannabis products from within the HelloMD Marketplace.



**Brightfield Group** is a strategic market research firm specializing in building actionable data and analysis for organizations focused on the cannabis industry. Our team of experts across the country, who have years of experience analyzing opaque markets, utilize a multi-source methodology incorporating existing published sources, sophisticated statistical modeling and primary research (interviews with industry experts) in our analyses to better triangulate the market.

# Glossary of Terms

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## Cannabis

Throughout history, **different varieties\*** of the cannabis plant have been grown for industrial and medical uses. The **two main cannabinoids** found within cannabis are:<sup>8</sup>

### CBD | Cannabidiol

Has anti-inflammatory, anti-anxiety, anti-psychotic, and anti-convulsant properties. CBD is not felt to have any intoxicating or psychoactive side effects.

### THC | Tetrahydrocannabinol

A very effective analgesic. It may be better known for its psychoactive side effect which can give users a sense of euphoria or “high”.

\* **Hemp** | Tall, sturdy plants that were grown by early civilizations to make a variety of foods, oils and textiles such as rope and fabrics.<sup>9</sup>

\* **Marijuana** | Recognized for its psychoactive properties; bred selectively for medical and religious purposes.<sup>10</sup>



# Glossary of Terms

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For the purposes of this study:

**CBD Products** | The term ‘CBD products’ refers to any and all products that fall into the following categories: Hemp-derived CBD, marijuana-derived CBD-only, or CBD-dominant.

**CBD-Only Products** | Can be derived from hemp or marijuana, although on a molecular level all CBD-only products are identical, containing **negligible amounts of THC**. Though we distinguish between hemp-derived and marijuana-derived CBD-only products throughout the study, the only meaningful difference between them is the terpene profile that accompanies the two plants.

**THC-Dominant Products** | Refers to products dominant in THC and containing varying concentrations of other compounds, such as CBD. **For the purposes of this study**, THC-dominant products are considered those with a ratio of 2:1 THC:CBD or higher.

**CBD Users** | The term ‘CBD users’ refers to any respondent who **uses one or more** of the following three types of products: **Hemp-derived CBD, marijuana-derived CBD-only, or CBD-dominant**.

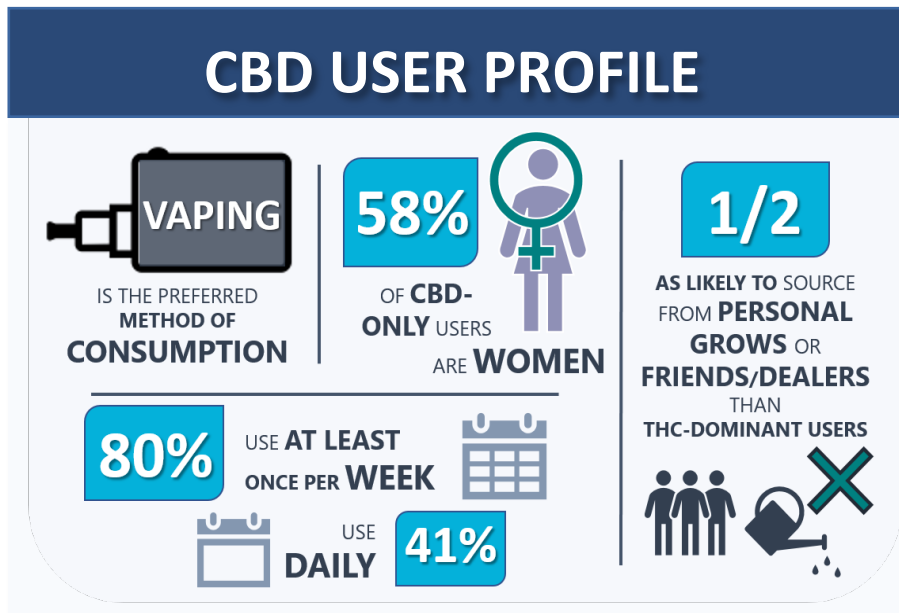
**CBD-Dominant Products** | Refers to CBD in combination with other compounds extracted from the marijuana plant. Generally, CBD-dominant products have varying concentrations of CBD, and a lesser amount of THC. These products typically declare a ratio of CBD:THC, such as 5:1, meaning it contains 5x as much CBD as it does THC. **For the purposes of this study**, CBD-dominant products are considered to be those with CBD:THC ratios of 1:1 or higher.

**Entourage Effect** | A theory that posits that any **cannabinoid is more effective when combined with companion cannabinoids from the same plant**. For instance, CBD works best when used in conjunction with THC (and other cannabinoids).<sup>11</sup>

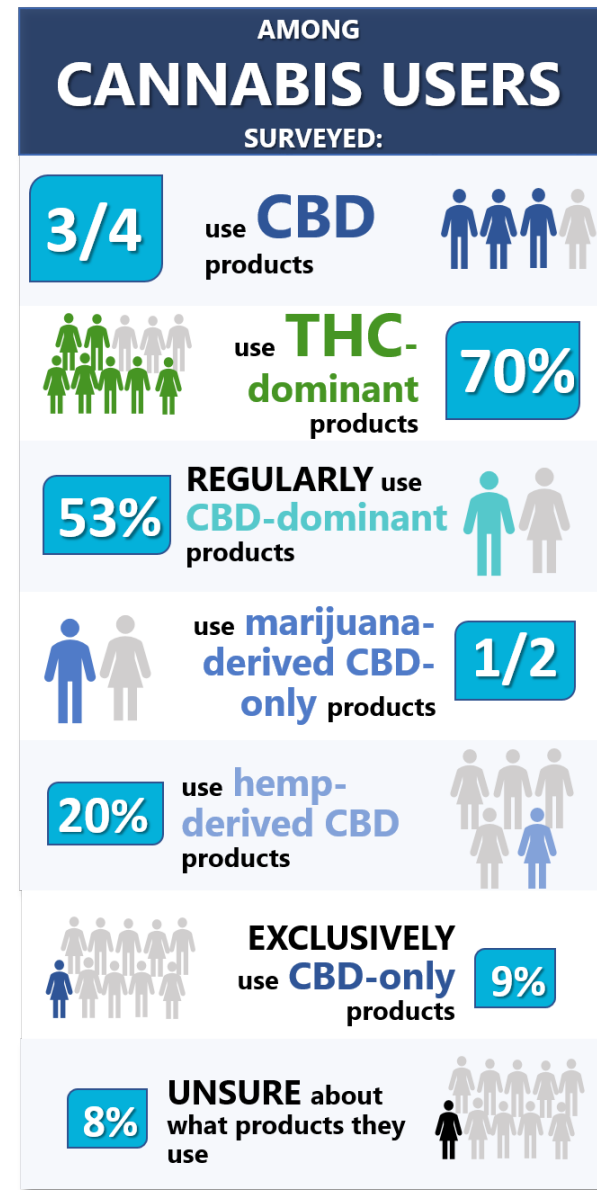
# Executive Summary

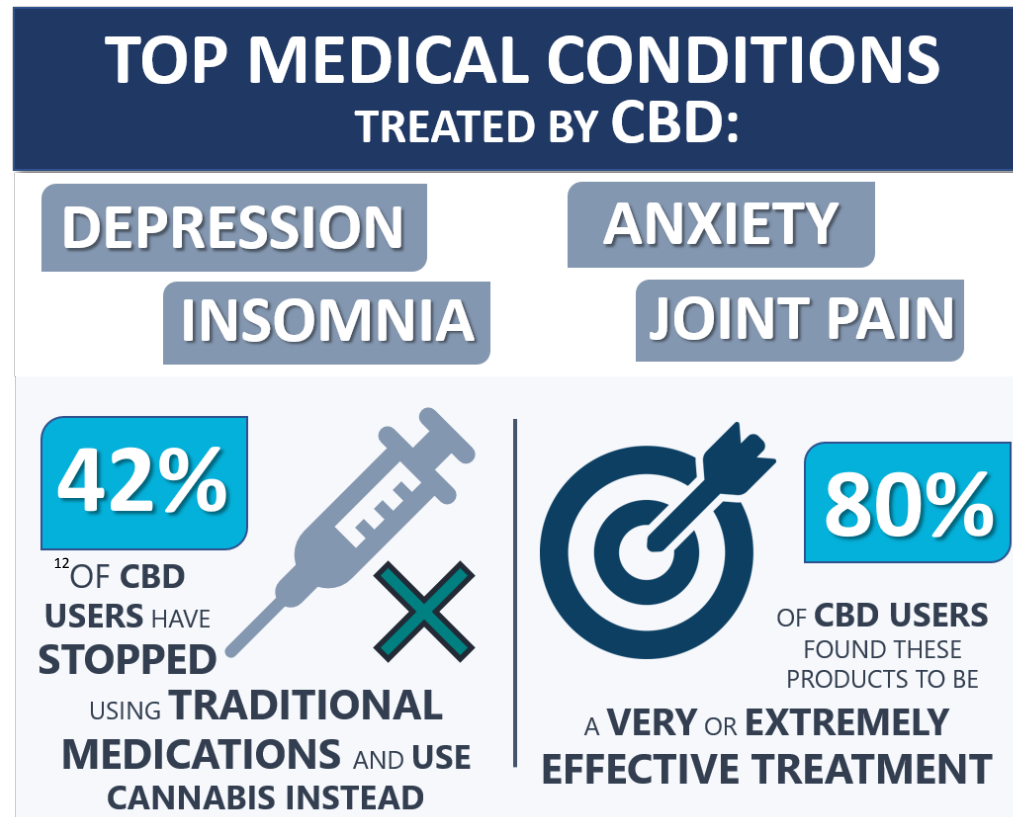
The most impactful insights derived from the study were:

- Rates of CBD usage
- CBD user profiles
- Medical conditions treated by CBD
- Brand preferences
- CBD consumer satisfaction



Unless otherwise indicated, figures exclude users who were unable to identify which cannabis product(s) they were regularly using.







# Executive Summary (Continued)

## CBD MARKET DYNAMICS

850+

**MARIJUANA**  
-DERIVED CBD-ONLY  
BRANDS

200+

**HEMP**-DERIVED  
CBD BRANDS

### TOP BRANDS

Kiva  
Care By Design  
Bloom Farms  
CW Charlotte's  
Web

**Disclaimer** | The data and insights in this report are based upon the survey responses collected, and reflect consumer perceptions only. No randomized control trial was conducted and the survey performed was not medical in nature, thus its results should not be construed as medical advice and are intended to be used for informational purposes only. More research will be required to determine whether there is a causal link between CBD products and relief of the various health conditions discussed.

## CBD USER SATISFACTION

90%

OF RESPONDENTS WOULD BE  
**LIKELY TO BUY**  
MARIJUANA-DERIVED  
**CBD-ONLY** PRODUCTS,  
OR BUY AGAIN



**PROS** PROVIDES  
MEDICAL  
**RELIEF** &  
**RELAXATION**  
WITHOUT THE POSSIBLE  
PSYCHOACTIVE  
EFFECTS THAT CAN  
RESULT FROM THC

### CONS

SOME  
USERS  
DISINTERESTED BECAUSE  
OF **PRICING**,  
**AVAILABILITY**, OR  
EFFICACY, IN THE CASE  
OF HEMP



**CONSUMER PRIORITY:**

**EFFECTIVE PRODUCTS**

# Who is Using CBD?

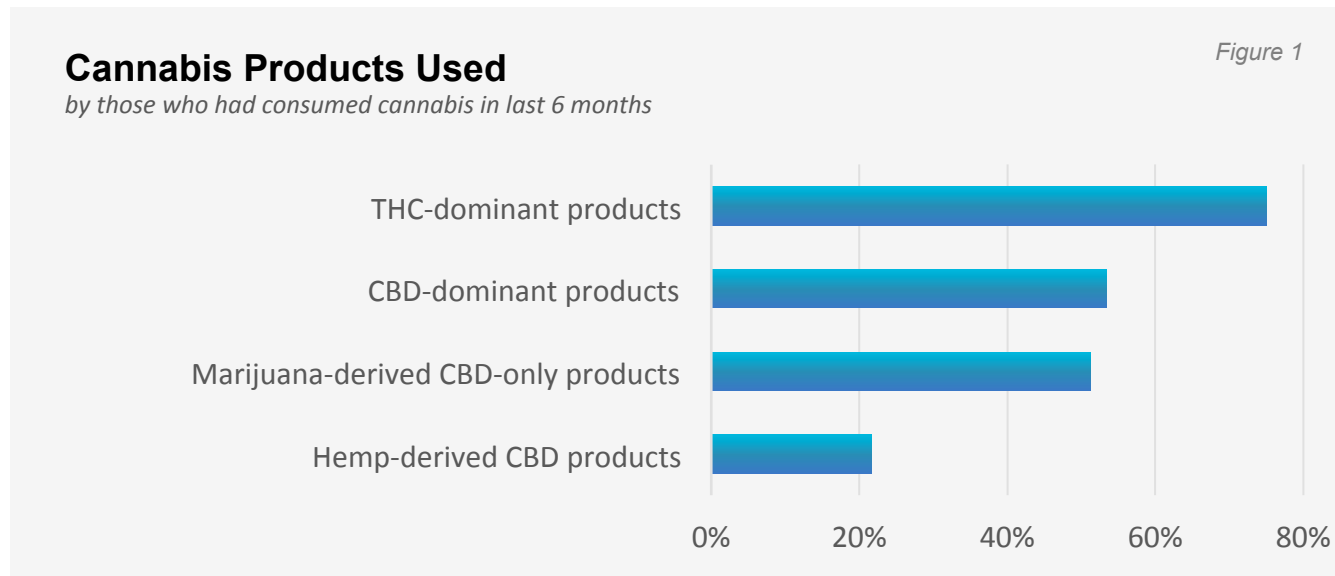
## Product Preferences

Among cannabis users who were able to identify the products they regularly consumed, approximately half use marijuana-derived CBD-only products, and over one-fifth use hemp-derived CBD products. More than half (53%) regularly use CBD-dominant products containing varying amounts of THC.

Confusion about the different product types is common amongst cannabis users, with more than 8% of respondents in this survey unclear about what types of cannabis products they had used.

Over 70% of respondents regularly use CBD products, and over 70% use THC-dominant products, meaning there was a great deal of overlap between the various CBD and THC users surveyed.

Just over 9% use exclusively CBD-only (hemp- or marijuana-derived) products that do not contain more than 0.3% THC.



# Who is Using CBD?

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## Demographic Characteristics of CBD Users

**RESIDENCY** | 86% of CBD users surveyed reside in California, approximately 1% each live in New York and Arizona, and the remainder were from 41 other states around the U.S.A. A small handful (about 1%) reside abroad, primarily in Canada, and in Europe.

**AGE** | When it comes to age, CBD users look essentially like cannabis users in general, with the largest group (nearly one-third) between ages 35 and 49, and the 26-34 and 50-64 age ranges each making up 20-25% of the market. Among CBD users, hemp-derived CBD users lean slightly older, more likely to fall into the 50-64 age range, and less likely to fall into the 26-34 age range.

**GENDER** | In general, significantly more CBD users are female (55%) than male (44%), with that figure being driven up by hemp-derived CBD users, 59% of whom were female. Those who preferred THC-dominant products were more likely to be men: 52% were male, and only 48% were female.

**INCOME** | The vast majority of users surveyed reside in California, which was used as a source for comparison. According to the most recent census data, California's median household income (in 2015 dollars) is \$61,818.<sup>13</sup> The largest cohort of CBD users (16%) falls around this median, making between \$50K and \$75K per year. About 35% make an income greater than this, and 36% less – with the remainder preferring to keep this information confidential. CBD users reflect the general population in terms of income, but within their ranks, slightly more hemp-derived CBD users fall into the lower-income groups (employed but making less than \$40K). Among those surveyed, THC users have the highest rate of unemployment (at a mere 4.1%, versus the 4.8% California unemployment rate<sup>14</sup>).

**EDUCATION** | CBD users are generally well-educated - only 1.3% have not (yet) received their high school diplomas, whereas 15.4% have a graduate or post-grad degree completed. Nearly half of CBD users have a Bachelor's Degree or beyond. Having a B.A. or B.S. degree is most common among respondents, followed by having completed some component of a two-year college education.

# Who is Using CBD?

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**MARITAL STATUS AND LIVING SITUATION** | Among those surveyed, CBD users are the most likely to be married – with 43% having spouses. At least 37% are married among all respondents, and this is the most common status. Just over 30% of CBD users are single, and hemp-derived CBD and THC-dominant users are slightly more likely to be single than other groups are.

A large portion – 61% – of CBD users are living with their spouses or partners, and about 24% are living with children. The figures are quite similar among all respondents, with hemp-derived CBD users among the least likely to live with a spouse/partner or children. Hemp-derived CBD users are also the most likely to live with parents or siblings versus other consumers, possibly related to their slightly lower income levels.

**ETHNICITY** | The majority (66%) of CBD users surveyed identified as Caucasian, and the second-largest group as Hispanic/Latino (11%). The remainder belonged to other ethnicities (Asian: 3%, Middle Eastern: 2%, other/mixed race: 5%). Considering the ethnic diversity within California (the principal state represented in the survey), especially regarding its Hispanic and Latino populations<sup>15</sup>, these figures are likely not representative of the true diversity present within the cannabis community.

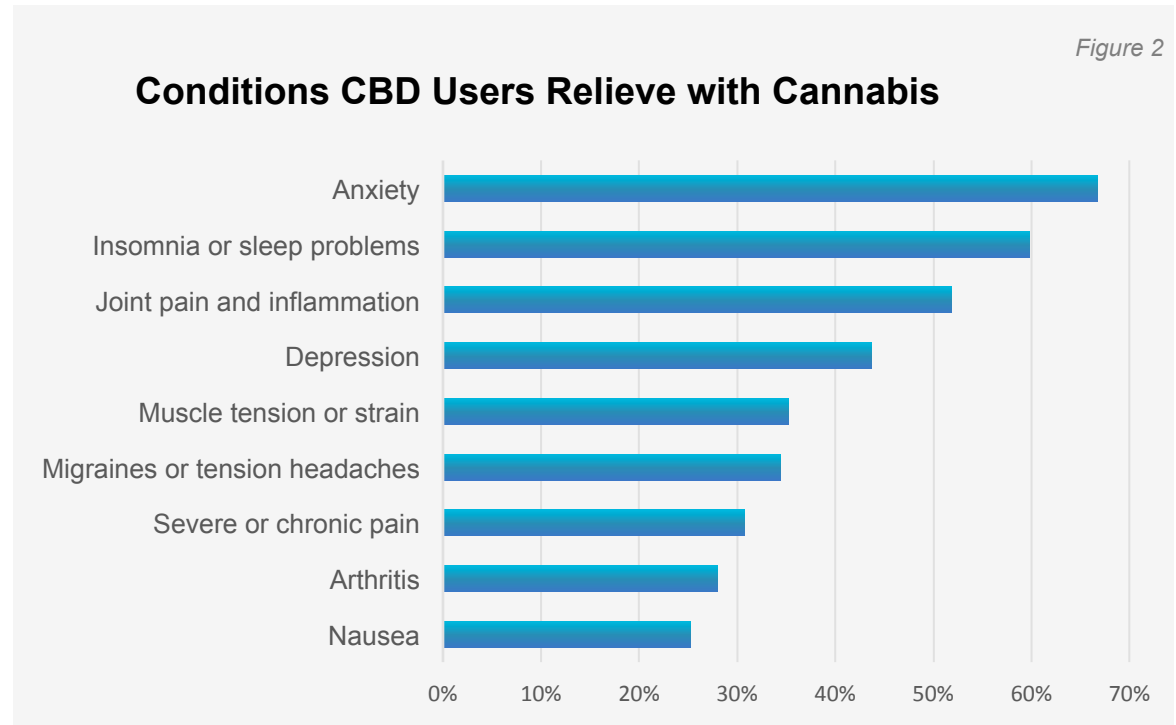
Hispanic and Latino respondents are most likely underreporting their cannabis use, leading to a discrepancy between their survey numbers and actual presence in the legal market. Though cannabis products have historically been used disproportionately by Caucasians, past studies have not shown them to be so dominant in the market; for example, in a series of cannabis consumer surveys conducted by Brightfield in early 2016 and representing nearly 1,200 Californians, 49% identified as Caucasian and 22% (twice as many as in the present study) as Hispanic or Latino.

Underreporting by Hispanic and Latino users is often related to fear of persecution regarding cannabis usage and the risk of reporting it (regardless of its legality in a user's state or country), especially as these may relate to immigration status. In 2017, the issue may have been exacerbated due to socio-political events and increasing concerns surrounding immigration and deportation that could have further lowered reporting. Thus, the reader can safely assume the figures above may not be fully representative of the minority population, especially Hispanics and Latinos, who most likely make up a significantly larger portion of the market.

# Who is Using CBD?

## Medical Conditions

There are a vast range of medical conditions that CBD consumers reported using cannabis to relieve, the principal among which were anxiety, insomnia, joint pain/inflammation and depression. When given the option to specify “other” conditions treated with cannabis, the most common responses among CBD users were: menstrual cramps, skin concerns, diabetes, ADHD, and stomach issues (IBS, loss of appetite, etc.).



## Uses of Different Cannabis Products to Treat HelloMD Community Ailments:

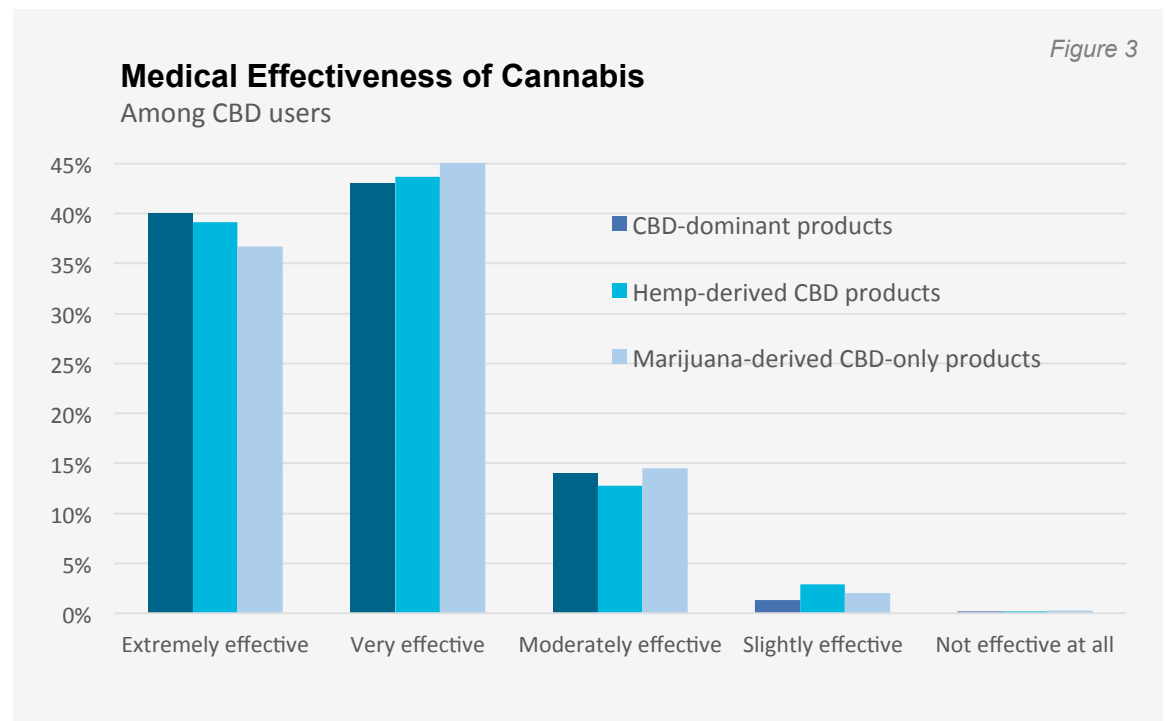
- **Joint pain and inflammation:** Only 48% of THC-dominant product users treat their joint pain/inflammation with cannabis, versus about 54% of CBD-only (marijuana and hemp-derived) product users
- **Migraines:** 38% of CBD-dominant users treat migraines with cannabis, versus 35% of hemp-derived CBD users and 34% of THC-dominant users
- **Severe/chronic pain:** 28% of THC-dominant users turn to cannabis to treat their chronic pain, versus 32% of CBD-dominant users
- **Arthritis:** 24% of THC-dominant product users treat their arthritis with cannabis, versus 28% of CBD-dominant users and 31% of hemp-derived CBD users
- **Nausea:** 26% of marijuana-derived CBD-only users treat nausea with cannabis, versus 31% of hemp-derived CBD users

# CBD Products – Comparing Effects

When asked about medical relief, more than four out of five CBD users found cannabis to work either extremely effectively or very effectively against their various conditions. Each of the individual categories under the CBD umbrella fared well, with the vast majority (82-83%) of users experiencing effective relief with the use of hemp-derived CBD, CBD-dominant and marijuana-derived CBD-only products to help treat their conditions. Very few (3% or less in each category) found any cannabis product to be slightly effective or ineffective in treating their medical ailments.

Most CBD users are not limited to one product, but rather, find relief in two or even several products combined – thus, the use of one cannabis product generally does not preclude the use of others. In fact, even CBD-only product users do not limit themselves to THC-free products alone.

- 68% of hemp-derived CBD users also use THC-dominant products
- 70% of marijuana-derived CBD-only product users also use THC-dominant products



Given their similar effects, are these products substitutes for each other? And why would consumers continue to purchase various products (especially more expensive ones) if they are interchangeable?

# CBD Products – Comparing Effects

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As discussed in the *Medical Conditions* section above, a number of cannabis products appear to serve a role in treating a particular ailment. Although anxiety, insomnia, depression and joint pain were the top four ailments for which the various types of cannabis were most effective among all users, some subgroups tend to have better results with specific products. For example:

**14%**

of **hemp-derived CBD** users claimed that they receive extremely effective nausea relief with cannabis use, **versus 11% of marijuana-derived CBD-only** product users.

**11%**

of **CBD-dominant and marijuana-derived CBD-only** users find cannabis to be extremely effective against arthritis, while this figure is only **9% among THC-dominant users**.

Consumers are willing to invest in products that contain the components that meet their specific needs, some seeking the “CBD-dominant effect” or “entourage effect” described in the Glossary of Terms, and looking to balance the effects of THC with CBD and take full advantage of each, and some preferring to keep THC out of the equation entirely.

If in some cases these products are interchangeable when it comes to desired medical effects, then consumers will look instead to price, convenience, etc. as deciding factors. It is conceivable, therefore, that medical cannabis users see these products as equally effective and are seeking out hemp-derived CBD for some conditions because it might be less expensive, THC-dominant products for others because they are more easily grown at home or have psychoactive effects, and marijuana-derived CBD-only products for still others because they will not appear on an employer’s drug screen and give users a consistent experience.

Product use may also have to do with practical matters - consumers may, for example, alternate between CBD-only products and THC-dominant products because the “entourage effect” gives them more complete healing, but by differentiating the two it allows them to remain clear-headed during the workday and consume THC when they are relaxing in the evening.

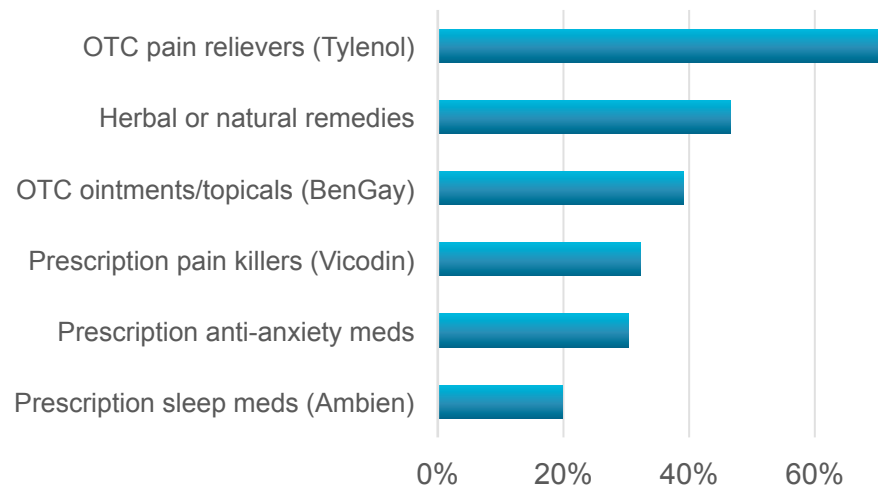
# CBD vs. Pharma

Perhaps not surprisingly, most CBD users utilize (or have utilized) other medications aside from cannabis – in fact, only 11% have *not* done so. Nearly three-fourths have turned to over-the-counter pain relievers, and almost half have used other herbal or natural remedies. Approximately a third of CBD users have turned to prescription painkillers, such as Vicodin, to relieve their conditions. However, satisfaction levels vary greatly when it comes to alternative medications.

## Other Medications Used

Among CBD users

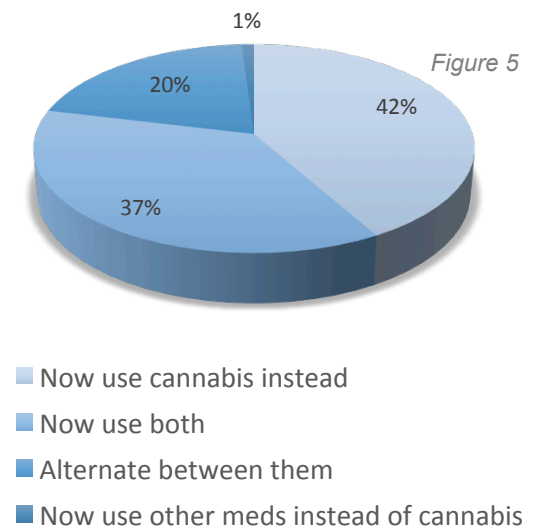
Figure 4



## Cannabis vs. Other Product Usage

Among CBD users

Figure 5





# CBD vs. Pharma

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While the largest portion (57%) of CBD users responding continues to use both cannabis and other medications – either simultaneously or alternating between them, 42% of these CBD users have left their traditional medications behind altogether and now use cannabis instead. The breakdown among CBD users is as follows:

- 43%** of CBD-dominant and hemp-derived CBD users now use cannabis instead of other medications to treat their conditions
- 40%** of marijuana-derived CBD-only users now use cannabis instead of other medications to treat their conditions



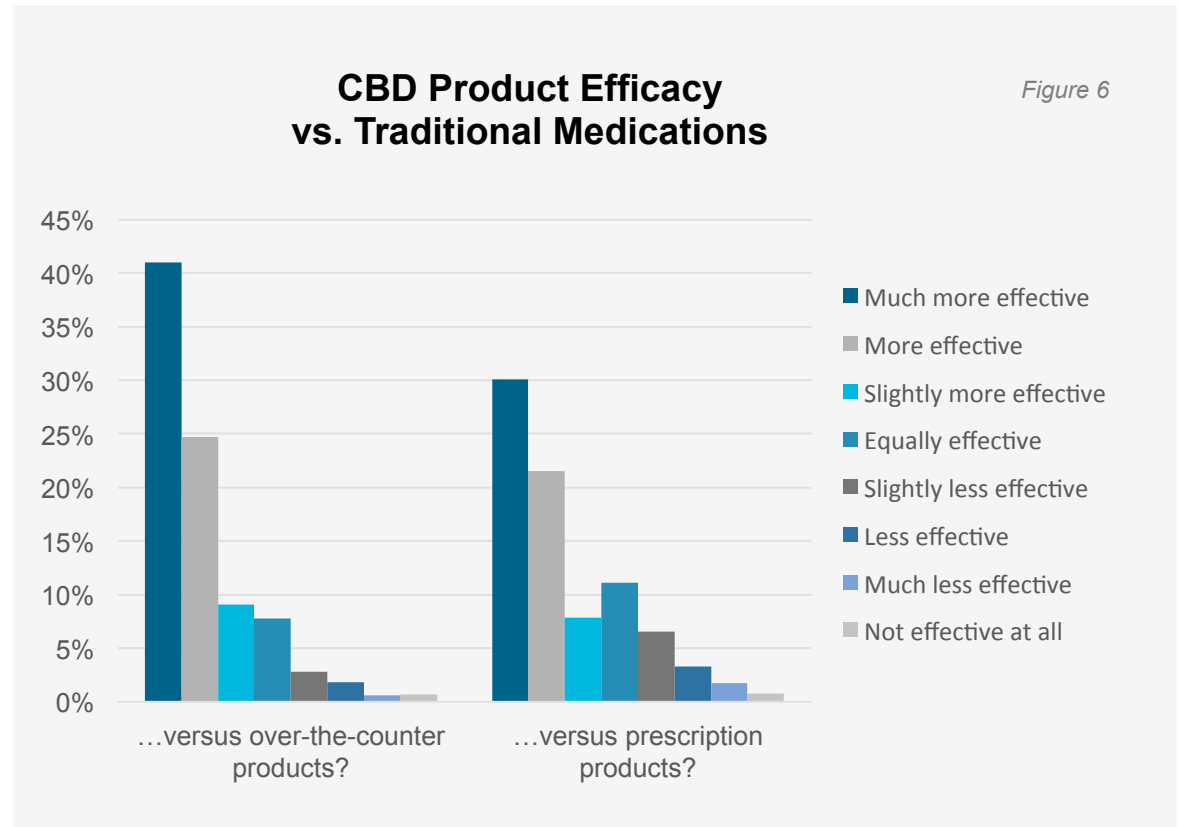
# CBD vs. Pharma

But how exactly does CBD stack up against prescription and over-the-counter treatment options, according to CBD consumers who continue to utilize traditional medications?

About 66% of CBD users indicated that CBD products are either “more effective” or “much more effective” in relieving their medical conditions than are over-the-counter (OTC) products. More specifically, these figures were:

**67%** among marijuana-derived CBD-only & CBD-dominant users

**69%** among hemp-derived CBD users



# CBD vs. Pharma

Approximately 52% of this consumer group indicated that their CBD products are either “more effective” or “much more effective” in relieving medical conditions than are prescription medications. Here is the breakdown by CBD category:



Per this survey’s responses, **users have found CBD to be quite effective in relieving various medical conditions** – even more so, in some cases, than their over-the-counter and prescription medications. Based on the consumer satisfaction reported, investors in the medical industry should be keenly aware of the potential that CBD products hold. Over time, as the CBD compound becomes better-understood (especially with regard to its efficacy against medical ailments), and cannabis prohibition continues to wane across the states, CBD products are well-positioned to become an important player in the industry.

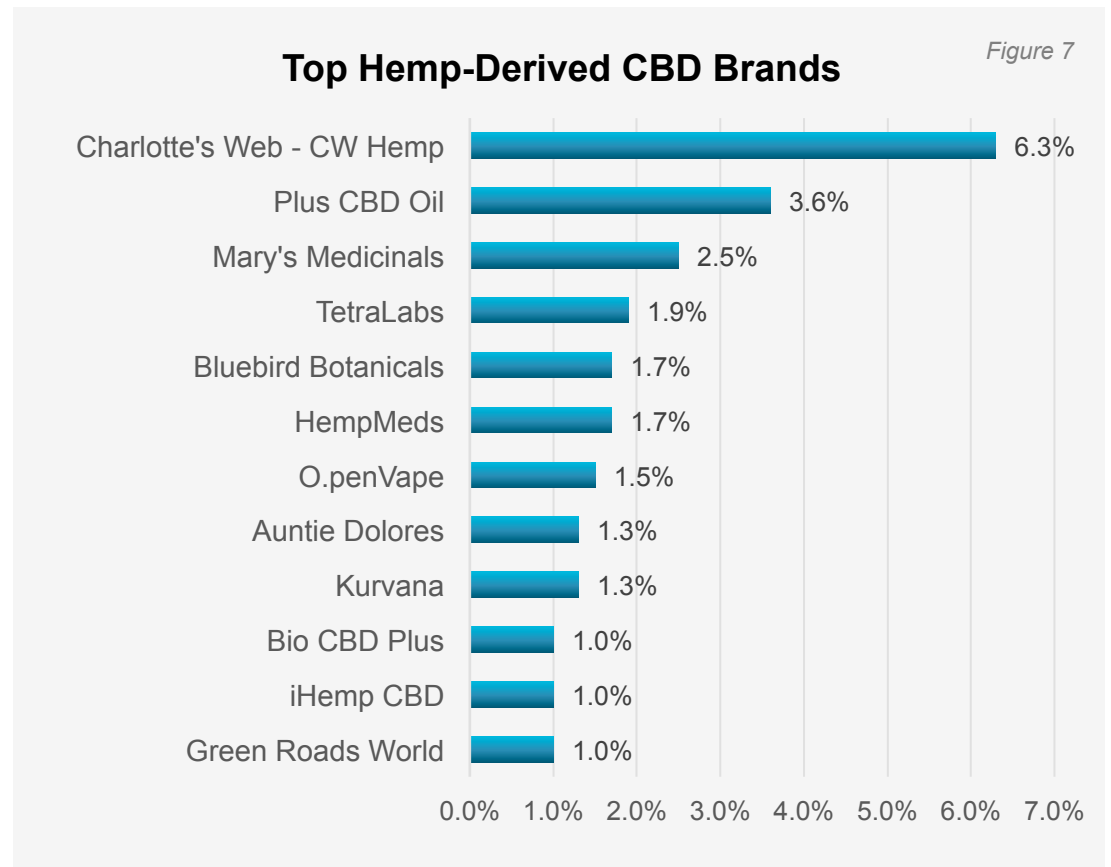


# CBD Brands – Who is Doing CBD Well?

It seems like everyone has a CBD brand these days, and most of these brands have a negligible market share. The market for CBD is so fragmented – that according to Brightfield Group data, more than 150 brands of hemp-derived CBD products and more than 850 brands of marijuana-derived CBD-only products are currently being sold through dispensaries nationwide, with more than two hundred additional hemp brands being sold online, through glass shops, doctor’s offices or health food shops. So which of these brands stands out from the crowd?

Among our respondents<sup>16</sup> who use hemp products, by far the favorite brand is CW by Stanley Brother’s. This should not come as a surprise for most following the industry; the brand gained national notoriety thanks to the documentary WEED by CNN correspondent Dr. Sanjay Gupta, which tracked the successful treatment of Charlotte Figi using the Stanley Brother’s Charlotte’s Webb strain.

Other favorite hemp products among respondents include Plus CBD Oil, Mary’s Nutritionals and TetraLabs. It is interesting to note that more than a quarter of respondents (28%) use unbranded products, are not aware of the brand of their products or do not yet have a favorite brand. Also notable is some of the geographical variation notable in the hemp market; many brands that are favorites among hemp users in the Midwest and East of the country, such as Green Roads World, don’t even crack the top 10 amongst Californians.



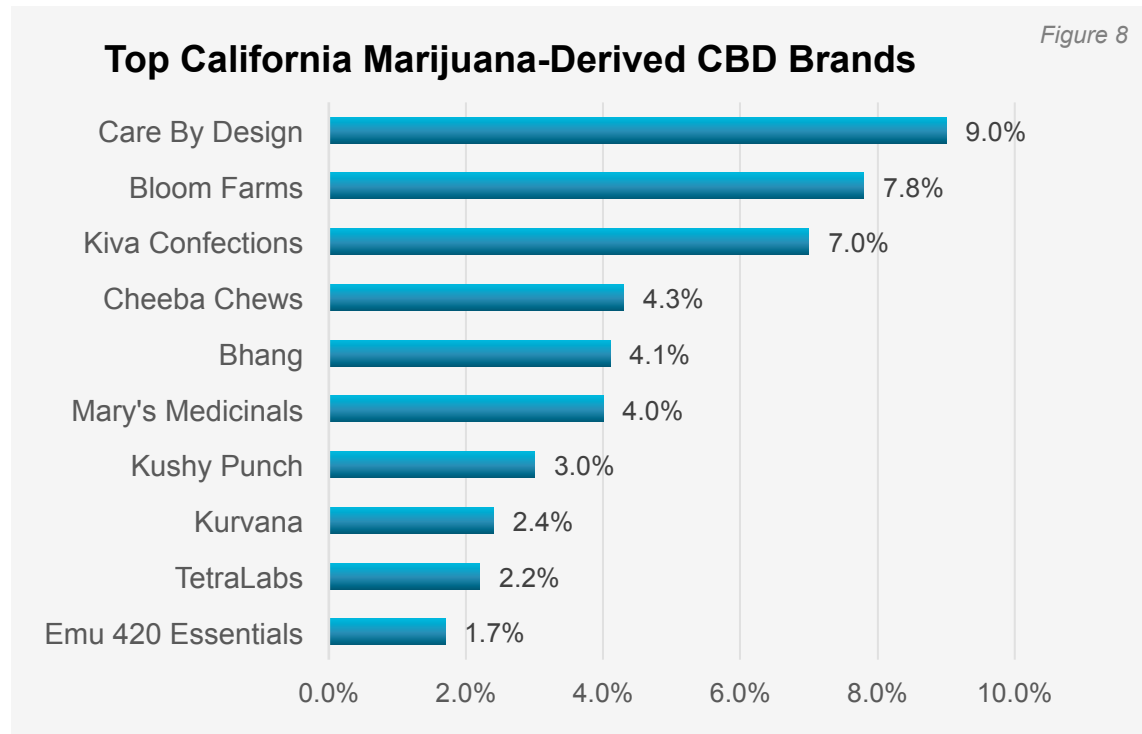
# CBD Brands – Who is Doing CBD Well?

Care By Design, which also specializes in CBD products, is the favorite marijuana-derived brand of 9.5% of California-based respondents<sup>17</sup>, followed closely by Bloom Farms, with 8.4% and Kiva Confections with 7.9%. Care by Design is one of the first movers in the CBD space, focusing on CBD-rich products long before most brands began including this in their portfolio, and now offering vape cartridges, sublingual drops and sprays as well as capsules in a variety of concentrations.

Bloom Farms is a leader in California's cartridge market, having launched their first high-CBD oil cartridge (Electra-Tsu) at the beginning of 2016, followed by AC/DC in mid-2016. Both have a 3:1 CBD:THC ratio and are offered in Era Pods and stand-alone cartridges (a third Pod/cartridge is expected in July 2017). These CBD products make up almost 5% of Bloom Farms' business, and are an important part of their product portfolio.

Kiva Confections, which leads California's chocolate market by a significant margin, first launched their line of 1:1 CBD bars in February 2016 and by 2017 are being carried by more than 500 dispensaries.

These three brands make up the top tier, with a second tier grouped between 4-5% of respondents including Cheeba Chews and Bhang. Beyond these top five, the market fragments significantly with loyalties of the remaining two-thirds of respondents split between nearly a hundred other brands.



# Usage and Purchasing Patterns of CBD Users

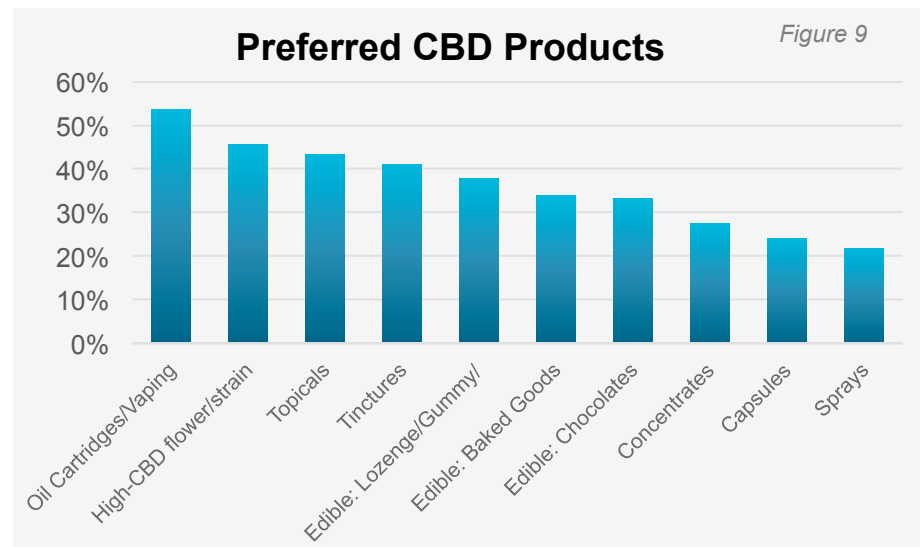
**Preferred Vendors** | 55% of CBD users purchase their CBD products at storefront dispensaries, 31% through local delivery services, and 17% online (THC-dominant products are also less likely to be purchased over the internet, with only 9% of users purchasing this way). Most of the remainder of CBD products are sourced from friends, dealers and cooperatives (8-9% each).

Relatively speaking, THC products are about twice as likely to be sourced from personal grows, friends or dealers (versus storefront dispensaries) than CBD products are. For every 6 THC product purchases made in a dispensary, 1 is sourced from a personal grow; for CBD purchases this ratio is 12 to 1. Similarly, for every 3 THC purchases in a dispensary, 1 comes from a dealer or friend, and for CBD products this ratio is 6 to 1. Thus, CBD customers are significantly more likely to purchase branded products via legal or official channels than are THC customers.

**Priority Product Attributes** | Among all CBD users, by far the highest priority when making a purchasing decision is that the product generate the desired effects – 24% listed this as their first priority, and 19% as their second. This is followed by quality of ingredients, price, concentration, and consumption methods (oil, topical, wax). Although 18% listed consumption method as their main priority, few listed it as a second, third, etc. Perhaps because of the possibility of online sales, availability was considered of lesser importance, along with dosage and discreet presentation.

## Purchasing Habits and Preferences

It is much more common for topicals and tinctures purchased to be CBD-dominant (or CBD-only) than THC-dominant, whereas flower is more often THC-dominant. Oil cartridges (vaping) are the favored CBD products among those surveyed - approximately 54% indicated this was among their preferred CBD products, followed by high-CBD flower, topicals and tinctures. Between 33-38% prefer edibles, which include lozenges, gummies and candies, followed by baked goods and chocolate. Less popular edibles include drinks and savory snacks (preferred by 15% and 13% of users, respectively).<sup>18</sup>



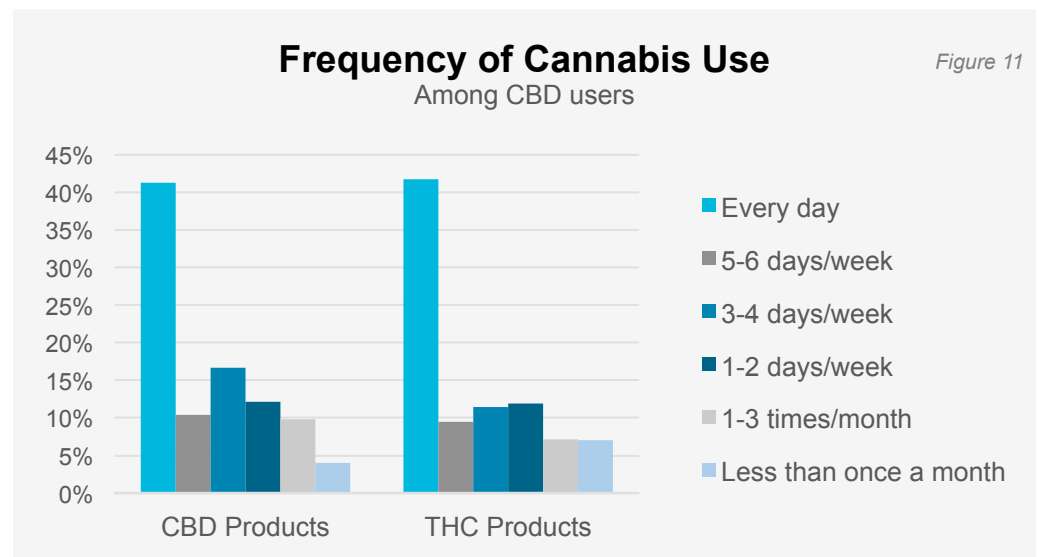
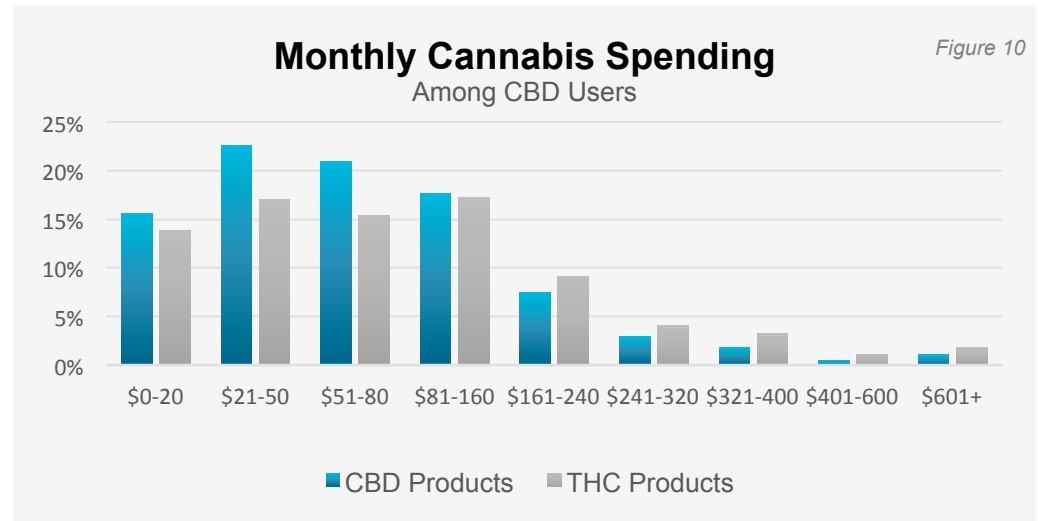
# Usage and Purchasing Patterns of CBD Users

**Spending Habits** | Nearly 70% of CBD users also use THC-dominant products, though those who are CBD users tend to spend significantly less on THC products. For example, 17% of CBD users spend \$81-160 per month on THC-dominant products, whereas among primarily THC users, 22.5% spend this amount.

The largest group of CBD users - about 44% - are spending between \$20 and \$80 per month on CBD products. Over 13% are spending more than \$160 per month on CBD products, and 1% spend over \$600 monthly.

**Frequency Used and Purchased** | Among CBD users, 80% use CBD products at least once a week, and about 41% use them every day. Approximately 4% of CBD consumers are occasional users, turning to CBD products less than once a month.

Over half of CBD users have bought 1-2 CBD products over the last two weeks, and roughly 17% have bought 3 or more over the same time period.

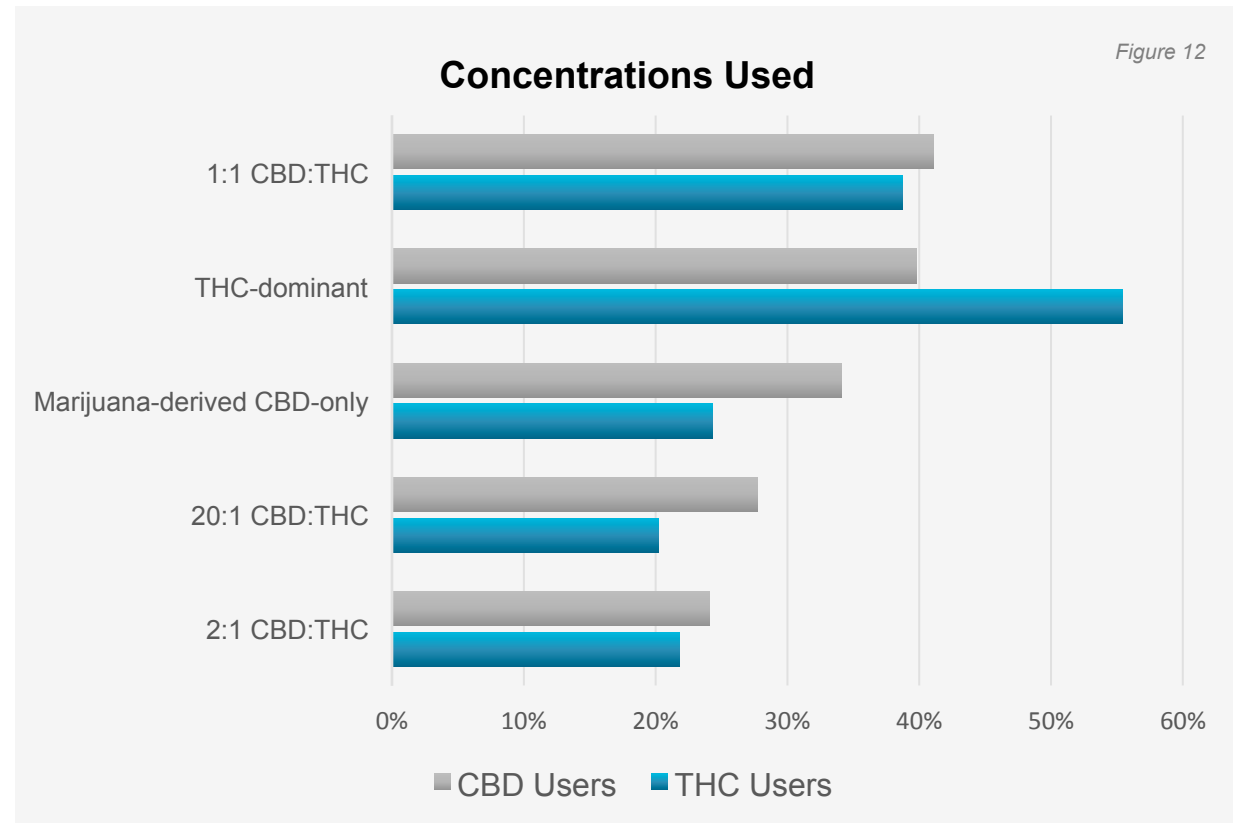


# Usage and Purchasing Patterns of CBD Users

Anxiety, insomnia and joint pain - the three conditions most commonly named by CBD users – are each most frequently treated with dosages of 10mg or less. Over one-fifth of CBD users treat these three ailments in this fashion.

## Dosage and Concentration |

CBD users tend to enjoy having low or micro-doses of CBD (10mg or less), once or twice per day. More specifically, 40% of CBD users prefer micro-dosing with products containing <10mg of THC or CBD (20% use this dosage once per day, and the same percentage do so more than once daily), and only 9.4% prefer doses over 100mg of CBD or THC.

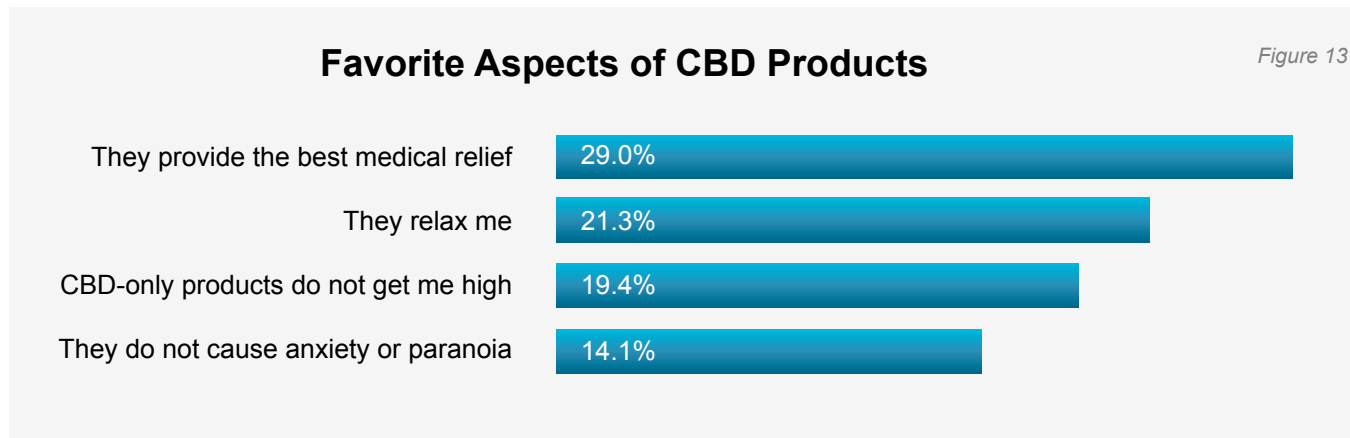




# Knowledge and Misconceptions About CBD

Over three-fourths of those surveyed were regularly using some sort of CBD product (marijuana-derived CBD-only, CBD-dominant or hemp-derived CBD), either in combination with other CBD/THC products or exclusively, demonstrating that the CBD market already has significant buy-in within the cannabis community.

Per responses from the cannabis community, the advantage of CBD-dominant and CBD-only products is that they provide relief for various medical conditions and allow for relaxation, without causing a psychoactive or anxious effect .



Those looking to manufacture and sell products catered to this consumer group should thus be focused on these perceived advantages – emphasizing the distinct medical properties treated with individual products, and being clear and strategic about the utilization (and dosage) of THC and CBD in each product.

# Knowledge and Misconceptions About CBD

## Marijuana-derived CBD-only

Over 90% of HelloMD community members surveyed would be likely to purchase marijuana-derived CBD-only products, or buy them again. Among the few (approximately 100) current cannabis users who were not interested in marijuana-derived CBD-only, the most common reasons cited were:

- It does not get me high (16%)
- It's too expensive (12%)
- It does not relax me (12%)
- My local vendor doesn't carry it (12%)



*"I am not interested because marijuana-derived CBD-only is too expensive"*

The concerns that marijuana-derived CBD-only products are "too expensive" and not carried by local vendors can be addressed and remedied by manufacturers and vendors in this space. Lowering costs where possible to make products more competitive, as well as highlighting similar medications and their comparative costs, are two approaches that will help marijuana-derived CBD-only products reach a greater consumer base.

As today's market is extremely fragmented, there is still space for growth among brands and products. Given that users tend to seek what is available immediately or locally, producers should look to get their products on as many dispensary shelves as possible as well as ramping up online availability and delivery coverage to reach these consumers.

# Knowledge and Misconceptions About CBD

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## Hemp-derived CBD

76% of HelloMD community members surveyed would be likely to buy hemp-derived CBD products, or buy them again. There were over 500 respondents who were current cannabis users and *not* interested in hemp-derived CBD. The most common reasons for this disinterest were the following:

- Hemp-derived CBD is **less** effective than CBD-dominant or marijuana-derived CBD-only products (28%)
- My local vendor doesn't carry hemp-derived CBD (18%)
- Hemp-derived CBD is **not** effective in treating my medical condition (8%)

The two challenges plaguing the hemp market appear to be – first and foremost – a perception that products are not effective (or not as effective as their marijuana-derived CBD-only counterparts) in treating medical ailments, which is hemp CBD's primary use and selling point. Secondary challenges include a lack of familiarity with and access to the product.

Some approaches to overcoming the first and most challenging hurdle might be generating and publicizing well-designed observational studies and clinical trials, highlighting consumer testimonies, or offering samples of products so that customers have first-hand experiences with the relief they provide. The latter will be well-addressed with targeted marketing campaigns promoting hemp, as well as ensuring it

is available (online or in-stores) to as many potential consumers as possible.

Another commonly cited reason for disinterest in CBD products was not thoroughly understanding what CBD is or the difference between THC and CBD, as well as not having ever tried it before. Very few held the misconception that CBD would show up in a urine or blood test, though a handful did believe this among non-cannabis users. Several of the misconceptions about hemp-derived CBD and marijuana-derived CBD-only will be clarified with time, acceptance, and effective media and marketing campaigns that bring these products out of the dark and to the consumers that need them.

# Notes

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1. <https://www.forbes.com/sites/debraborchardt/2016/12/12/the-cannabis-market-that-could-grow-700-by-2020/#75057e584be1>. Referenced June 2017.
2. Tetrahydrocannabinol (THC)
3. The glossary of terms on Page 3 provides more detailed information about each different product.
4. The Farm Bill redefined industrial hemp as distinct from marijuana and authorized institutions of higher education or state departments of agriculture to regulate and conduct research and pilot programs. Source: [http://www.votehemp.com/2014\\_farm\\_bill\\_section\\_7606.html](http://www.votehemp.com/2014_farm_bill_section_7606.html)
5. Over the past several years, Representative Scott Perry has introduced multiple variances of the bill “Charlotte’s Web Medical Access Act” in Congress – none of which have made it past this first stage of the legislative process. These bills were designed to amend the Controlled Substances Act to exclude cannabidiol and cannabidiol-rich plants: (1) from the definition of “marihuana,” and (2) from treatment as a controlled substance. The bill was most recently introduced in May of 2017 and is still in initial stages as of this writing.
6. <https://www.leafly.com/news/cannabis-101/does-using-cbd-hemp-oil-result-in-a-positive-drug-test-for-thc-or>. Referenced June 2017.
7. Administered through Google Surveys in four U.S. regions: West, Midwest, South, Northeast. May 2017.
8. <http://www.leafscience.com/2014/09/16/5-differences-hemp-marijuana/>
9. Ibid.
10. Ibid.
11. HelloMD: What is the Entourage Effect? <https://www.hellomd.com/health-wellness/what-is-the-entourage-effect#!>. February 26, 2016.
12. References to “cannabis” throughout the study refer to all variants of cannabis products, regardless of levels of different cannabinoids (e.g. THC-dominant, CBD-dominant, hemp-derived CBD, etc.).
13. United States Census Bureau: Quick facts – California. <https://www.census.gov/quickfacts/table/INC110215/06>. Referenced June 2017.
14. April 2017 California Employment Highlights. <http://www.labormarketinfo.edd.ca.gov/file/lfmonth/Employment-Highlights.pdf>.
15. Per the latest U.S. Census Bureau data, the ethnic composition of California was 38% Caucasian and 38.8% Hispanic/Latino, leaving a massive discrepancy (nearly 30%) between the Hispanic community and its representation among survey respondents.
16. Note that 86% of respondents live in California; there are significant geographical variations in CBD brands within the United States.
17. For this question, only responses from California were used, as marijuana-derived products must be sold through dispensaries and as such the lineup of brands available varies widely between states. Based on sample of 548 respondents living in California who have used cannabis in the past 6 months and regularly use marijuana-derived CBD.
18. These figures might be different within the general public, as opposed to the HelloMD community of regular cannabis users, given that for less experienced (or first-time) users, edibles and topicals might be more user-friendly than flower and oil cartridges/vapes, and thus would likely be in greater demand.

# Notes

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## Image credit:

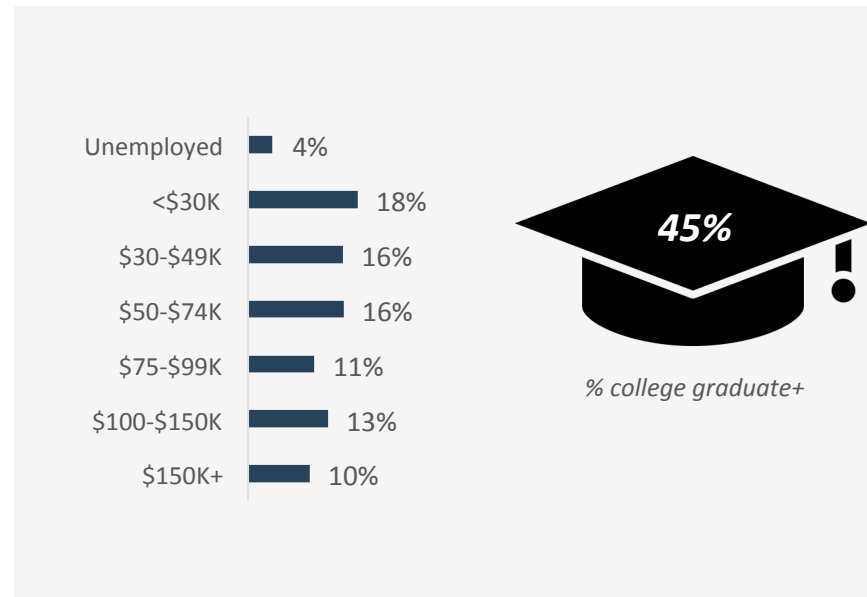
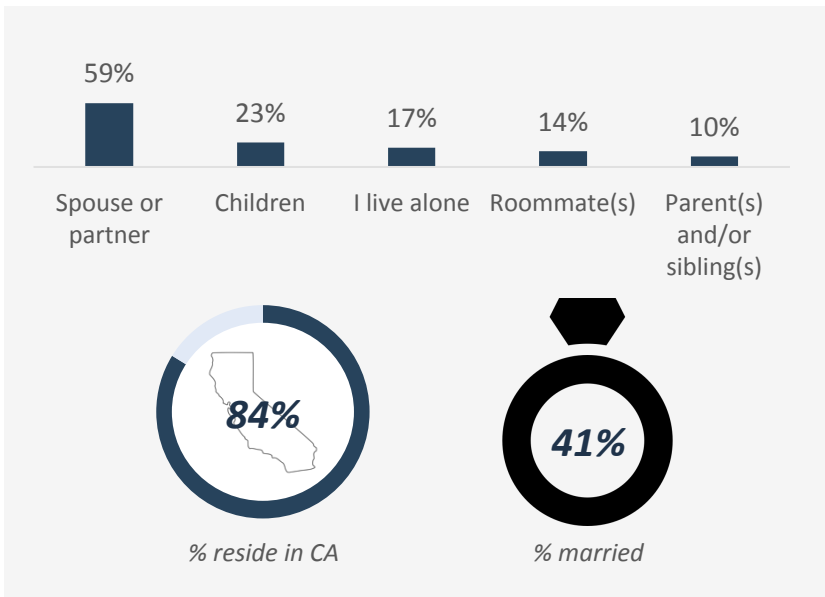
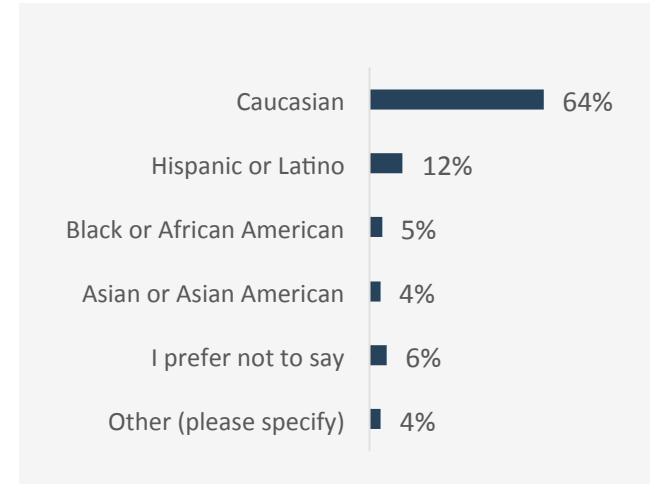
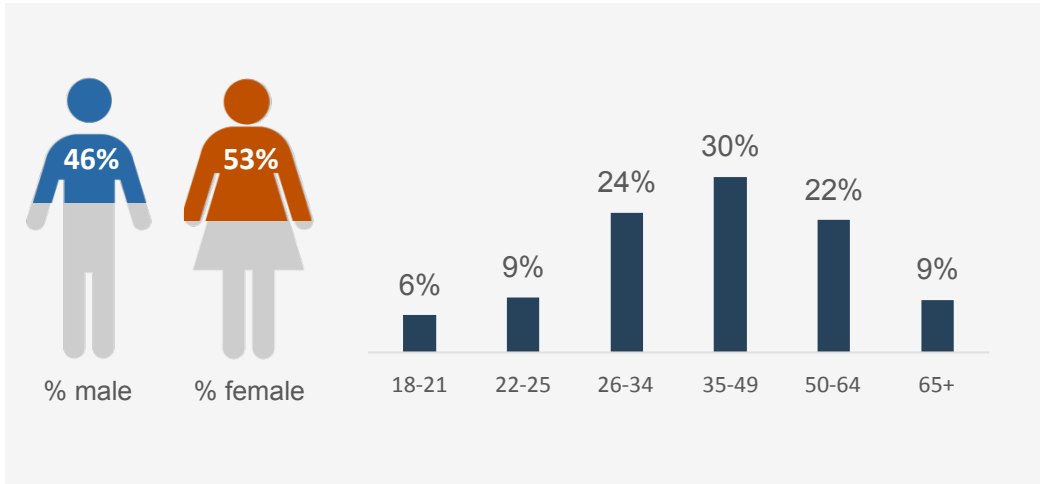
Page 2: CBD molecular diagram by [Medihuana](#) under license [Creative Commons Attribution-ShareAlike 3.0](#).

## Charts and Diagrams:

- Figure 1 | Responses to question: "Thinking about all of the cannabis products you use, which type(s) do you regularly use? I regularly use .... (Select all that apply)". In subsequent questions, statistics and graphics limited to "CBD users only" include only the responses of those who answered this question with either "CBD-dominant products", "marijuana-derived CBD-only products" or "hemp-derived CBD products".
- Figure 2 | Responses to question: "Which of the following conditions, if any, do you relieve with cannabis? (Select all that apply)"
- Figure 3 | Responses to the question: "How effective are the cannabis products you use at relieving your condition?" (CBD users only).
- Figure 4 | Responses to question: "Have you used any of the following products either instead of, or in addition to cannabis to alleviate your medical condition? Please select all products that you have previously used or are currently using" (CBD users only)
- Figure 5 | Responses to question: "Which of the following best describes your usage of cannabis related to other medications (those selected in the previous question)?" Answer options: 1. I used this product prior to trying cannabis for my condition; I now use cannabis instead. 2. I used this product prior to trying cannabis for my condition; I now use both this product and cannabis. 3. I previously used cannabis for my condition but now use this product instead of cannabis. 4. I alternate between this product and cannabis. (CBD users only)
- Figure 6 | Responses to the question: "How effective are the CBD products you use at relieving your medical condition....versus over-the-counter products? ...versus prescription products?"
- Figure 7 | Responses to question: "Which is your preferred CBD brand?" (Only hemp-derived CBD brands represented in graphic)
- Figure 8 | Responses to question: "Which is your preferred CBD brand?" (Only marijuana-derived CBD brands represented in graphic)
- Figure 9 | Responses to question: "Which types of CBD-rich and CBD-dominant products (either marijuana- or hemp-derived) would you or do you prefer to use? (Select all that apply)"
- Figure 10 | Responses to question: "On average, how much do you spend on cannabis per month?"
- Figure 11 | Responses to question: "On average, how often do you currently use cannabis?".
- For both questions, one column was provided for CBD product use and a second column for THC product use. In both graphics, responses are limited to those who use one or more CBD product (including CBD-dominant, marijuana-derived CBD-only or hemp-derived CBD).
- Figure 12 | Responses to question: "What concentration(s) do you typically use? (Select all that apply)"
- Figure 13 | Responses to question: "What do you most enjoy about CBD-rich or CBD-dominant products (either marijuana- or hemp-derived)?"

# APPENDIX A: ALL RESPONDENTS

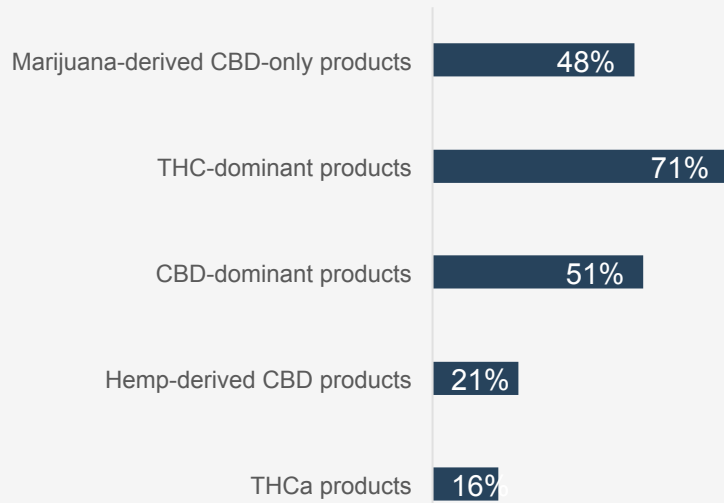
# Key Demographics Scorecard



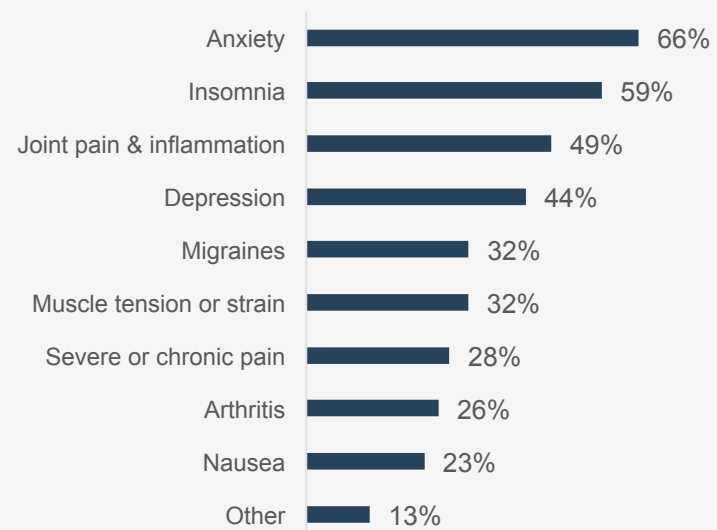
\*Ethnicities <4% not shown

# Cannabis Product Usage & Medical Conditions

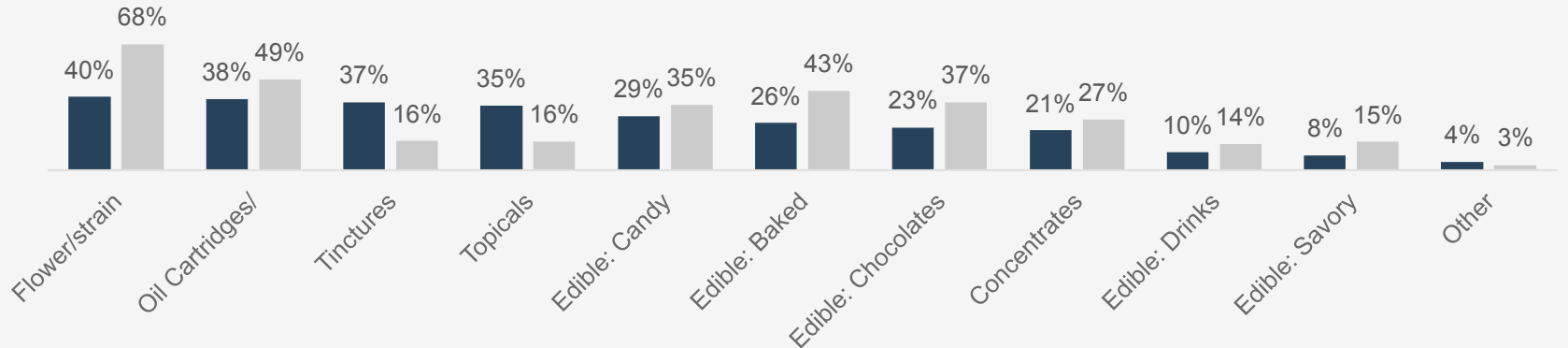
## Cannabis Products Regularly Used



## Top Ten Medical Conditions



## Categories of Cannabis Used

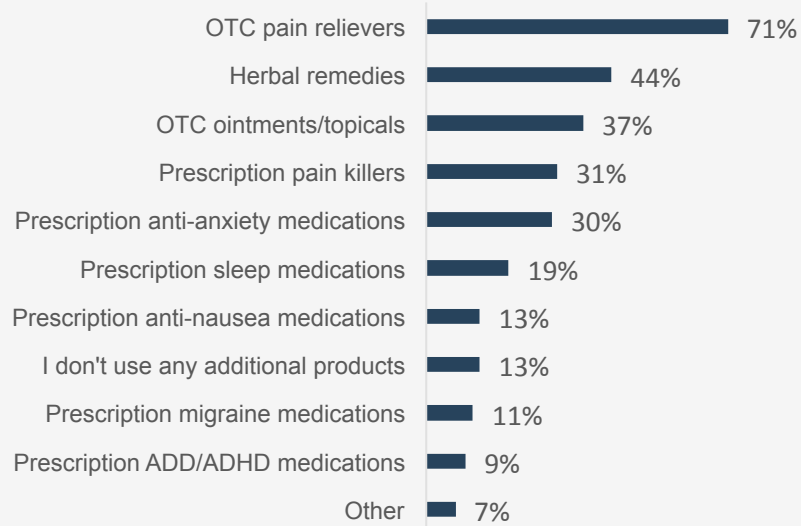




# Cannabis vs. Other Products

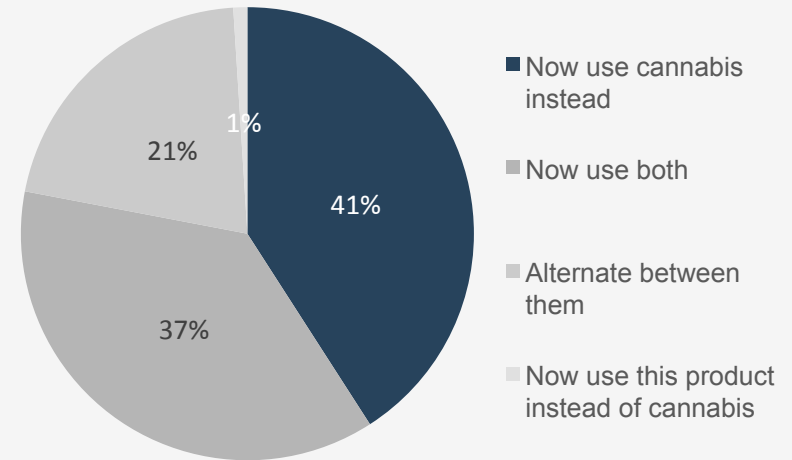
## Other Products Currently or Previously Used

(Among those w/ a medical condition)



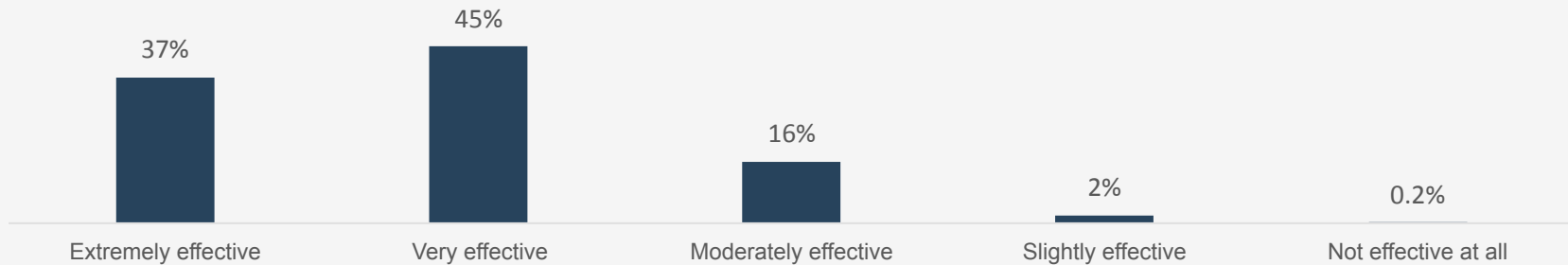
## Cannabis vs. Other Product Usage

(Among those who use another product)



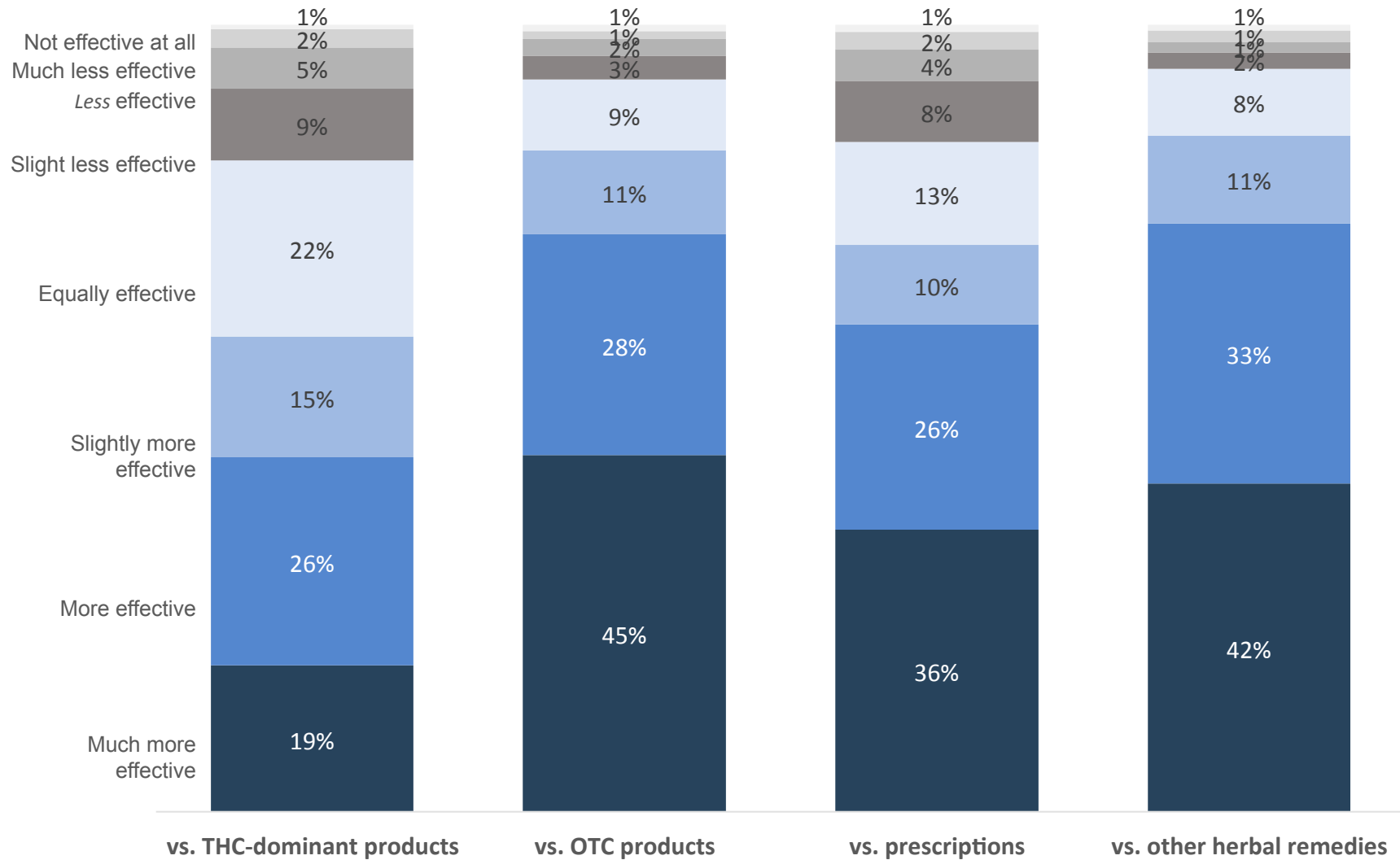
## Effectiveness of Cannabis Products

(Among those w/ a medical condition)



# Comparative Effectiveness of CBD Products

## Effectiveness at Relieving Medical Conditions

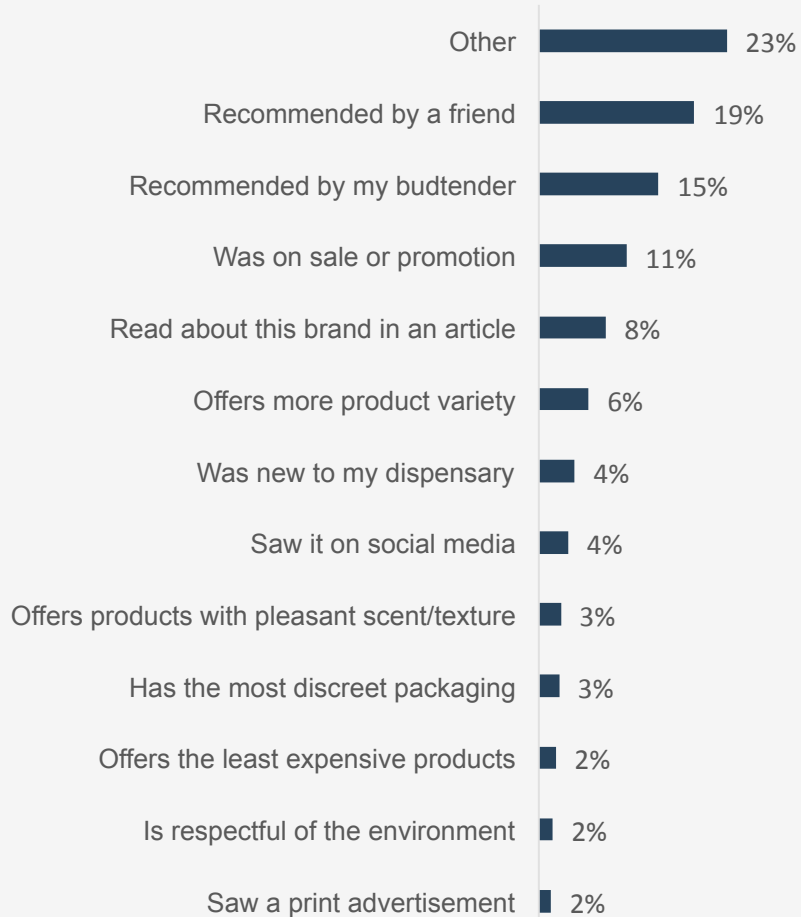


(Each column based to those who use product type)

# CBD Brand Choice Drivers

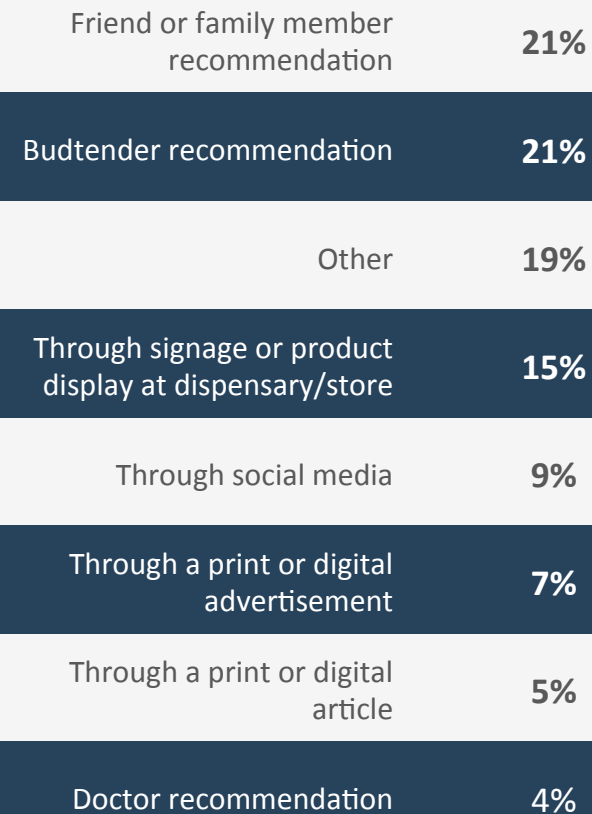
## Motivation for Trying Brand

(Among users likely to buy CBD products)



## Source of Brand Awareness

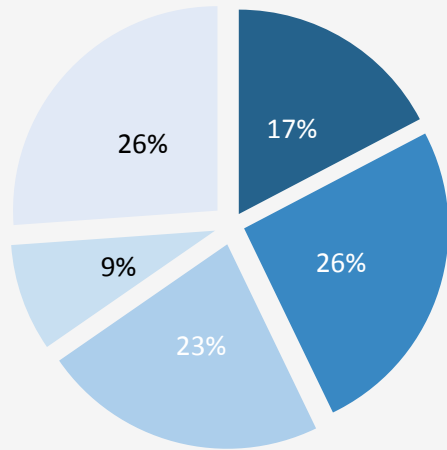
(Among users likely to buy CBD products)



# CBD Brand Loyalty

## Brand Loyalty

(Among those likely to buy CBD products)



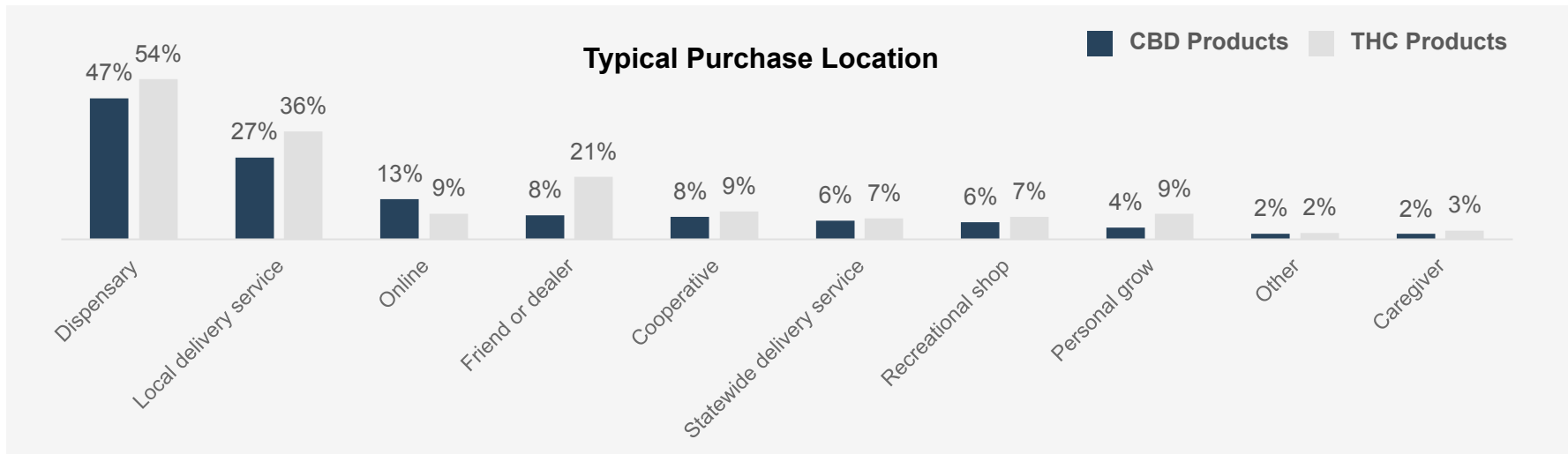
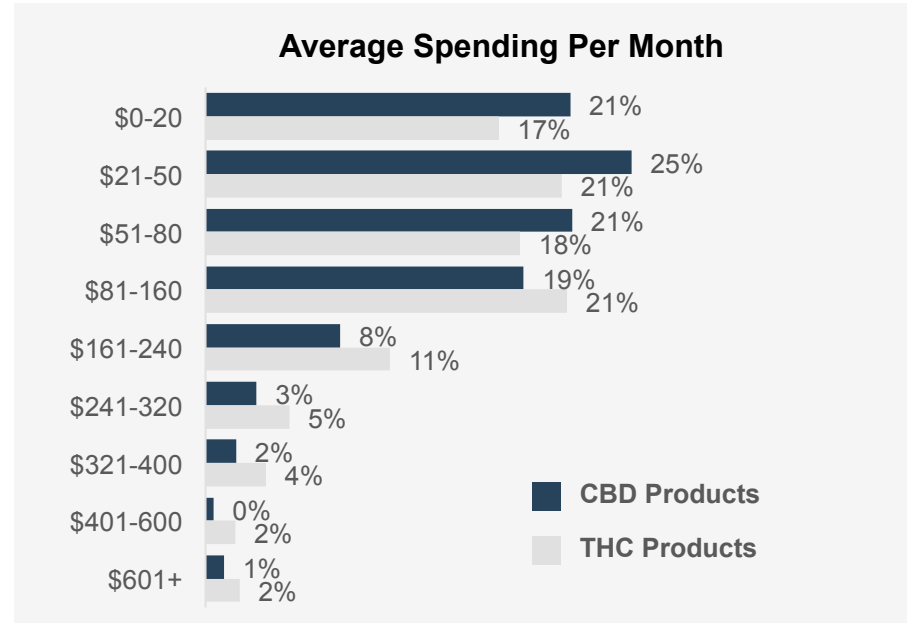
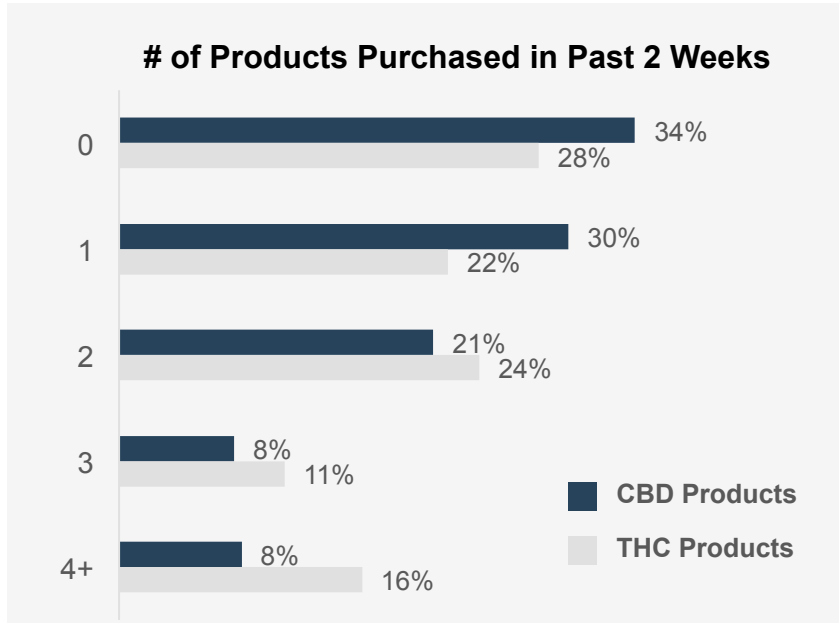
- Only purchase it
- Purchase it at least 75% of the time
- Purchase it at least half of the time
- Purchase it at least 25% of the time
- Purchase it only occasionally

## Top Reasons Why Brand is Favorite

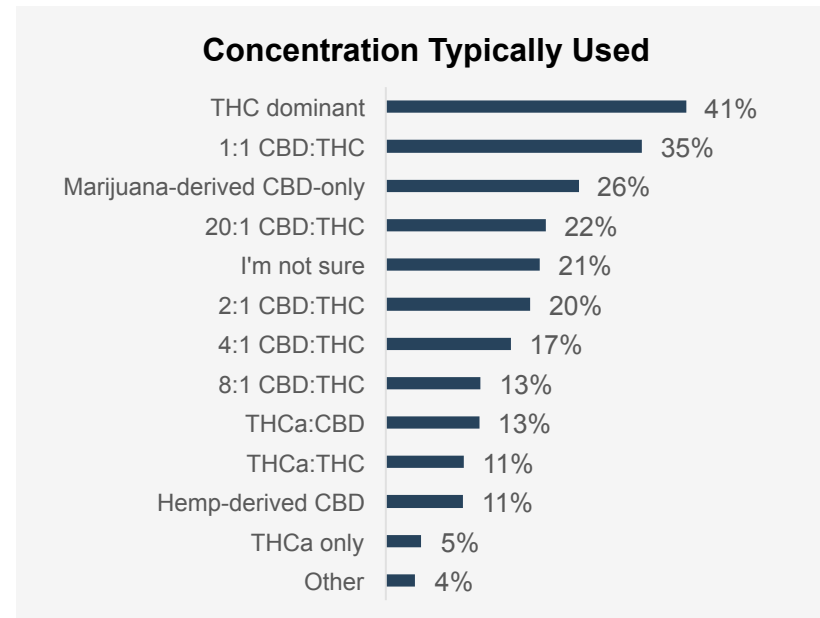
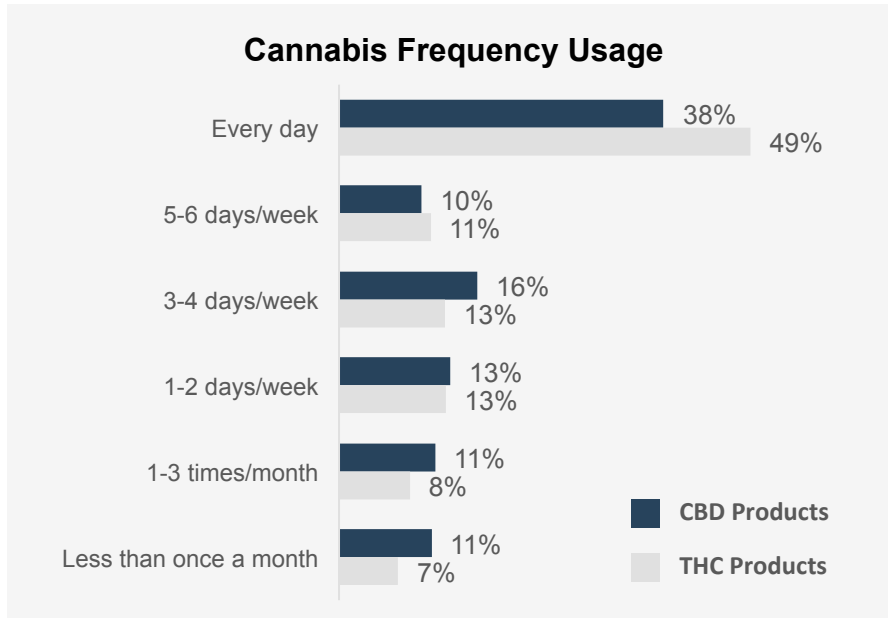
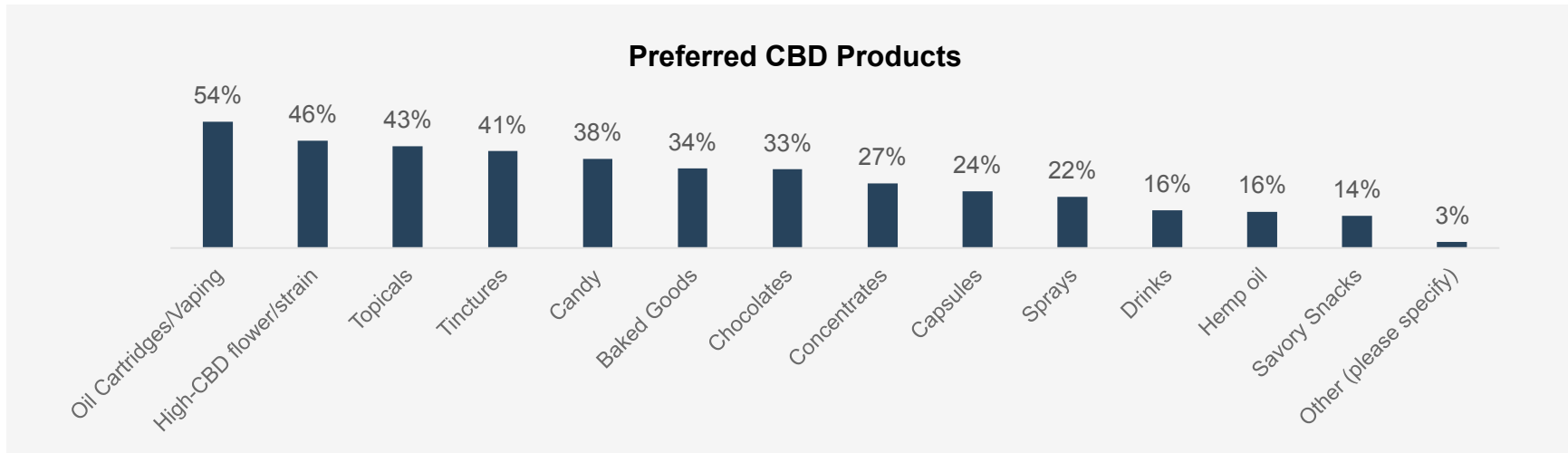
(Among those likely to buy CBD products)



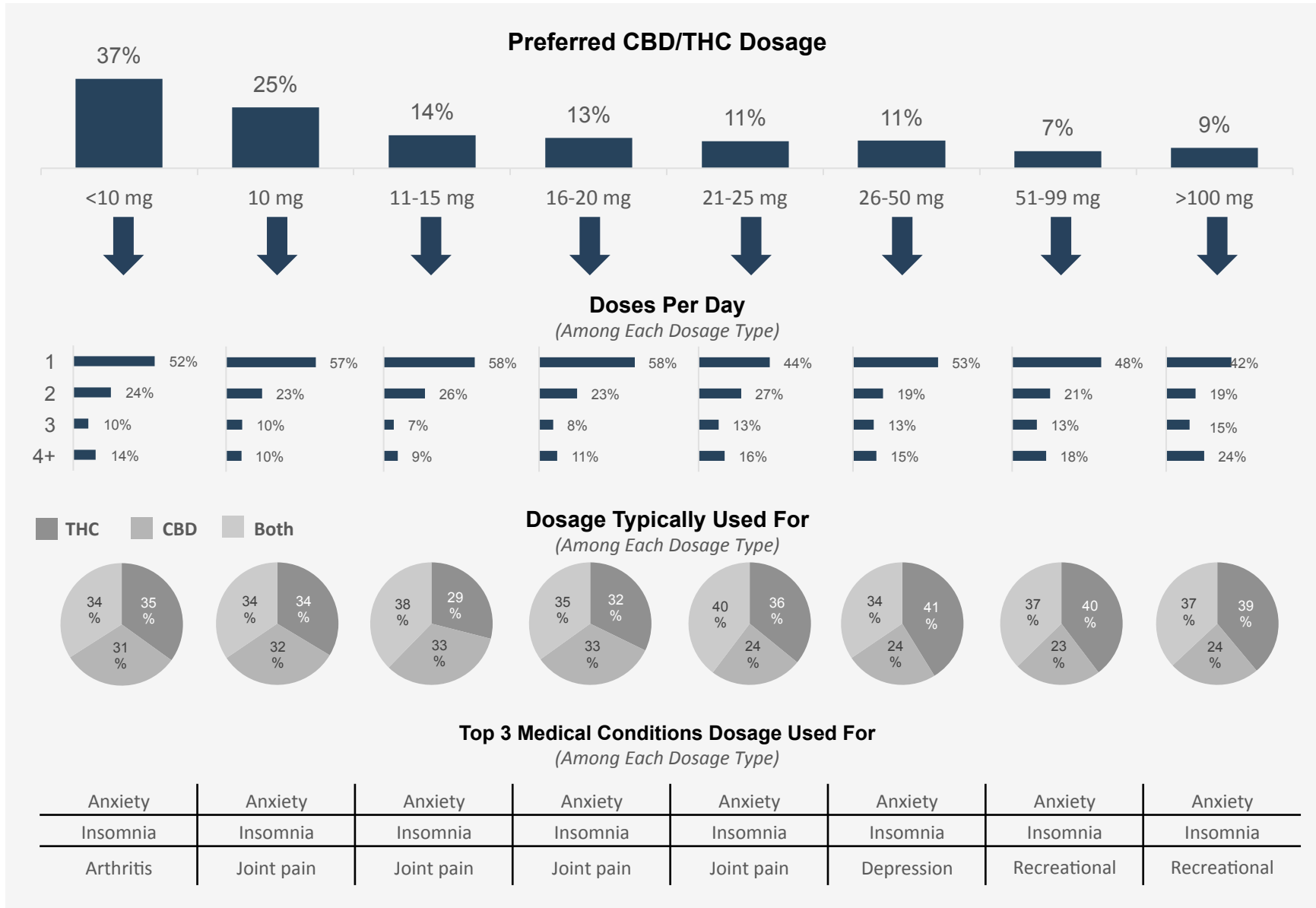
# Cannabis Purchase Dynamics - CBD vs THC-Dominant



# Cannabis Consumption Profile

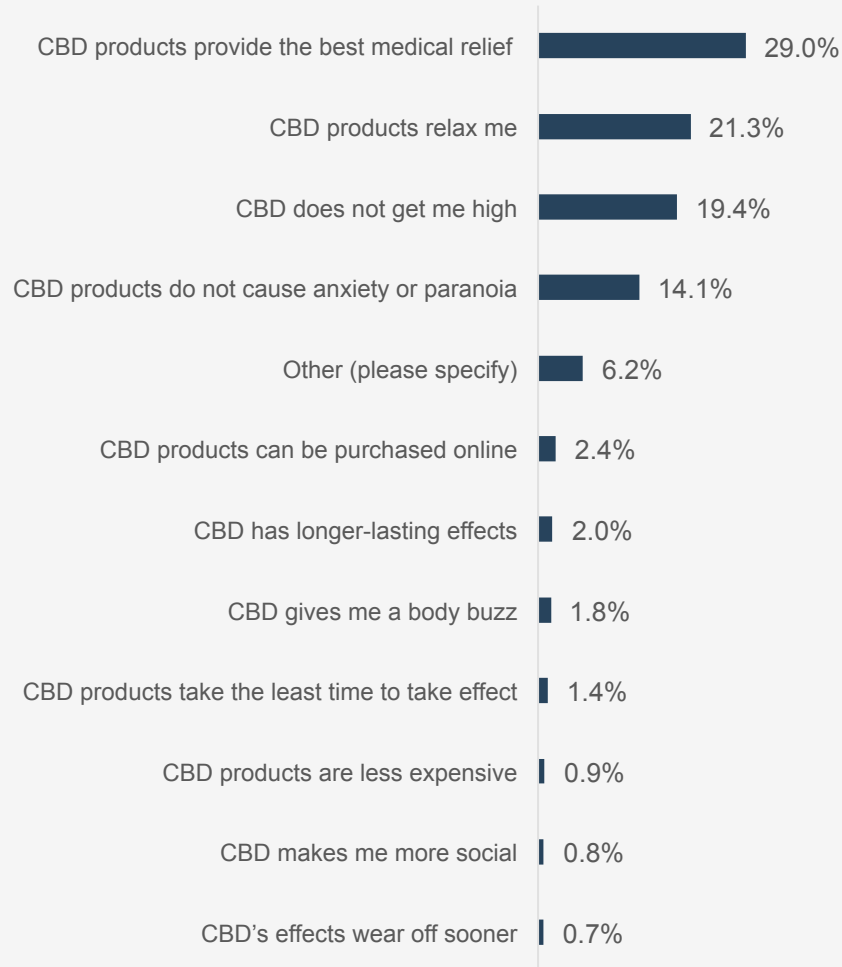


# CBD / THC Dosage Dynamics



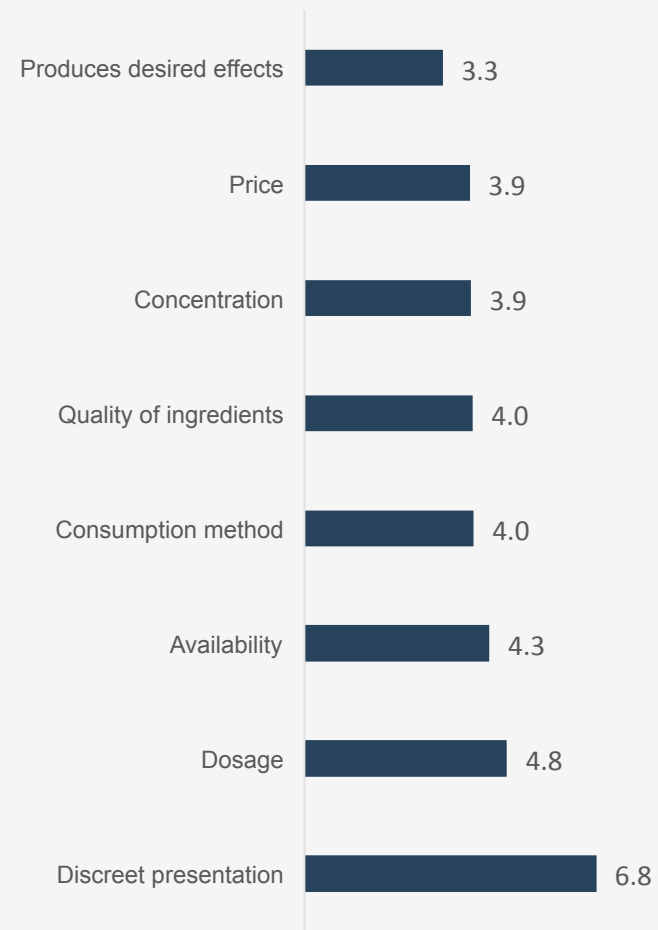
# Top CBD Features & Purchase Drivers

## Best CBD Features



## CBD Purchase Drivers

Avg. Ranking, 1-8

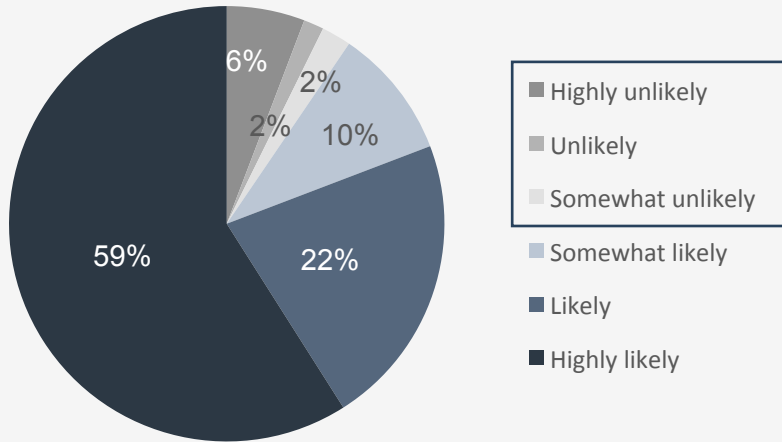




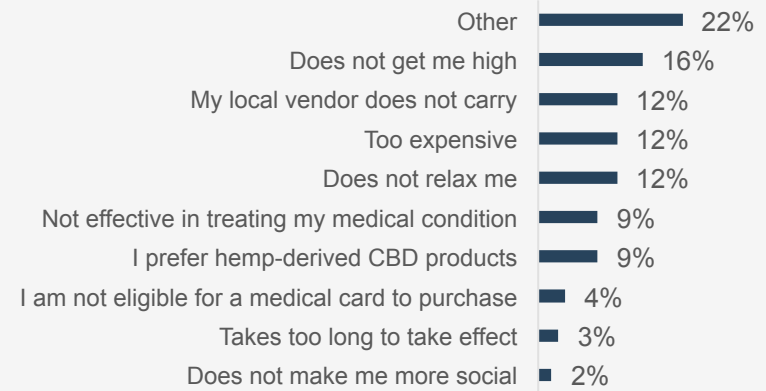
# Purchase Likelihood & Reasons for Unlikely

## Likelihood to Buy Marijuana-Derived CBD Products

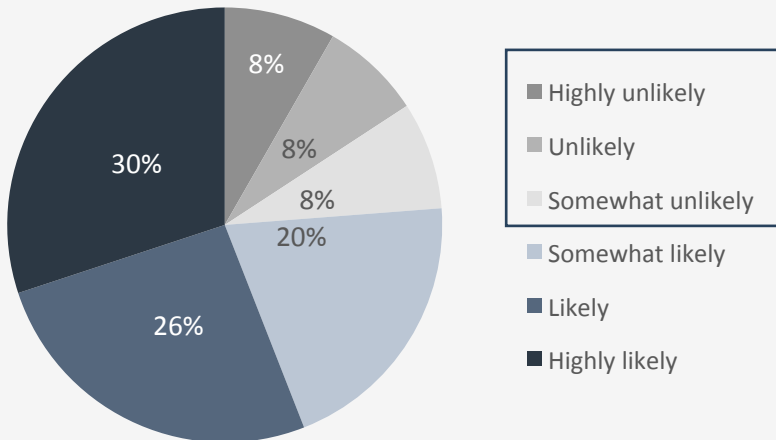
(including CBD-dominant and marijuana-derived CBD-only)



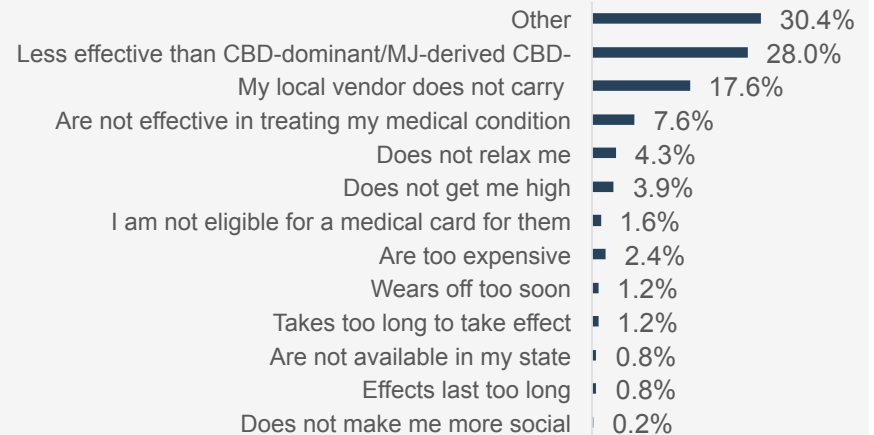
## Why Unlikely to Buy Marijuana-Derived CBD Products



## Likelihood to Buy Hemp-Derived CBD Products

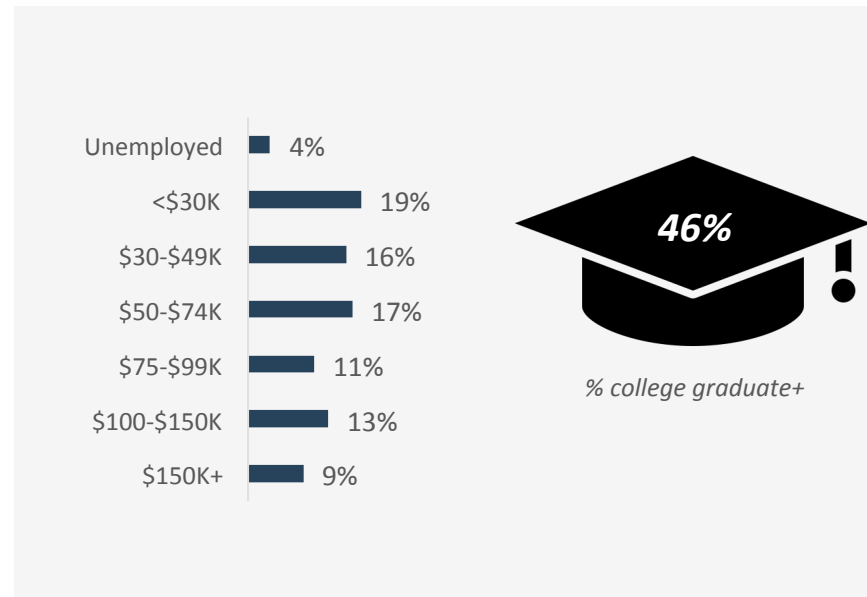
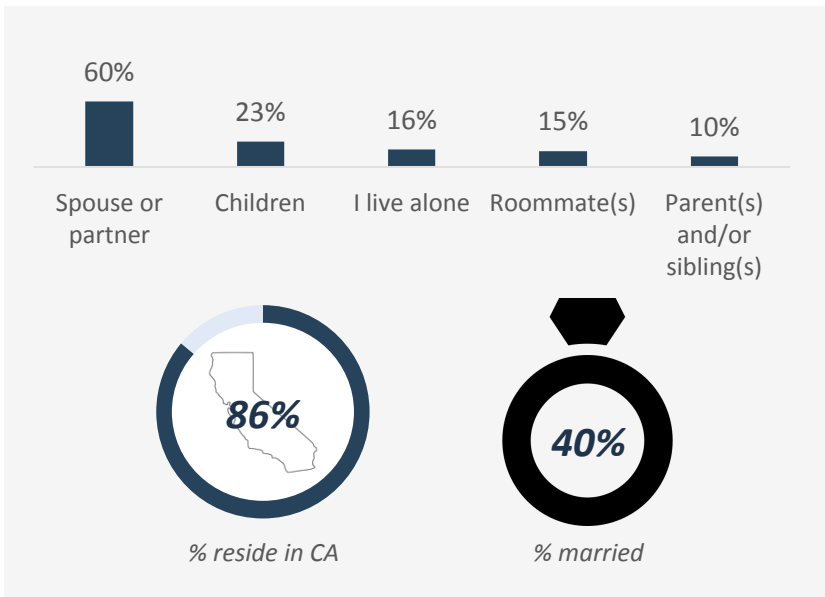
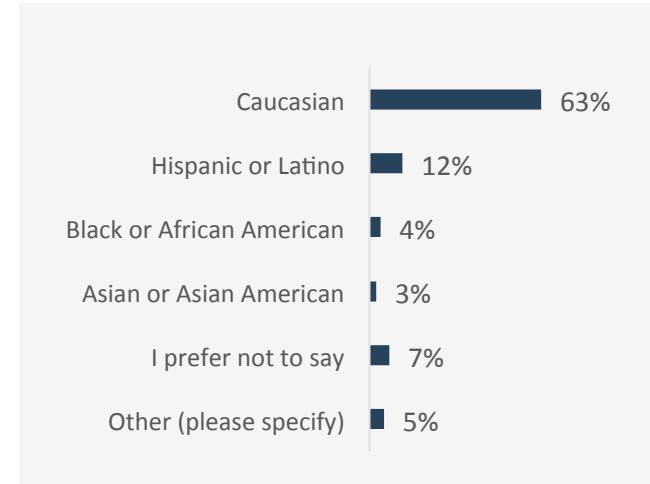
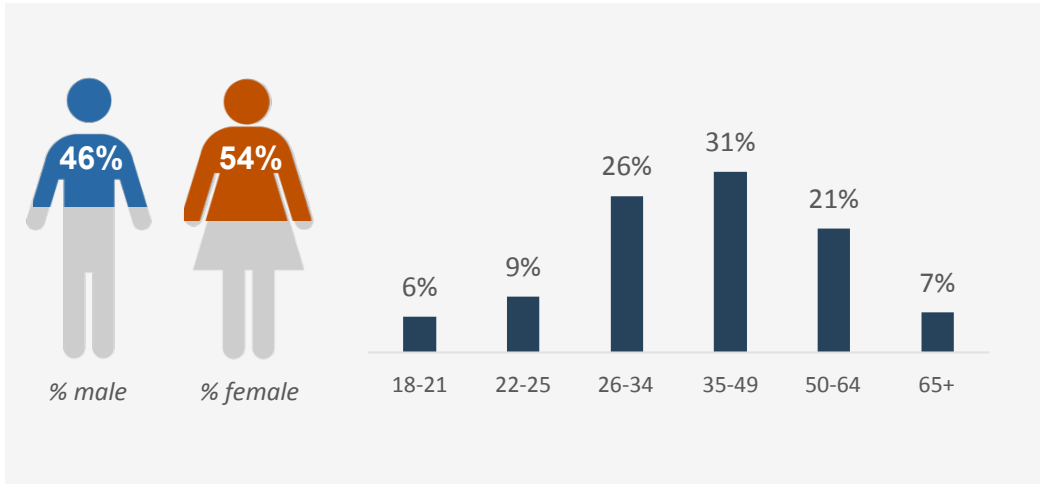


## Why Unlikely to Buy Hemp-Derived CBD Products



# APPENDIX B: CBD-DOMINANT USERS

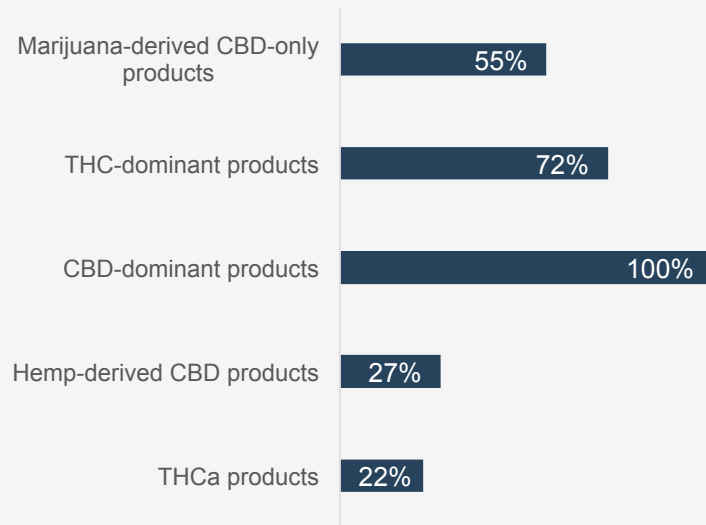
# Key Demographics Scorecard



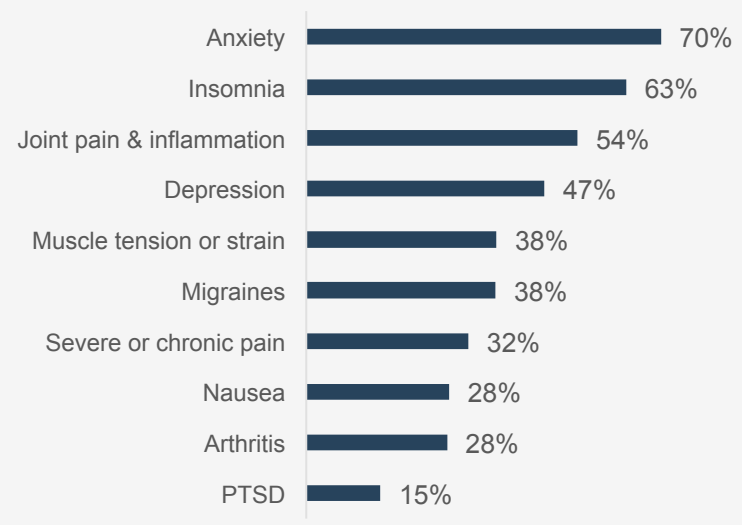
\*Ethnicities <4% not shown

# Cannabis Product Usage & Medical Conditions

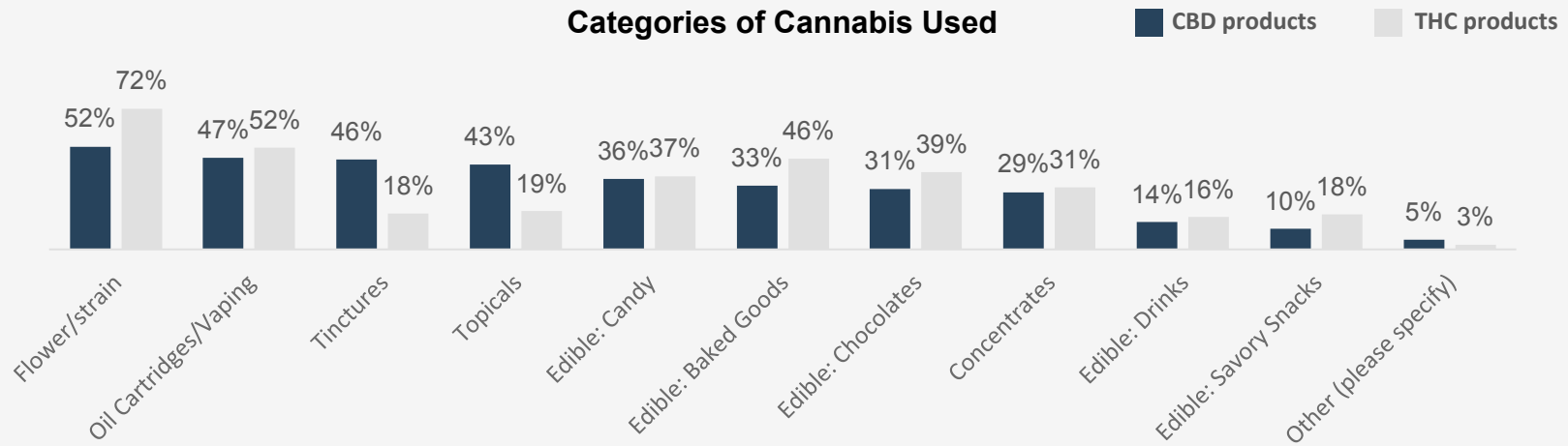
## Cannabis Products Regularly Used



## Top Ten Medical Conditions

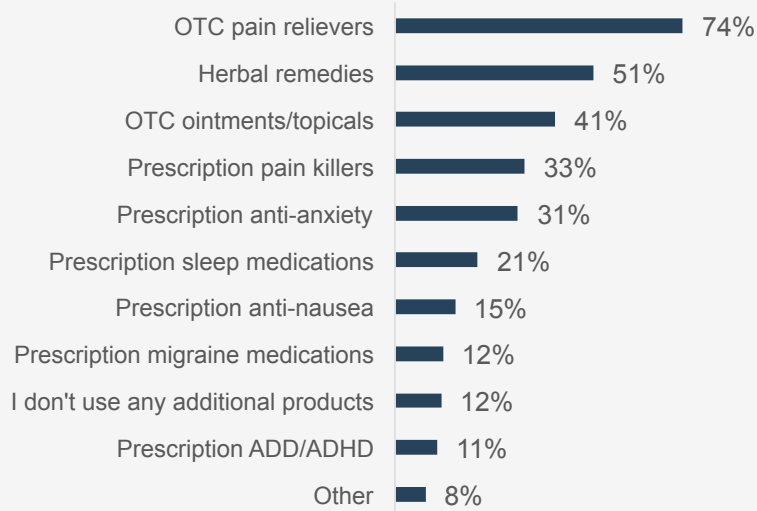


## Categories of Cannabis Used

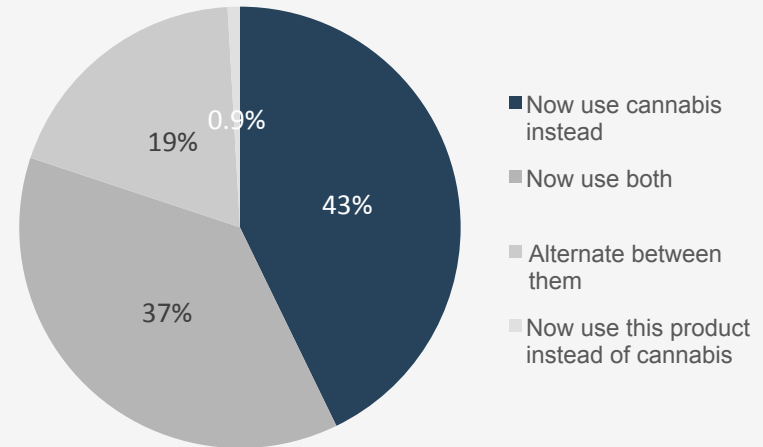


# Cannabis vs. Other Products

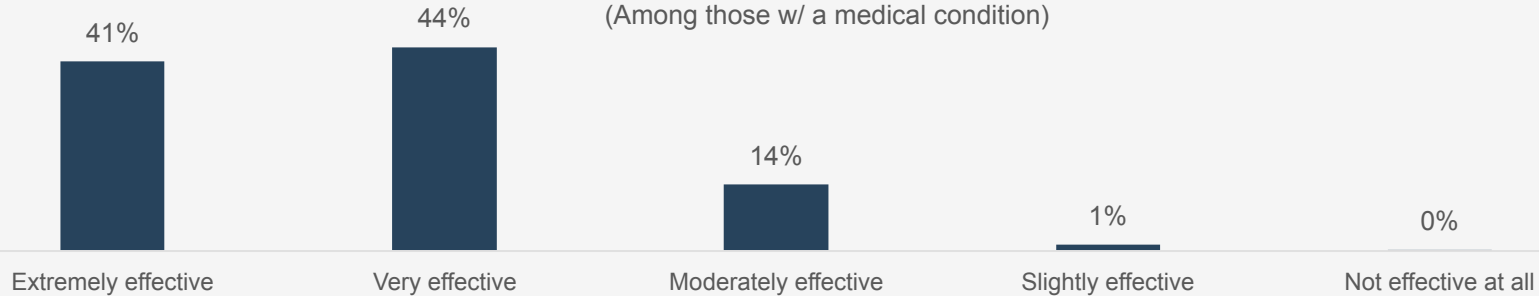
**Other Products Currently or Previously Used**  
(Among those w/ a medical condition)



**Cannabis vs. Other Product Usage**  
(Among those who use another product)

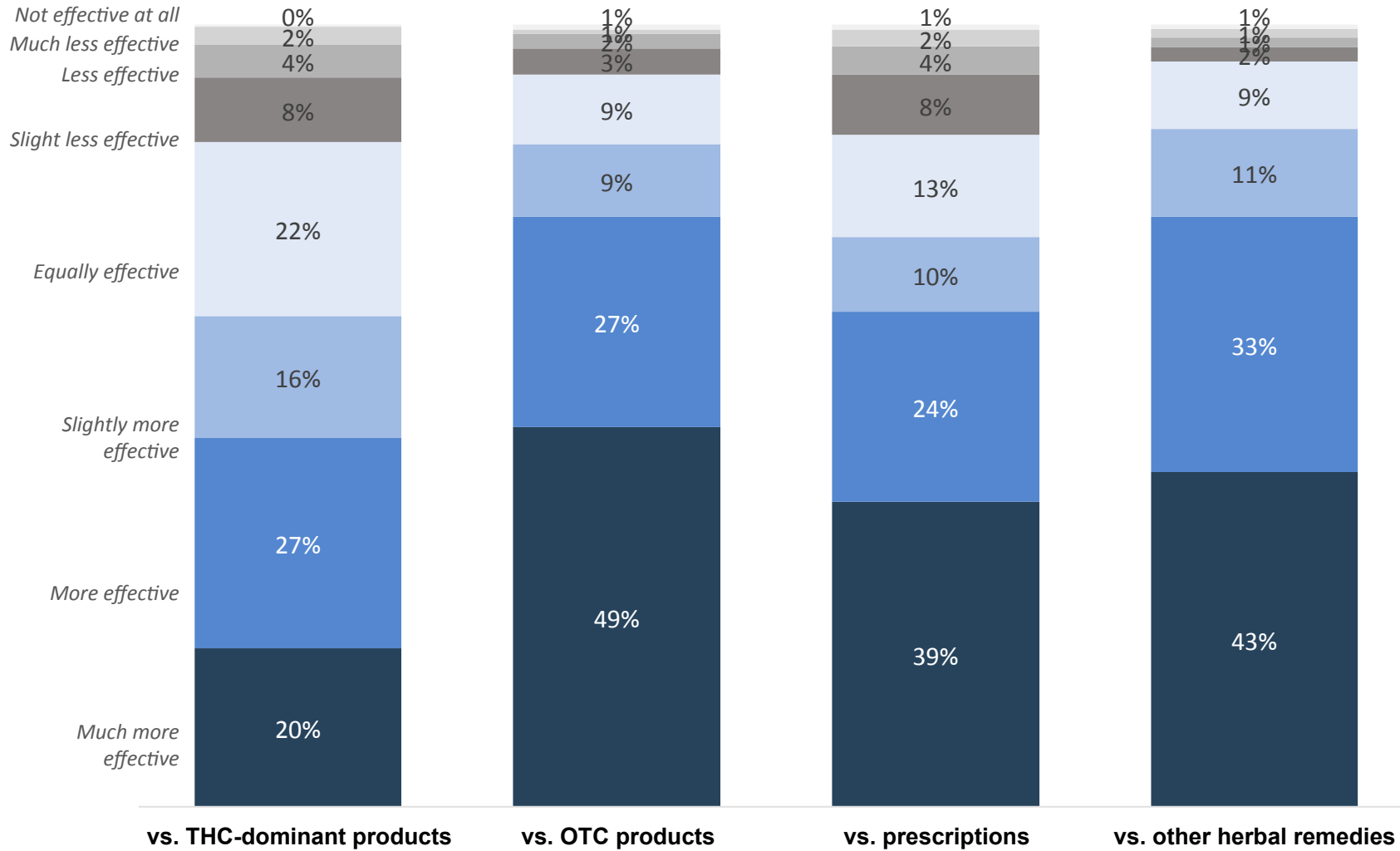


**Effectiveness of Cannabis Products**  
(Among those w/ a medical condition)



# Comparative Effectiveness of CBD Products

## Effectiveness at Relieving Medical Conditions

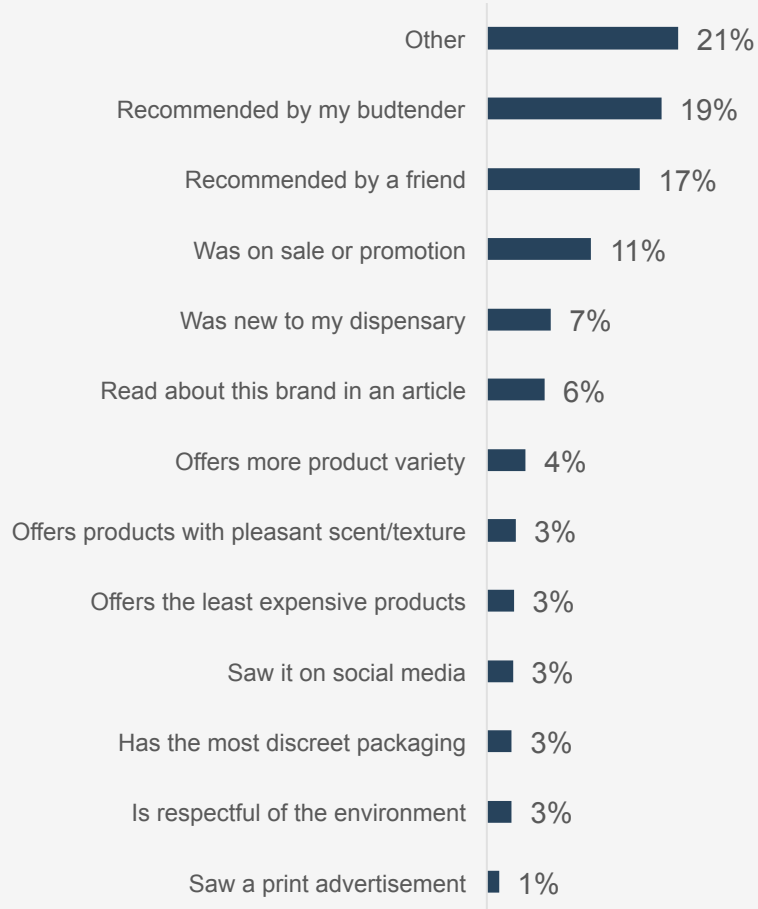


(Each column based to those who use product type)

# CBD Brand Choice Drivers

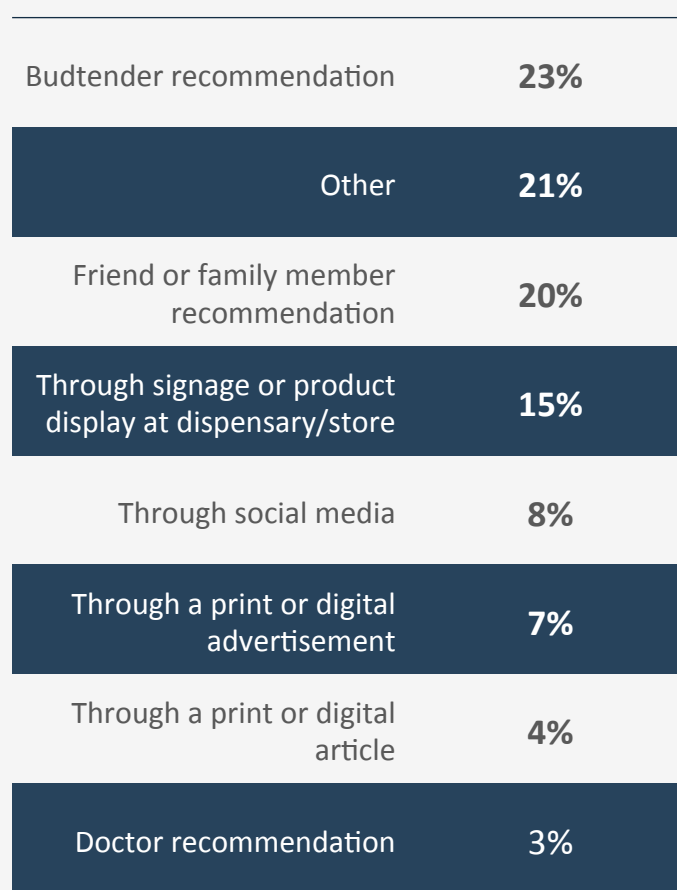
## Motivation for Trying Brand

(Among users likely to buy CBD products)



## Source of Brand Awareness

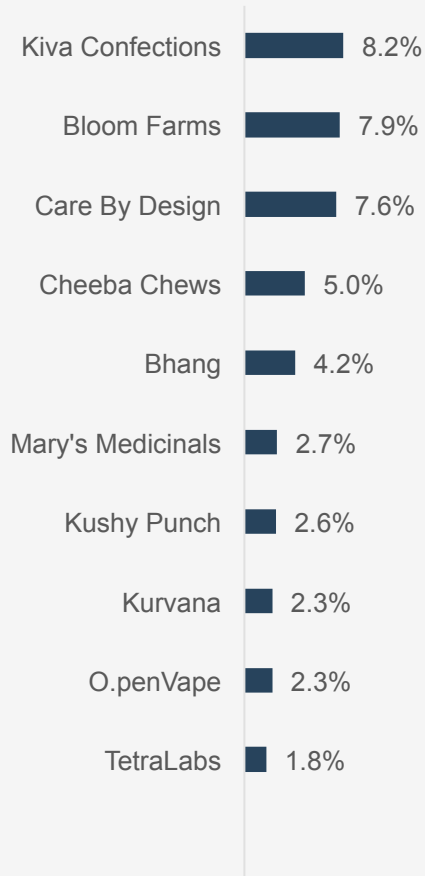
(Among users likely to buy CBD products)



# CBD Brand Loyalty

## Top Preferred CBD-dominant Marijuana-Derived CBD Brands

(Among users likely to buy CBD products)



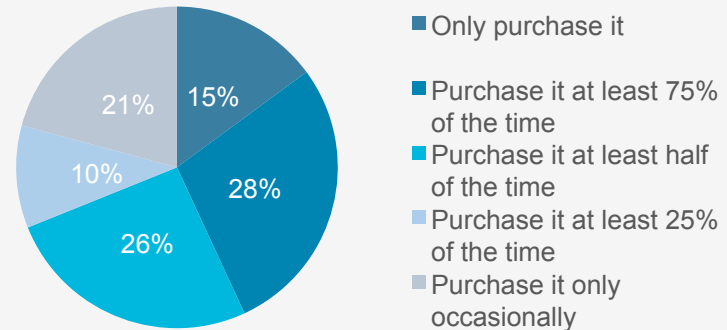
## Top Reasons Why Brand is Favorite

(Among users likely to buy CBD products)



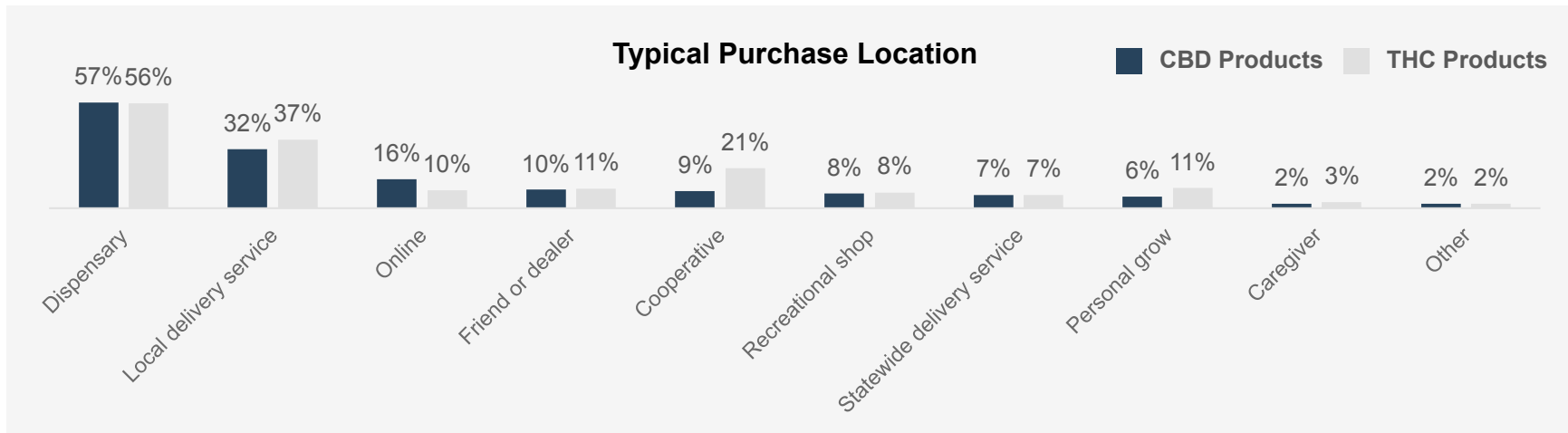
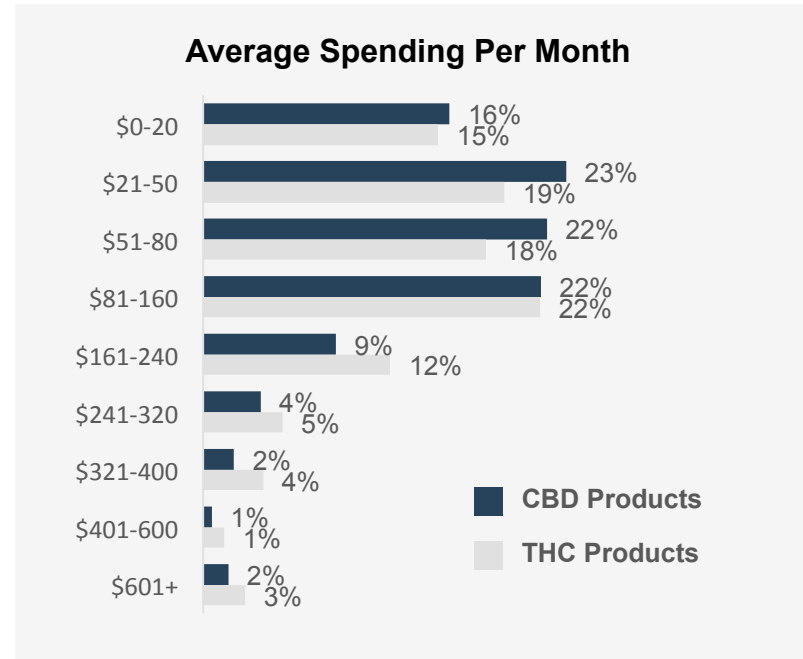
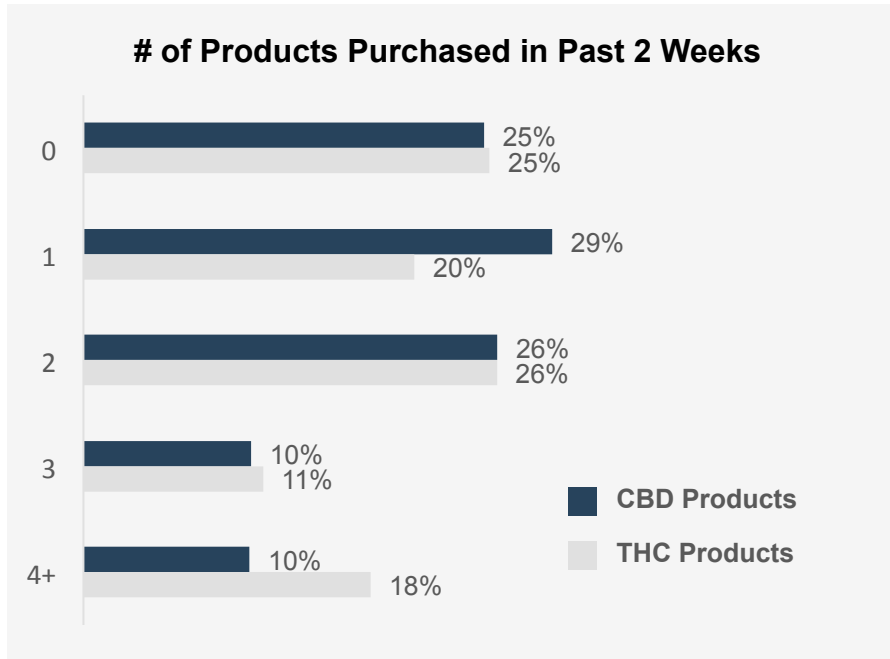
## Brand Loyalty

(Among users likely to buy CBD products)

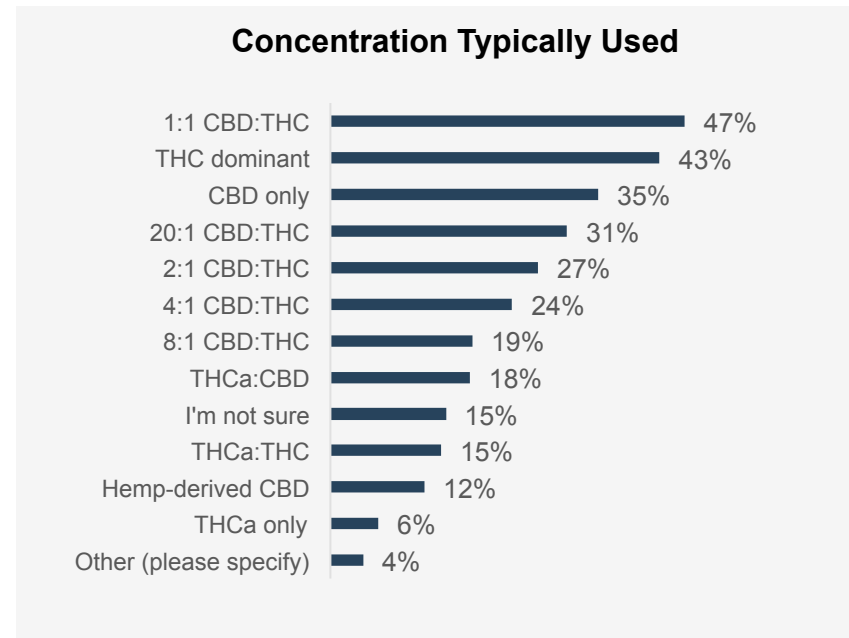
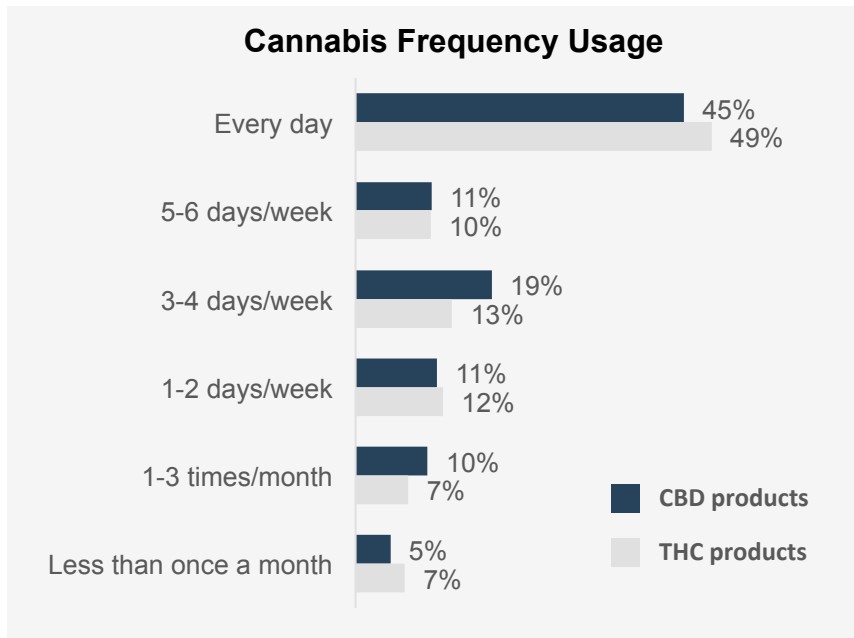
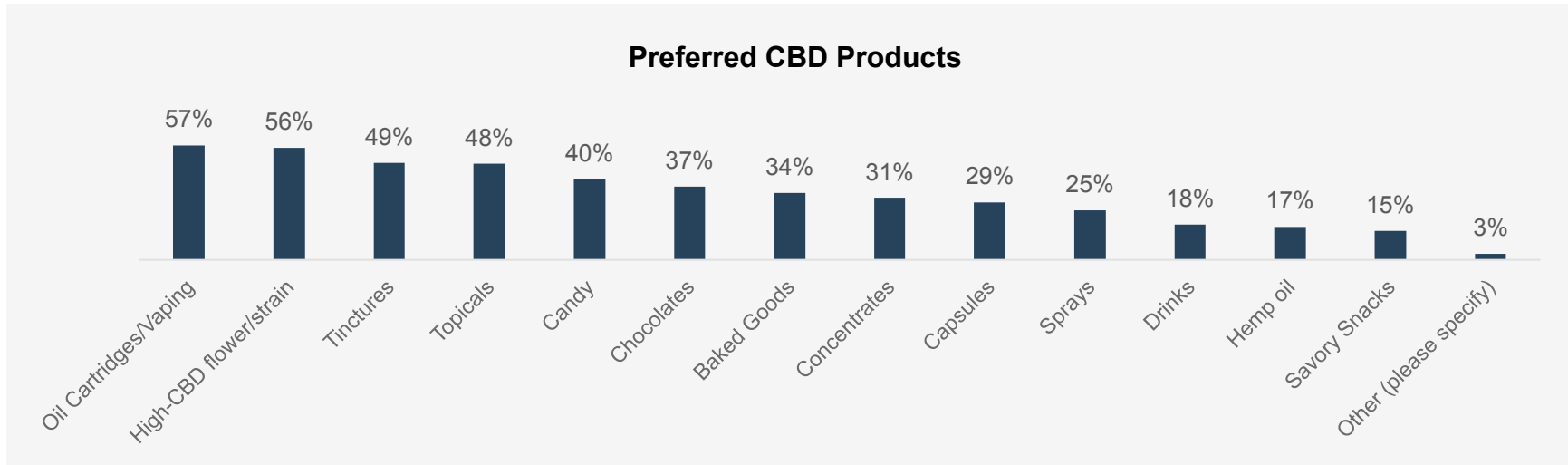




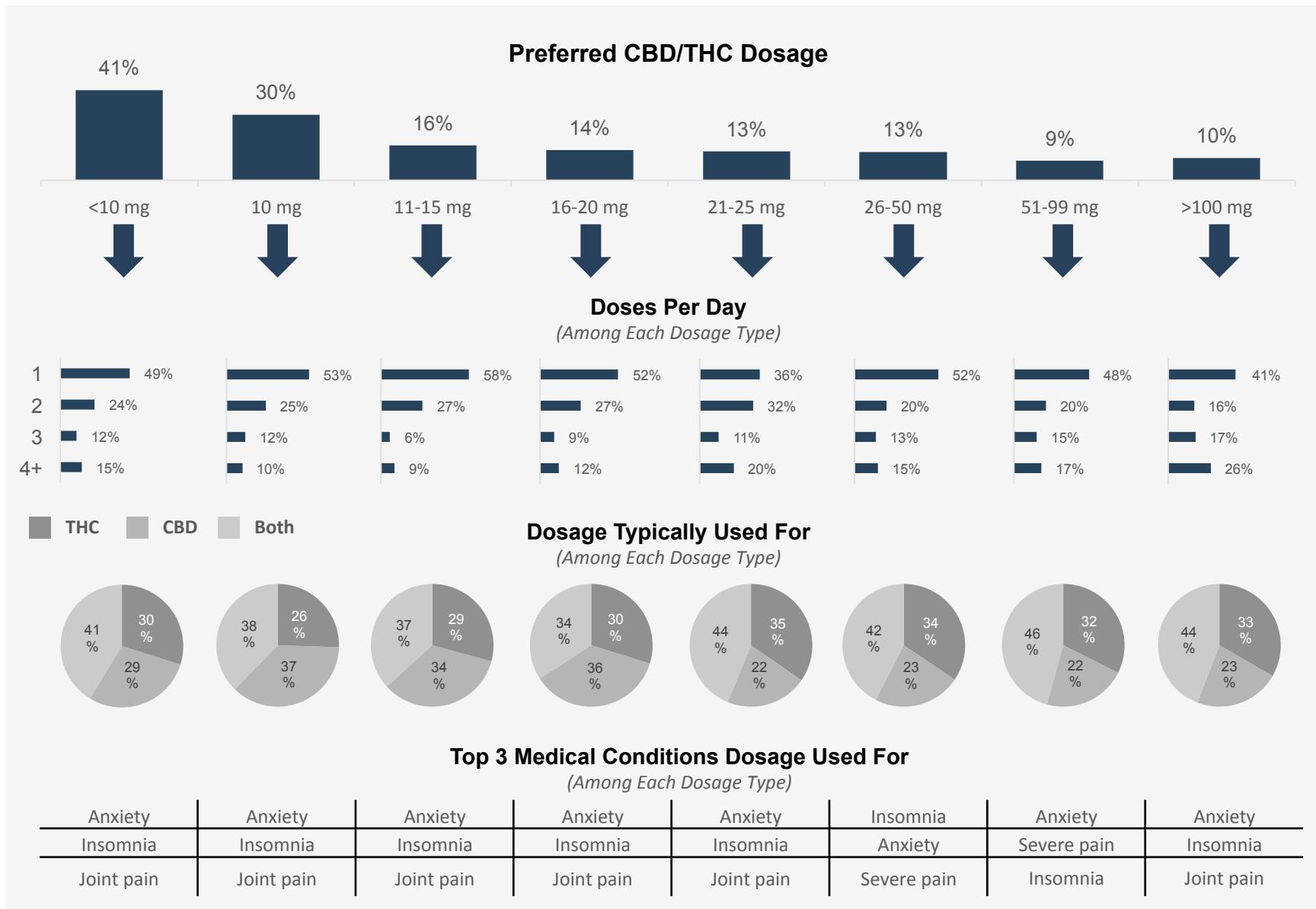
# Cannabis Purchase Dynamics - CBD vs THC-Dominant



# Cannabis Consumption Profile

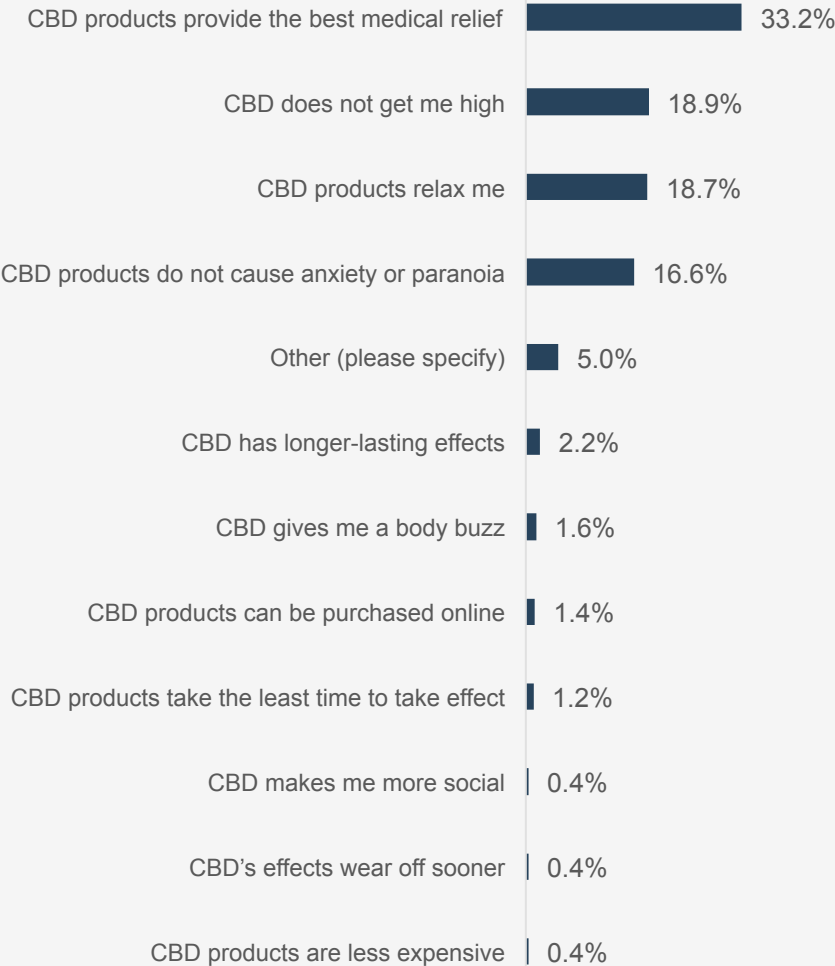


# CBD / THC Dosage Dynamics

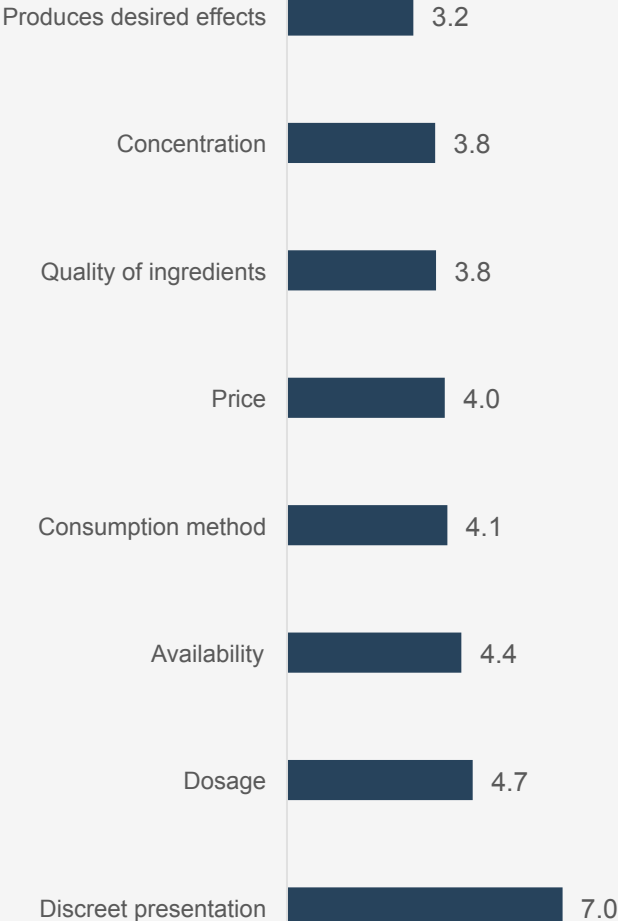


# Top CBD Features & Purchase Drivers

### Best CBD Features



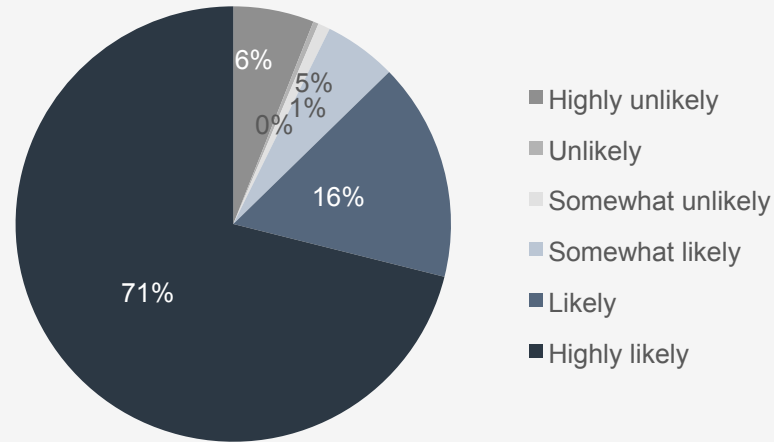
### CBD Purchase Drivers Avg. Ranking, 1-8



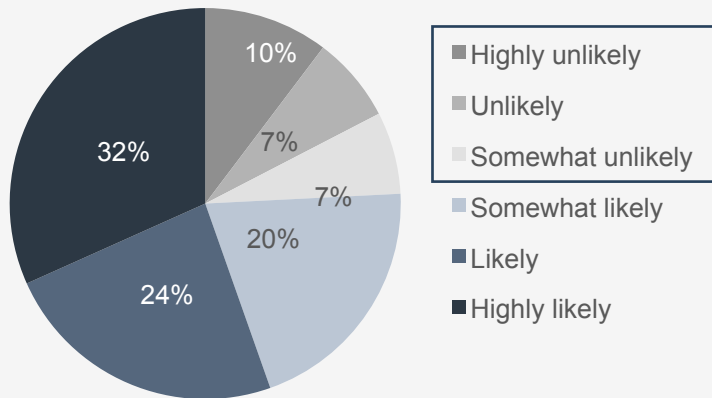
# Purchase Likelihood & Reasons for Unlikely

## Likelihood to Buy Marijuana-Derived CBD Products

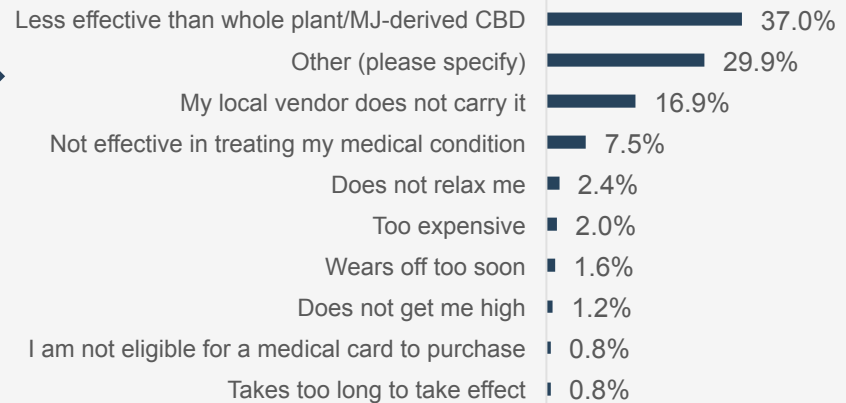
(including CBD-dominant and marijuana-derived CBD-only)



## Likelihood to Buy Hemp-Derived CBD Products

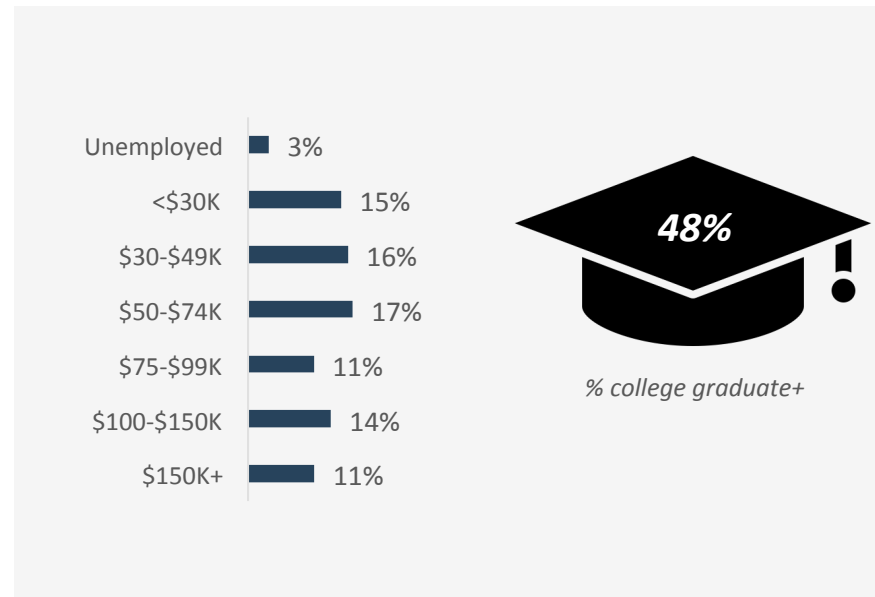
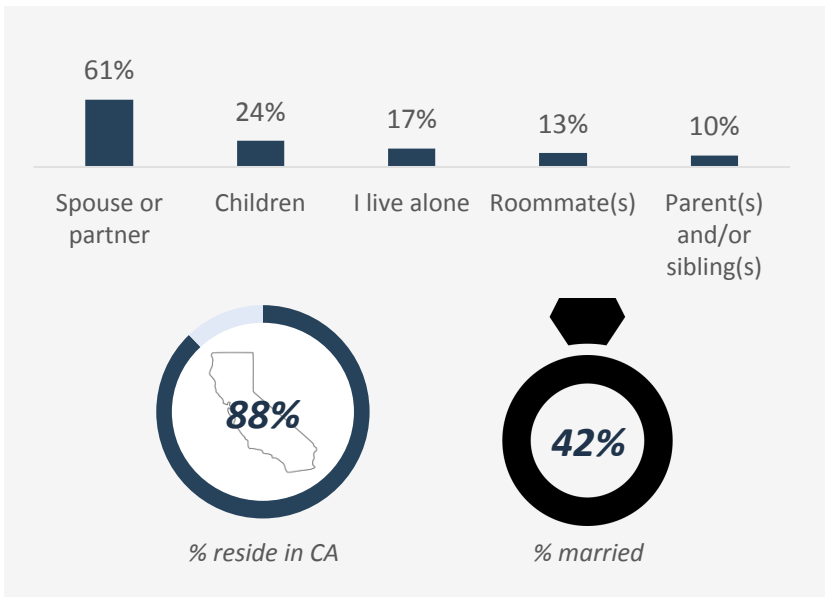
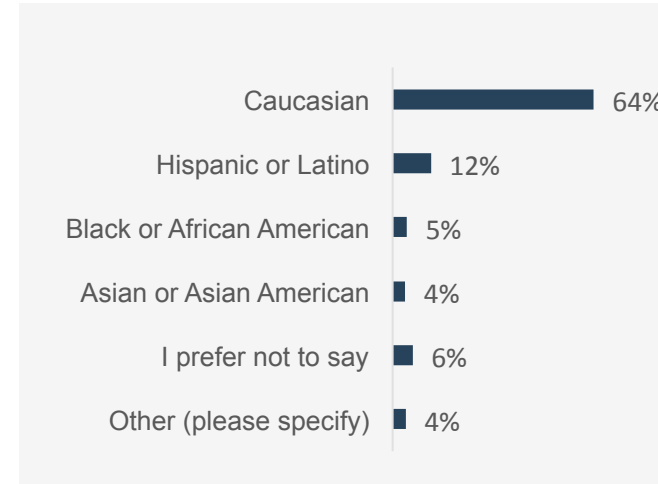
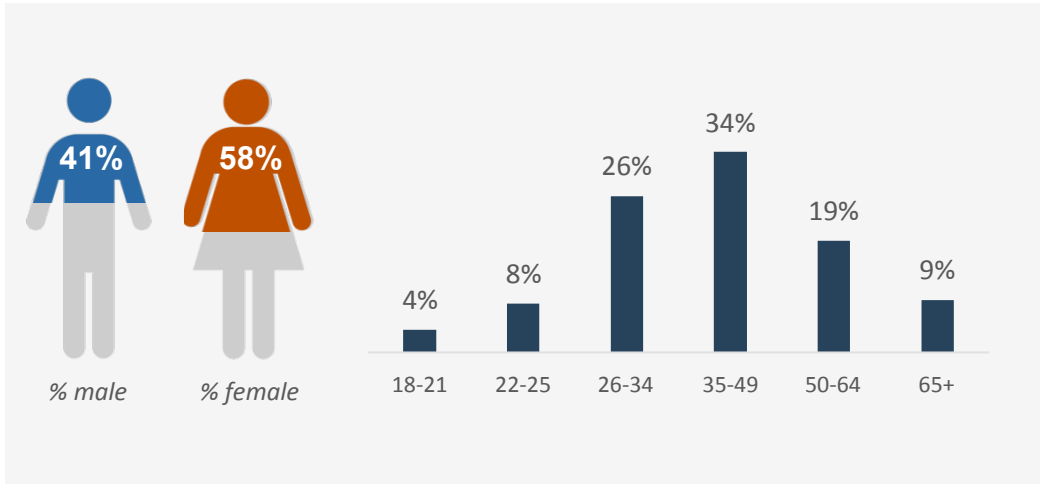


## Why Unlikely to Buy Hemp-Derived CBD Products



# APPENDIX C: MARIJUANA-DERIVED CBD-ONLY USERS

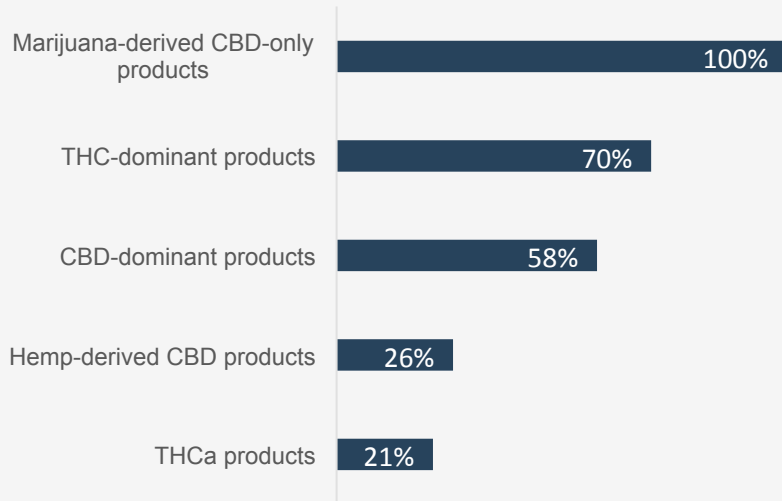
# Key Demographics Scorecard



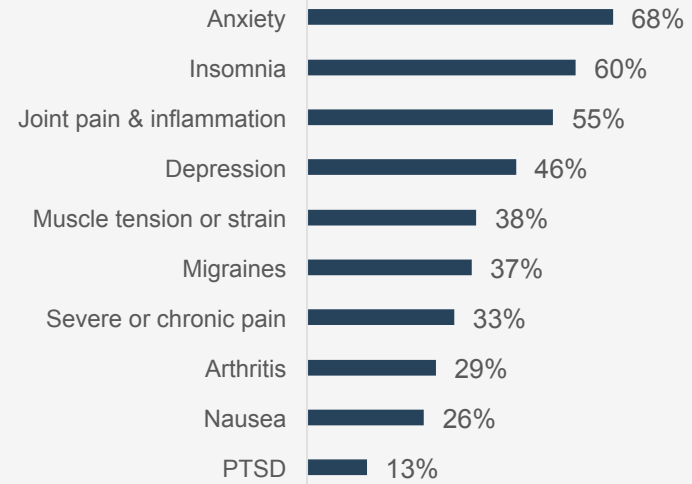
\*Ethnicities <4% not shown

# Cannabis Product Usage & Medical Conditions

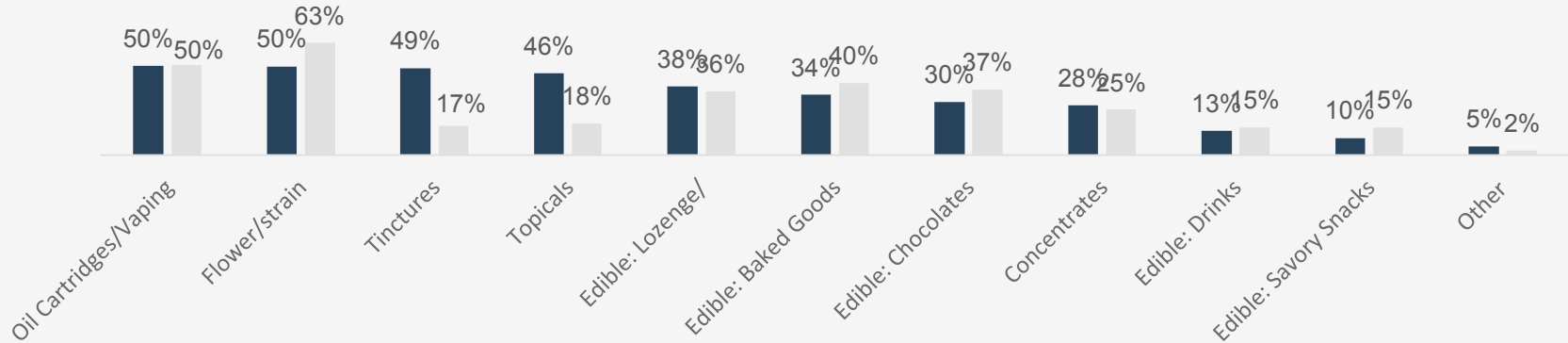
## Cannabis Products Regularly Used



## Top Ten Medical Conditions



## Categories of Cannabis Used

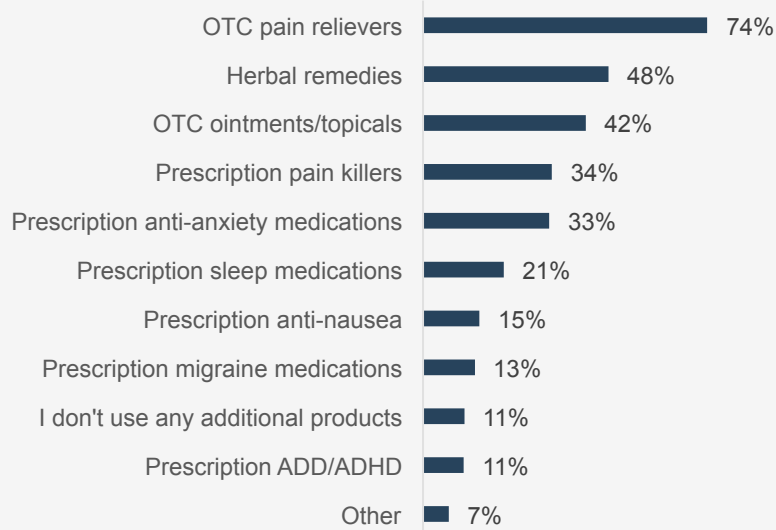




# Cannabis vs. Other Products

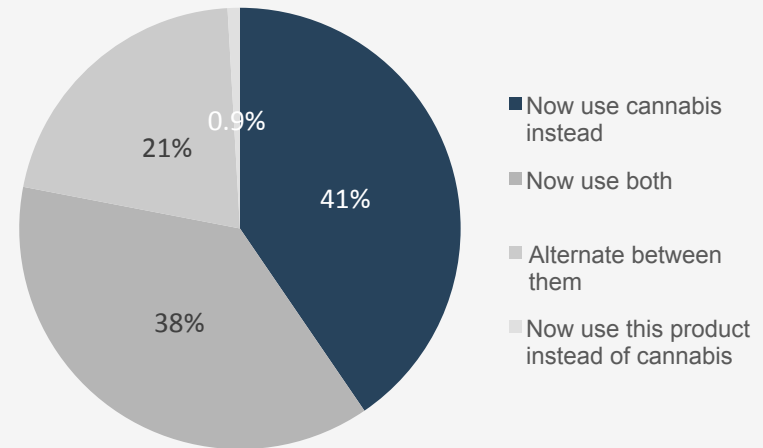
## Other Products Currently or Previously Used

(Among those w/ a medical condition)



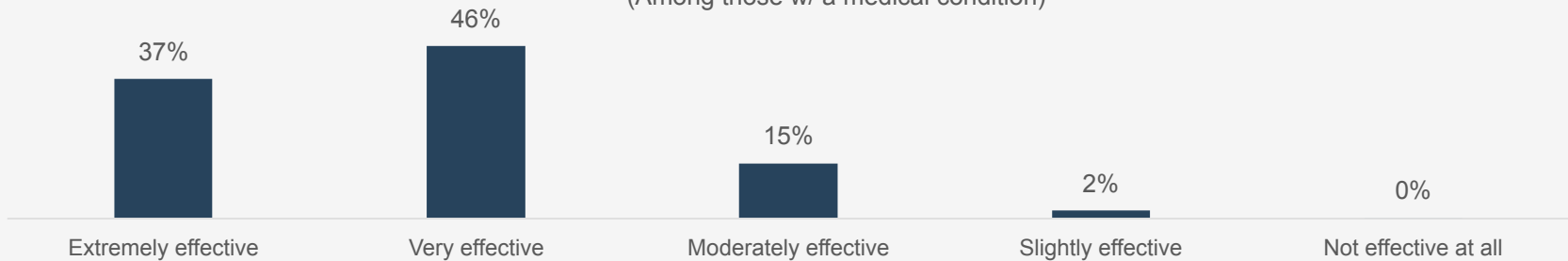
## Cannabis vs. Other Product Usage

(Among those who use another product)



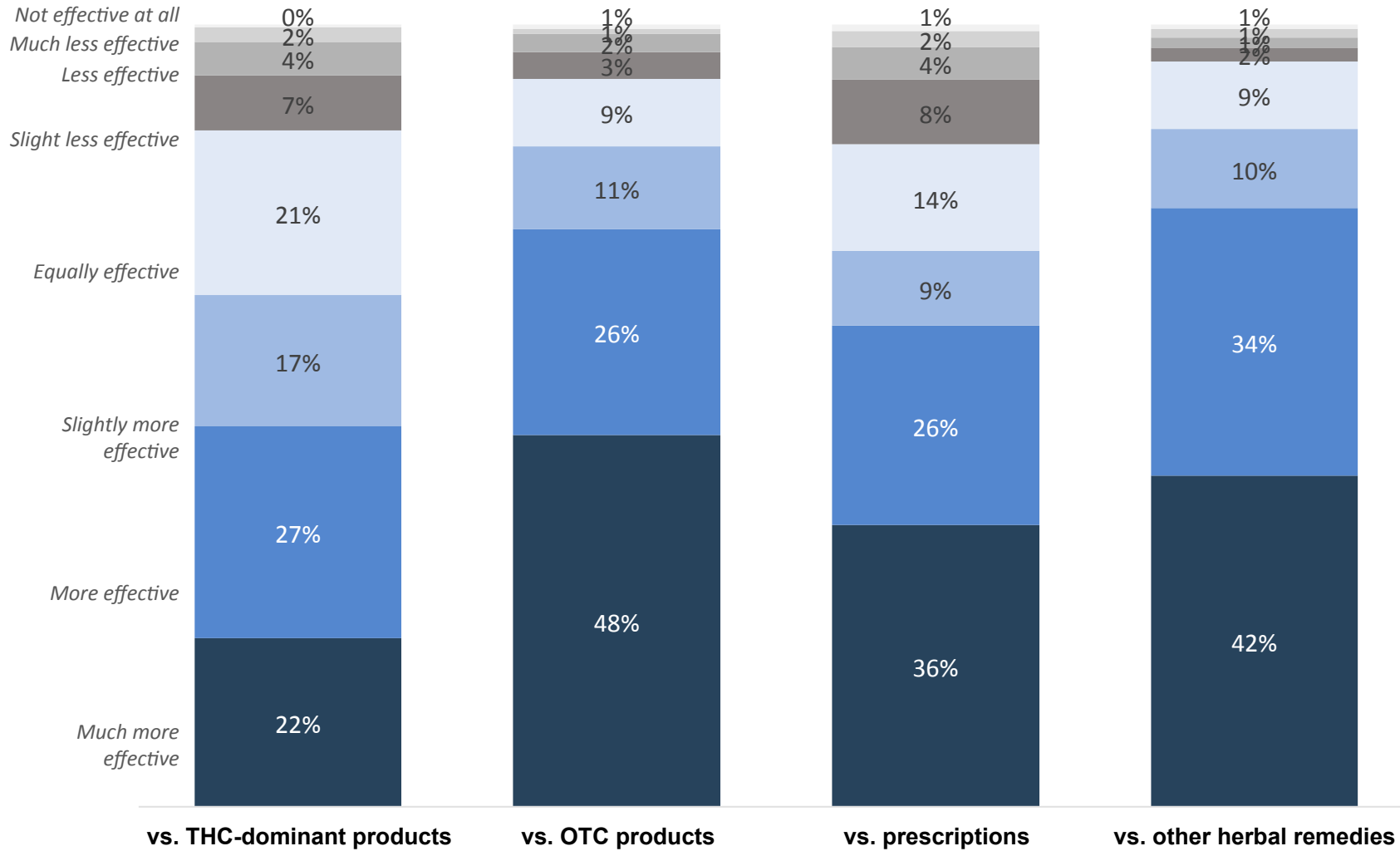
## Effectiveness of Cannabis Products

(Among those w/ a medical condition)



# Comparative Effectiveness of CBD Products

## Effectiveness at Relieving Medical Conditions

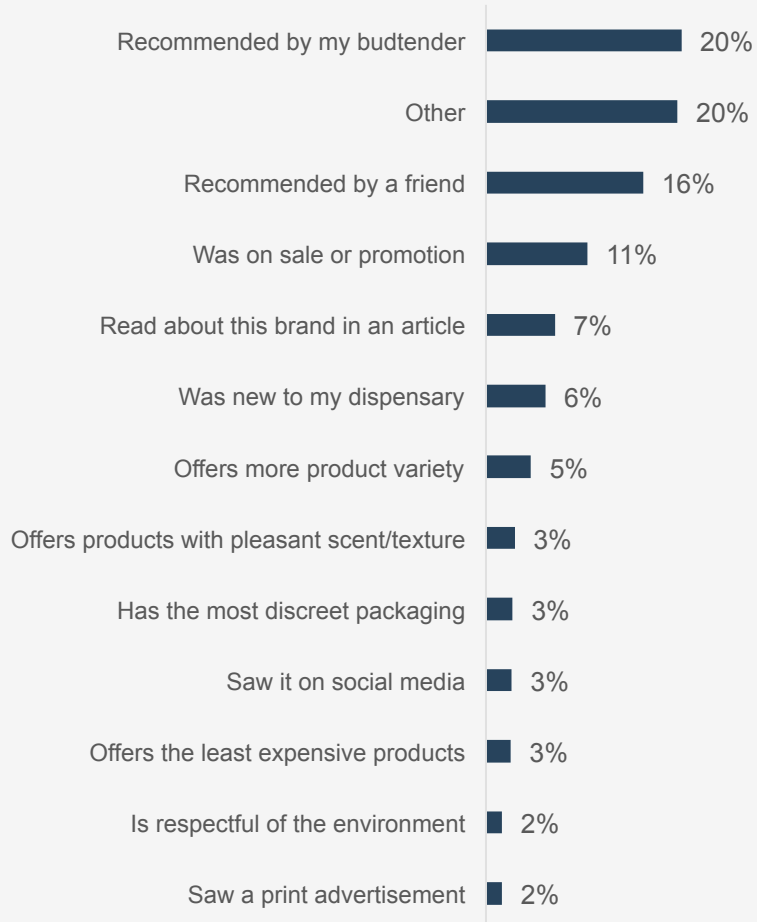


(Each column based to those who use product type)

# CBD Brand Choice Drivers

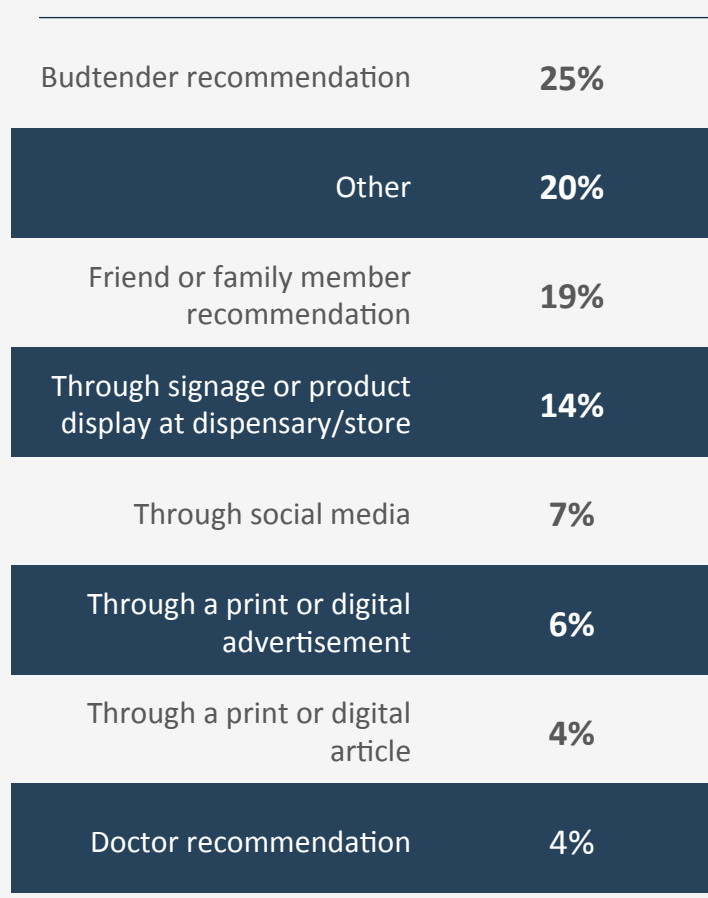
## Motivation for Trying Brand

(Among users likely to buy CBD products)



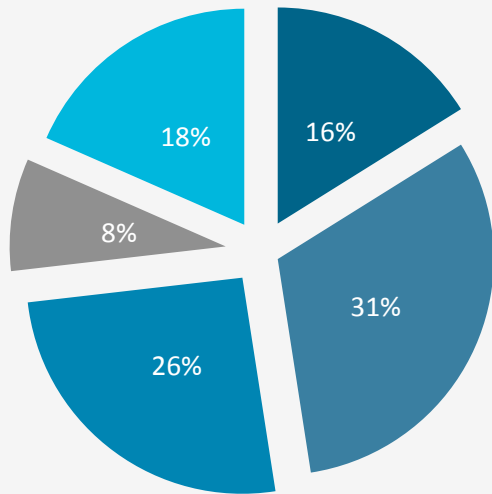
## Source of Brand Awareness

(Among users likely to buy CBD products)



# CBD Brand Loyalty

**Measuring Brand Loyalty**  
(Among those likely to buy CBD products)



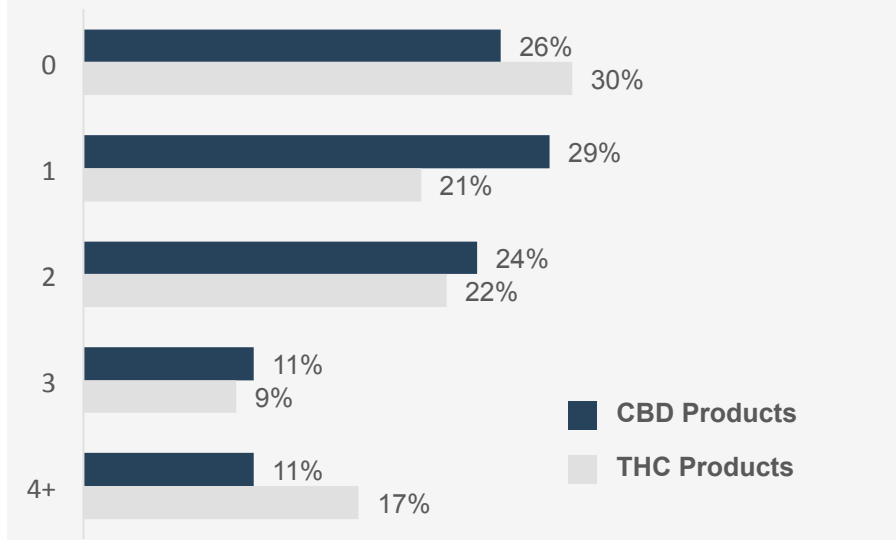
- Only purchase it
- Purchase it at least 75% of the time
- Purchase it at least half of the time
- Purchase it at least 25% of the time
- Purchase it only occasionally

**Top Reasons for Brand Loyalty**  
(Among those likely to buy CBD products)

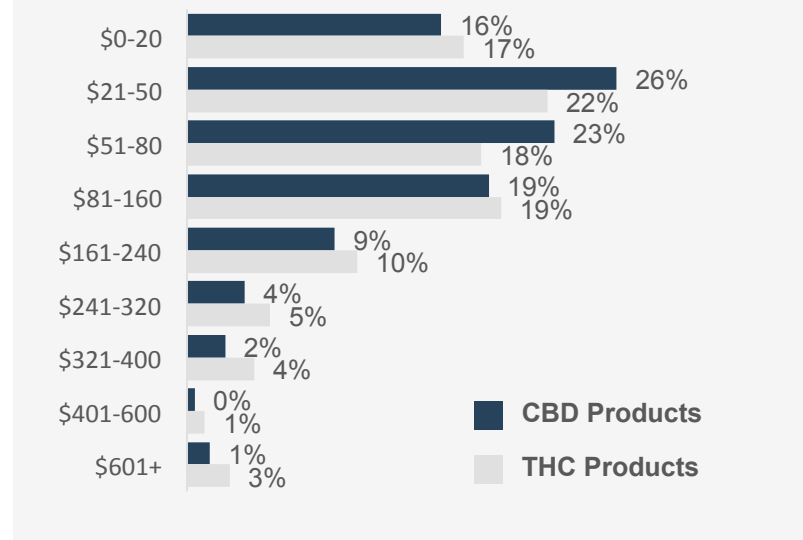


# Cannabis Purchase Dynamics - CBD vs THC-Dominant

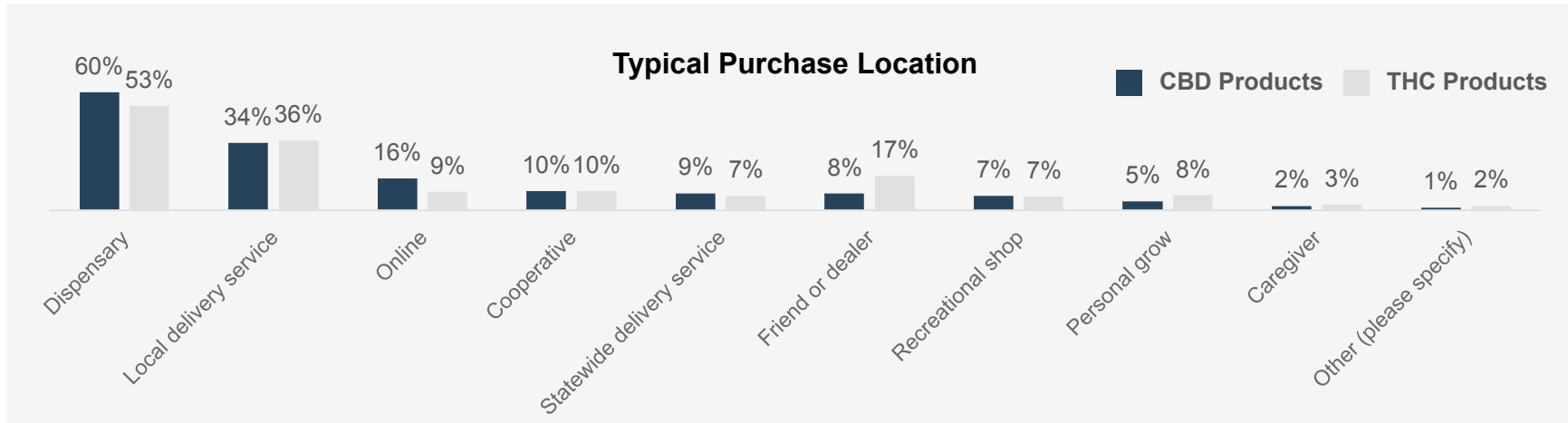
### # of Products Purchased in Past 2 Weeks



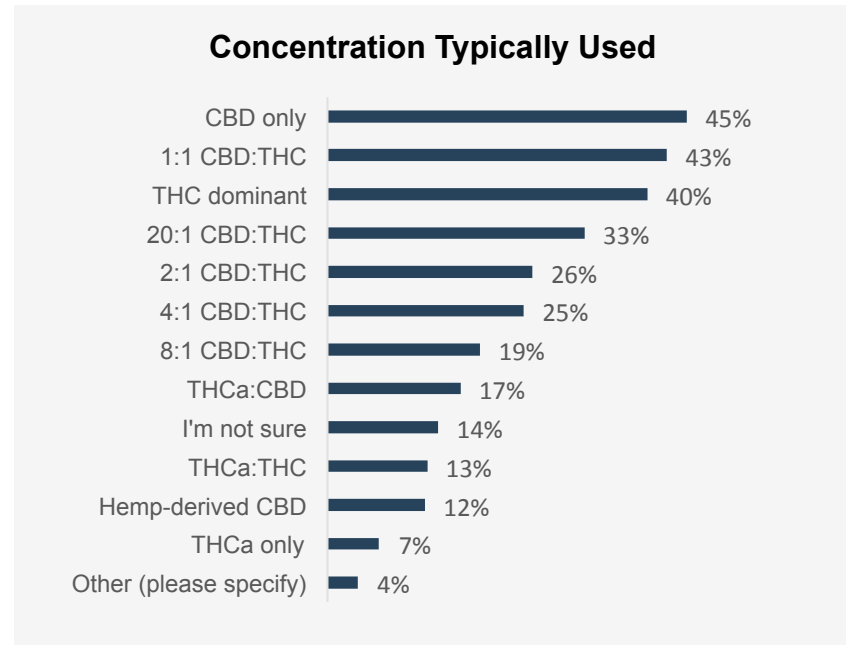
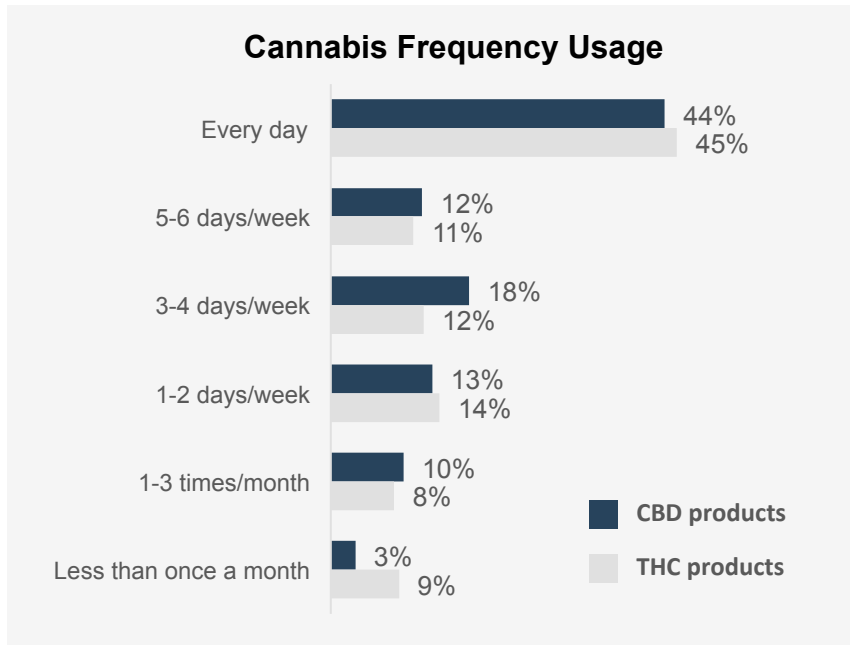
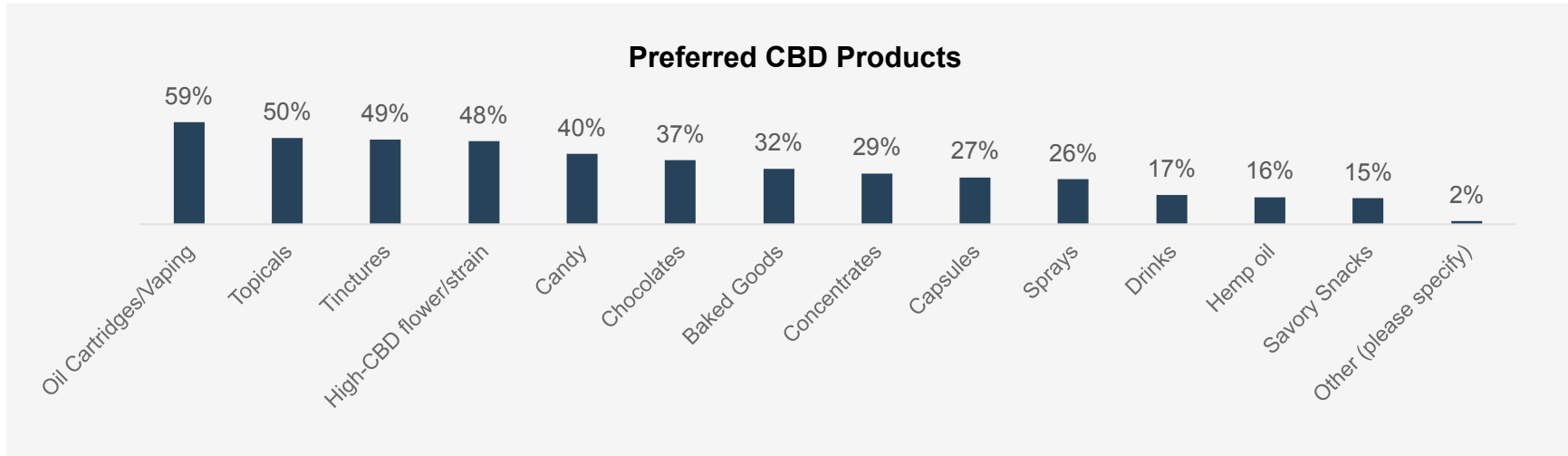
### Average Spending Per Month



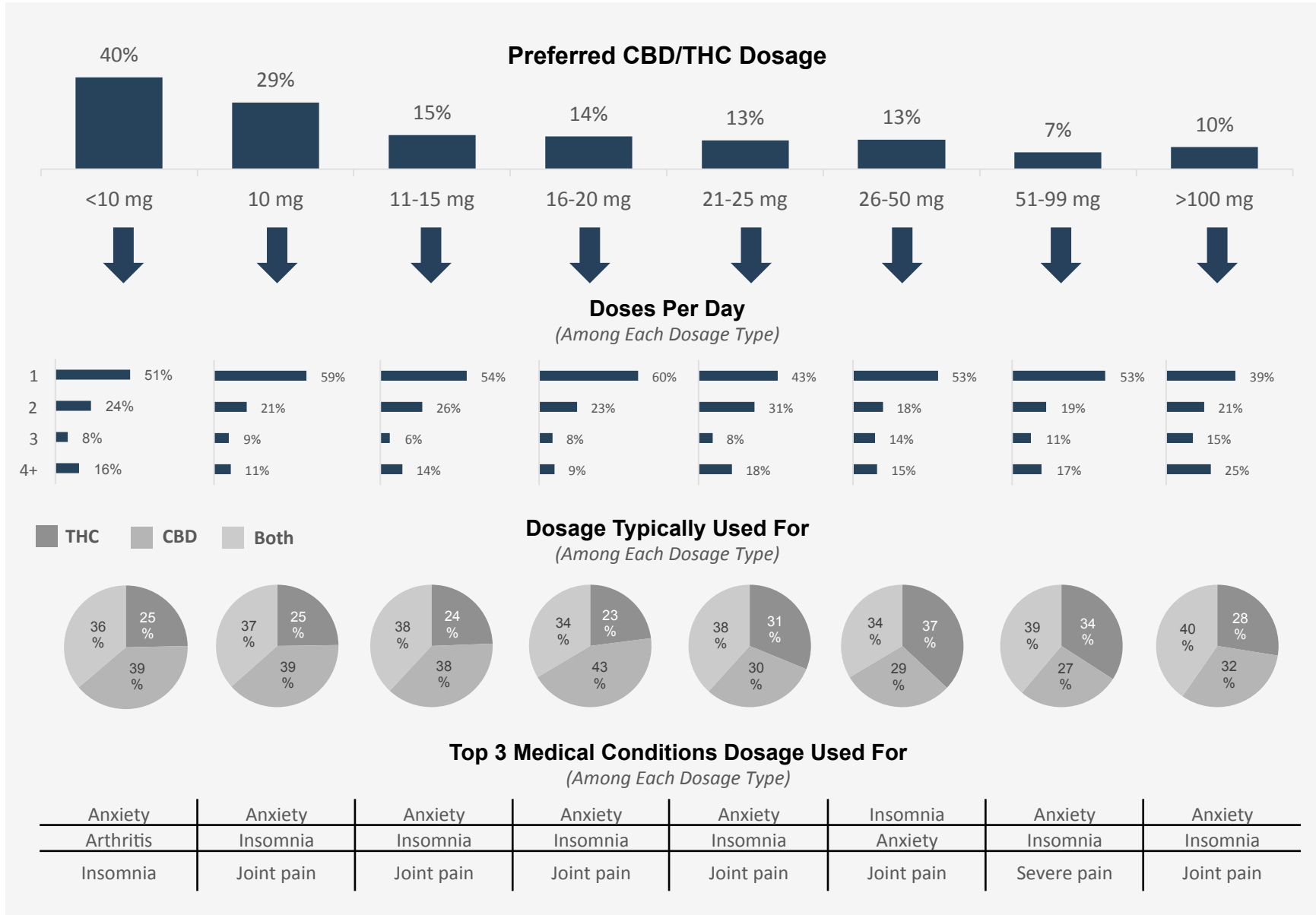
### Typical Purchase Location



# Cannabis Consumption Profile

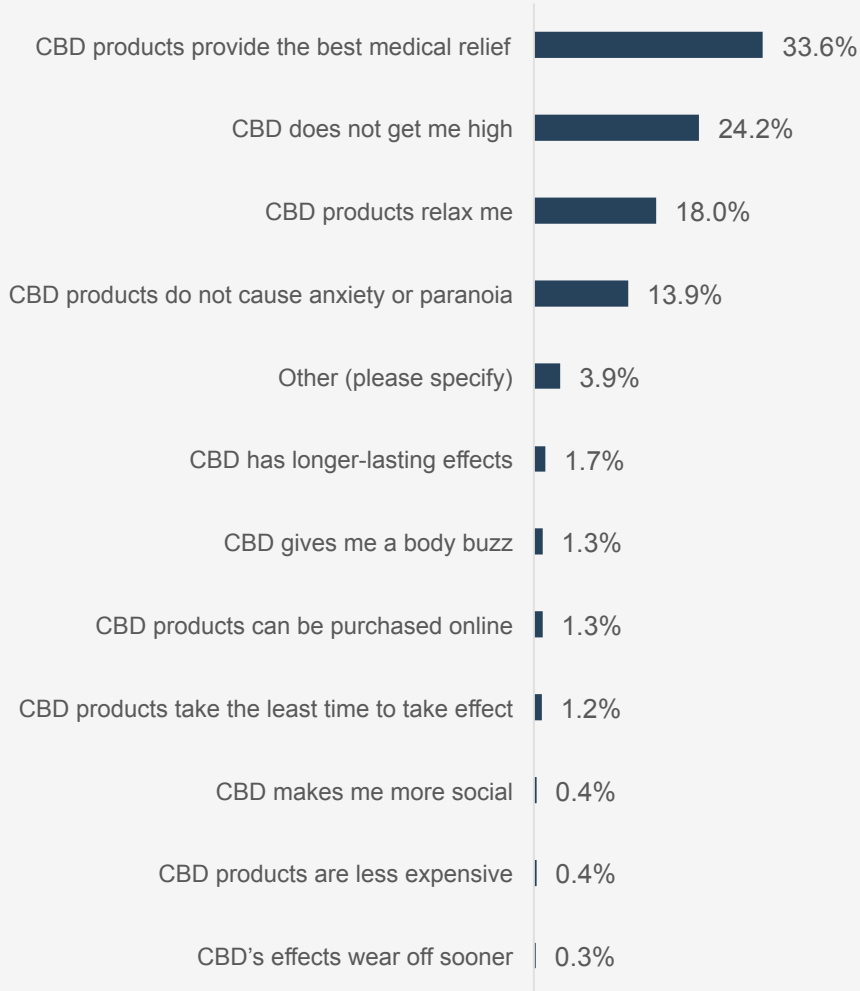


# CBD / THC Dosage Dynamics

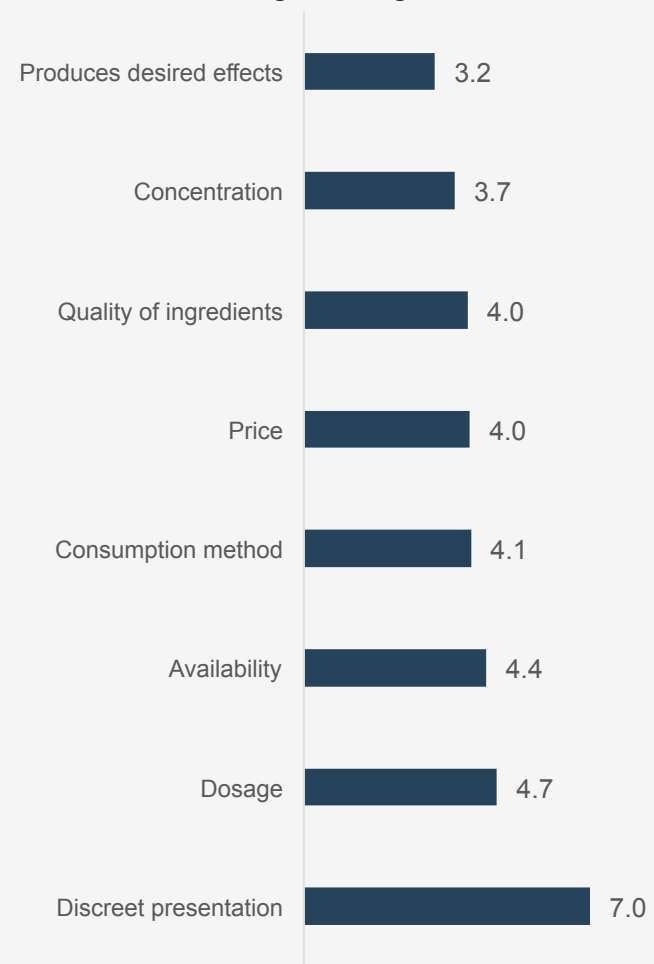


# Top CBD Features & Purchase Drivers

## Best CBD Features



## CBD Purchase Drivers Avg. Ranking, 1-8

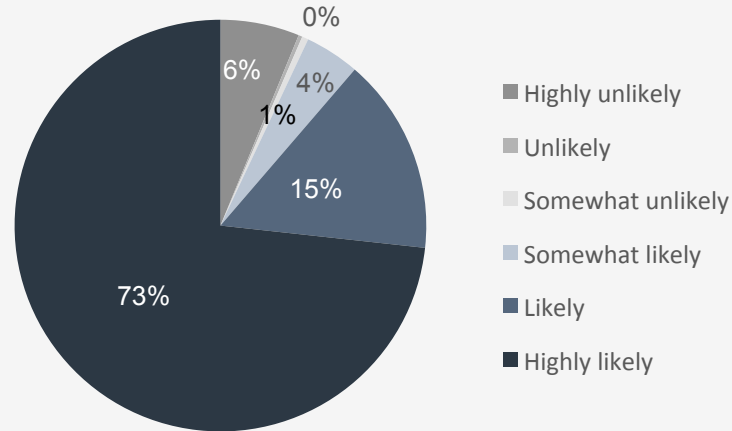




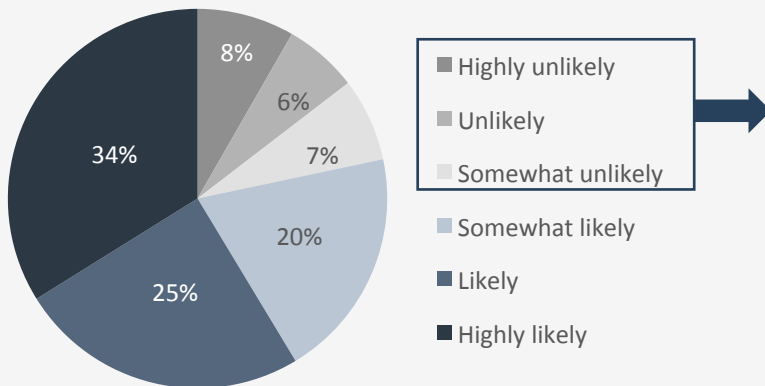
# Purchase Likelihood & Reasons for Unlikely

## Likelihood to Buy Marijuana-Derived CBD Products

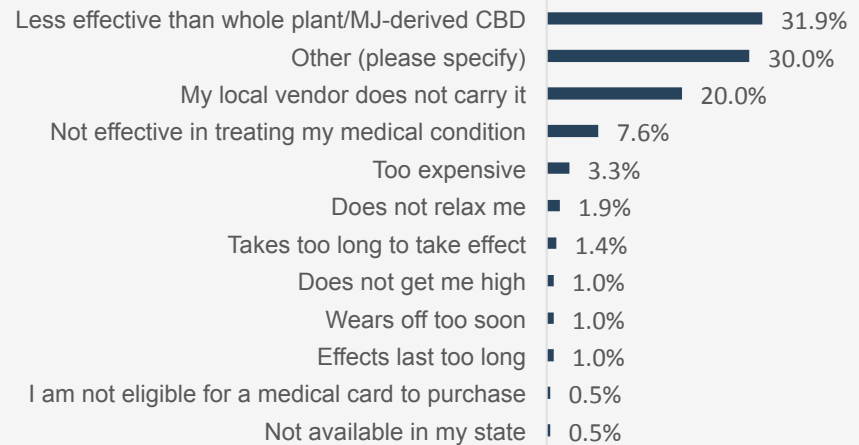
(including CBD-dominant and marijuana-derived CBD-only)



## Likelihood to Buy Hemp-Derived CBD Products

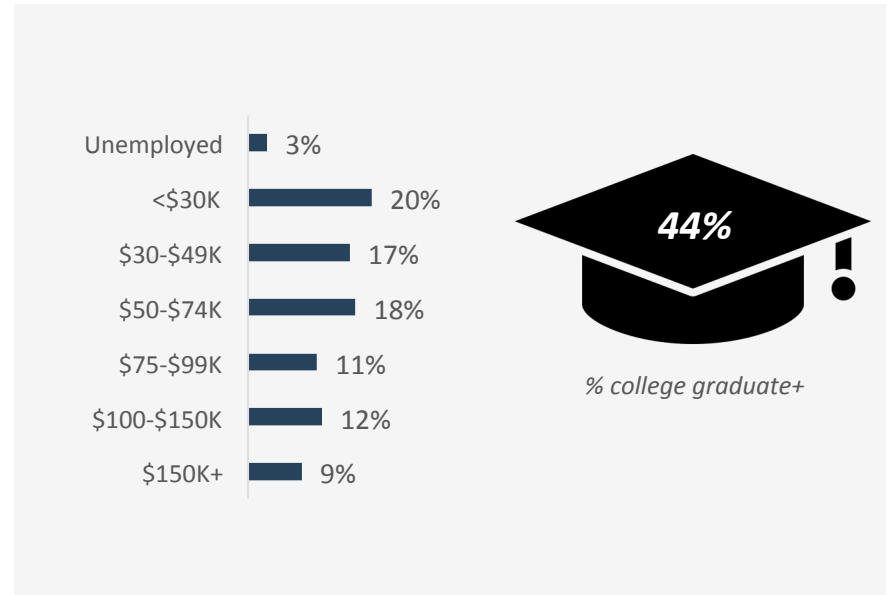
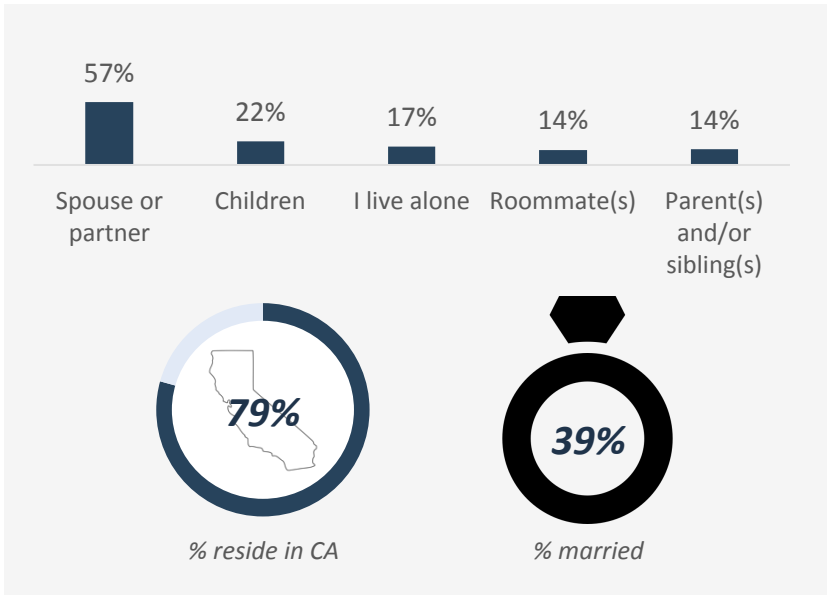
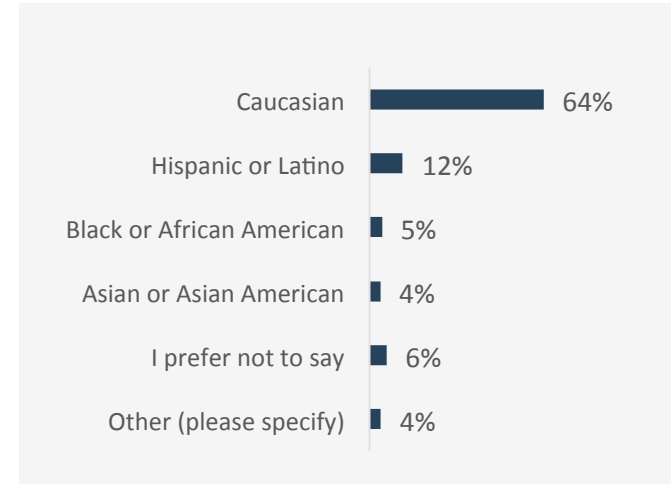
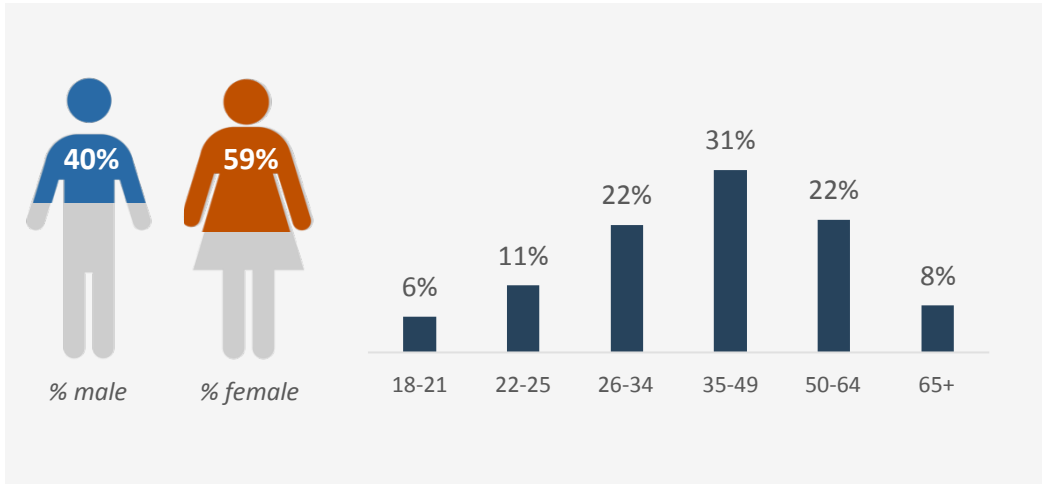


## Why Unlikely to Buy Hemp-Derived CBD Products



# APPENDIX D: HEMP-DERIVED CBD USERS

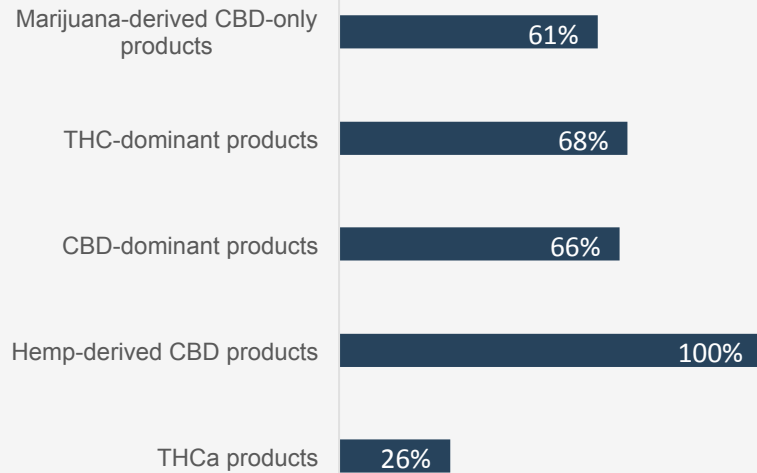
# Key Demographics Scorecard



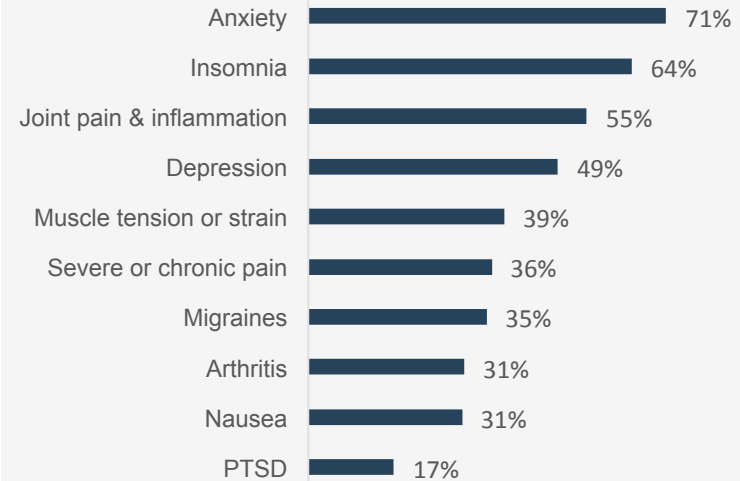
\*Ethnicities <4% not shown

# Cannabis Product Usage & Medical Conditions

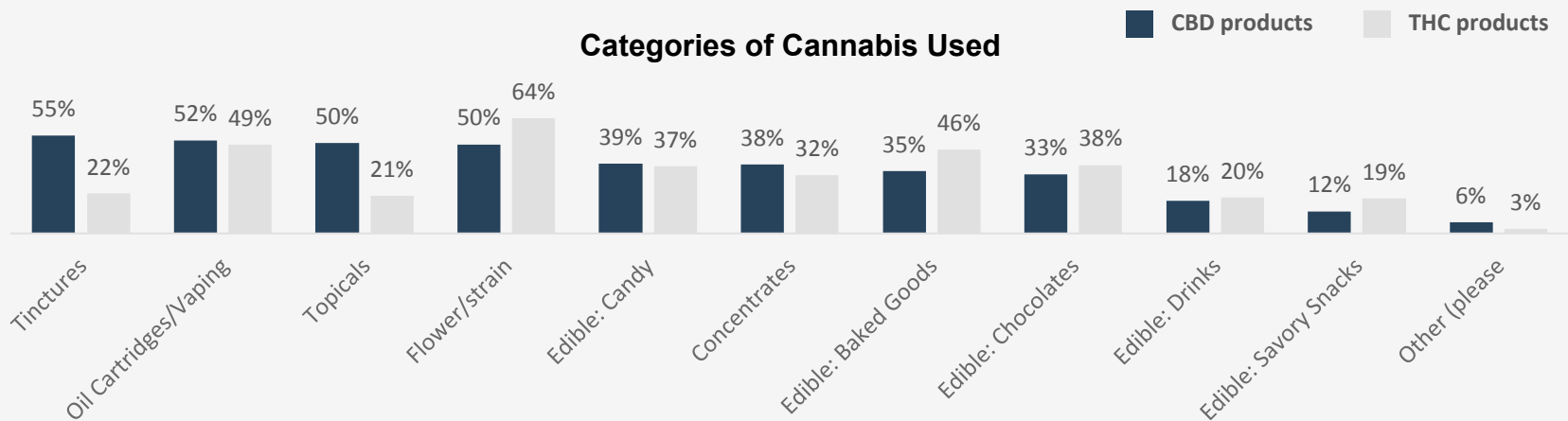
## Cannabis Products Regularly Used



## Top Ten Medical Conditions



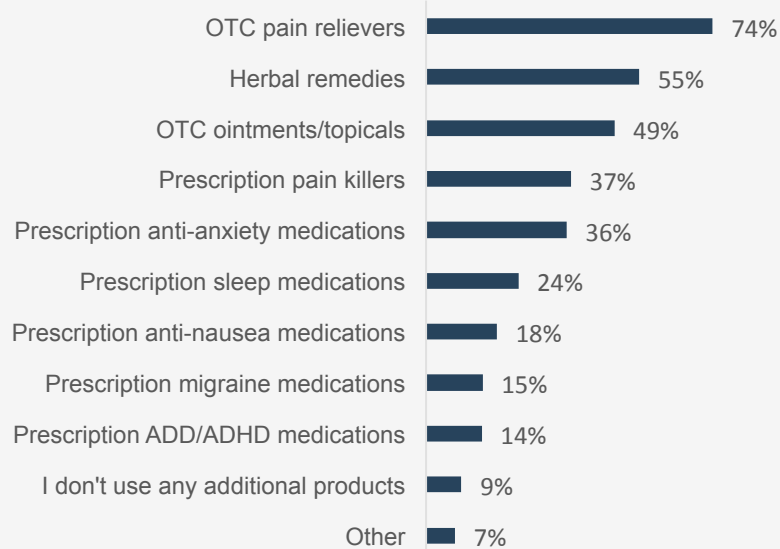
## Categories of Cannabis Used



# Cannabis vs. Other Products

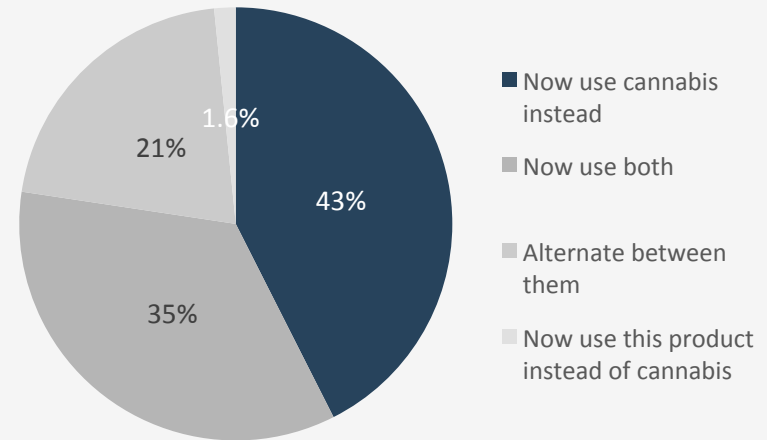
## Other Products Currently or Previously Used

(Among those w/ a medical condition)



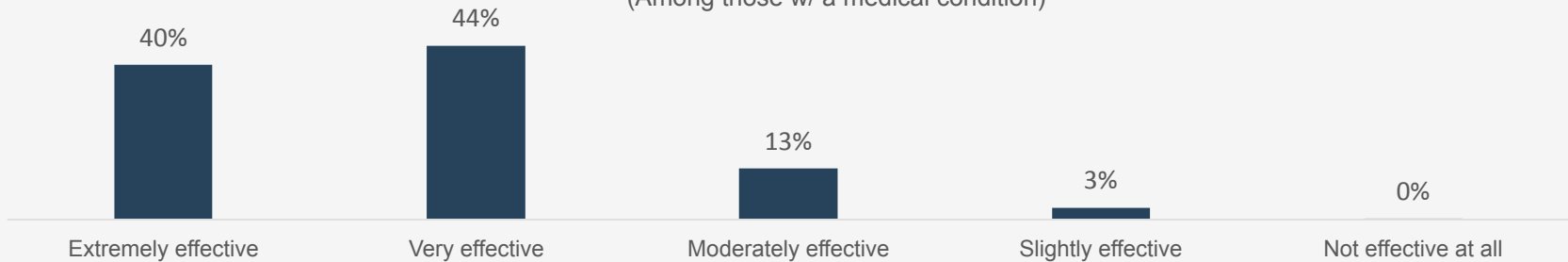
## Cannabis vs. Other Product Usage

(Among those who use another product)



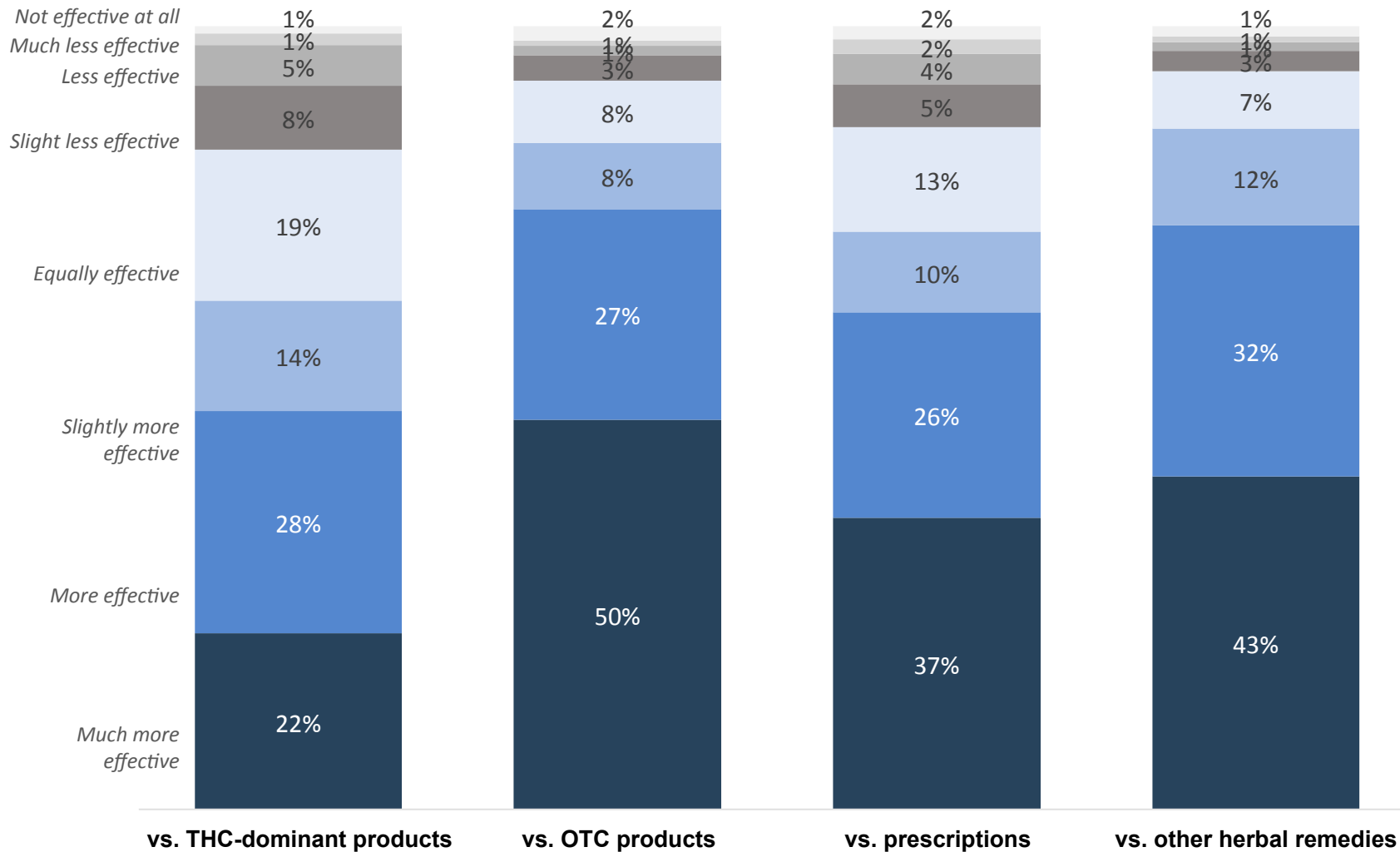
## Effectiveness of Cannabis Products

(Among those w/ a medical condition)



# Comparative Effectiveness of CBD Products

## Effectiveness at Relieving Medical Conditions

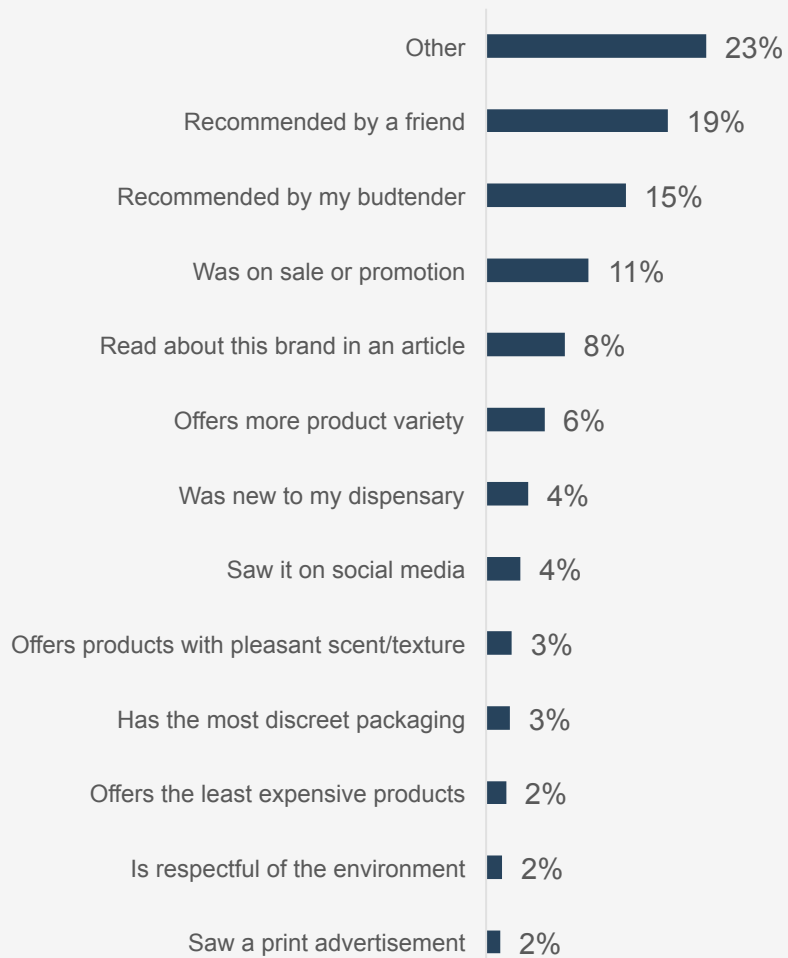


(Each column based to those who use product type)

# CBD Brand Choice Drivers

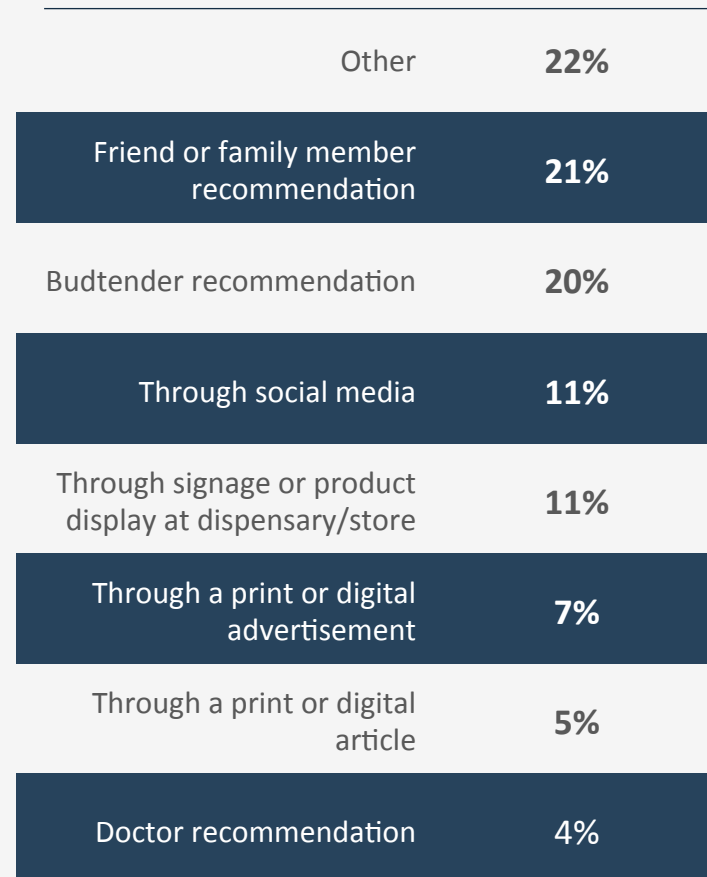
## Motivation for Trying Brand

(Among users likely to buy CBD products)



## Source of Brand Awareness

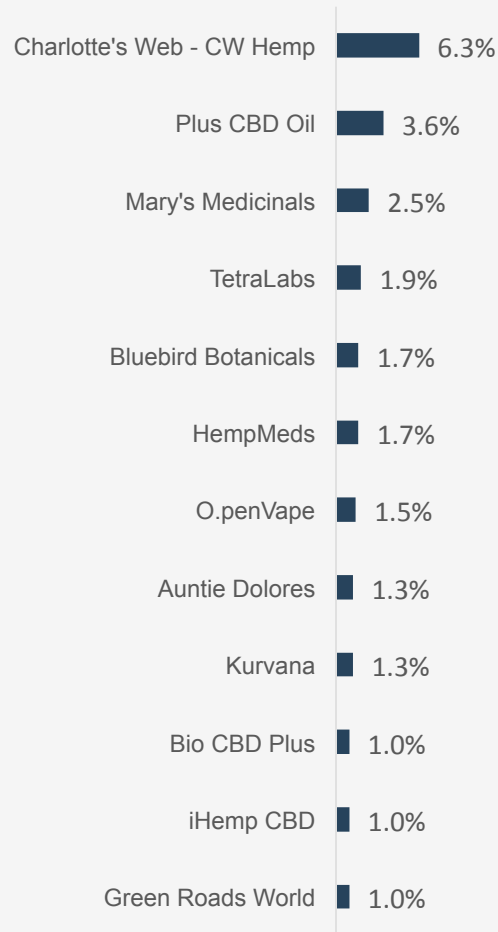
(Among users likely to buy CBD products)



# CBD Brand Loyalty

## Top Preferred Hemp-Derived CBD Brands

(Among users likely to buy CBD products)



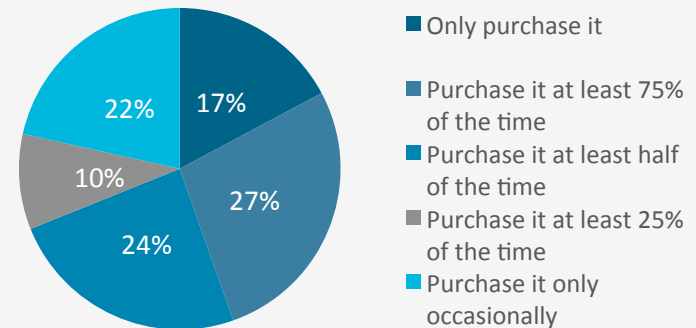
## Top Reasons Why Brand is Favorite

(Among users likely to buy CBD products)



## Brand Loyalty

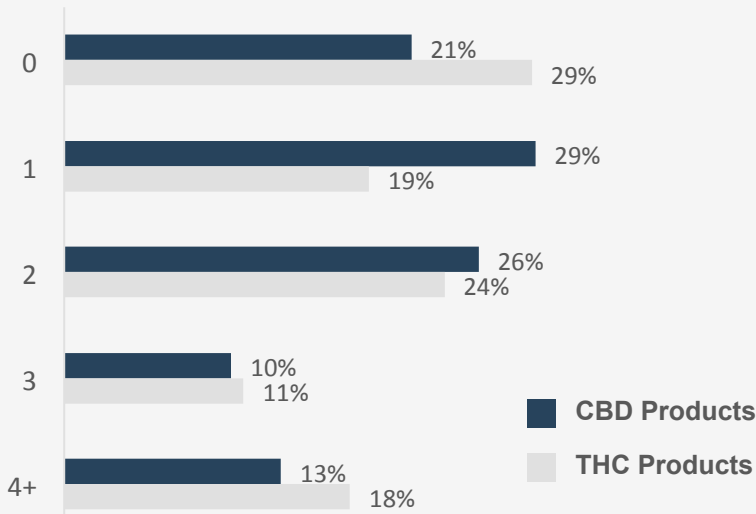
(Among users likely to buy CBD products)



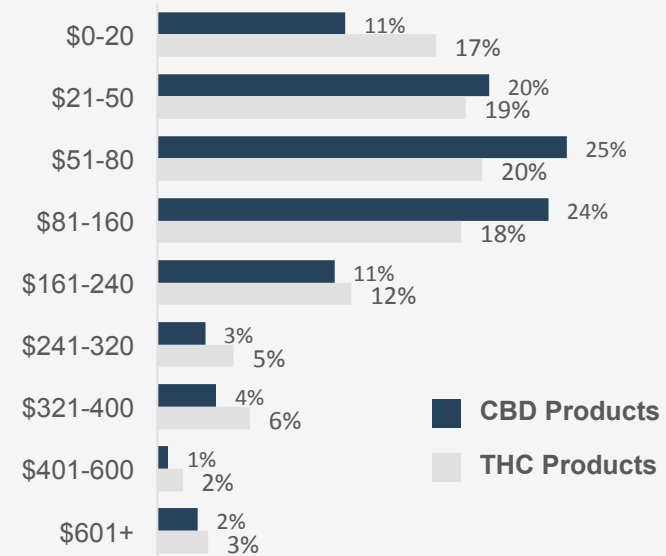


# Cannabis Purchase Dynamics - CBD vs THC-Dominant

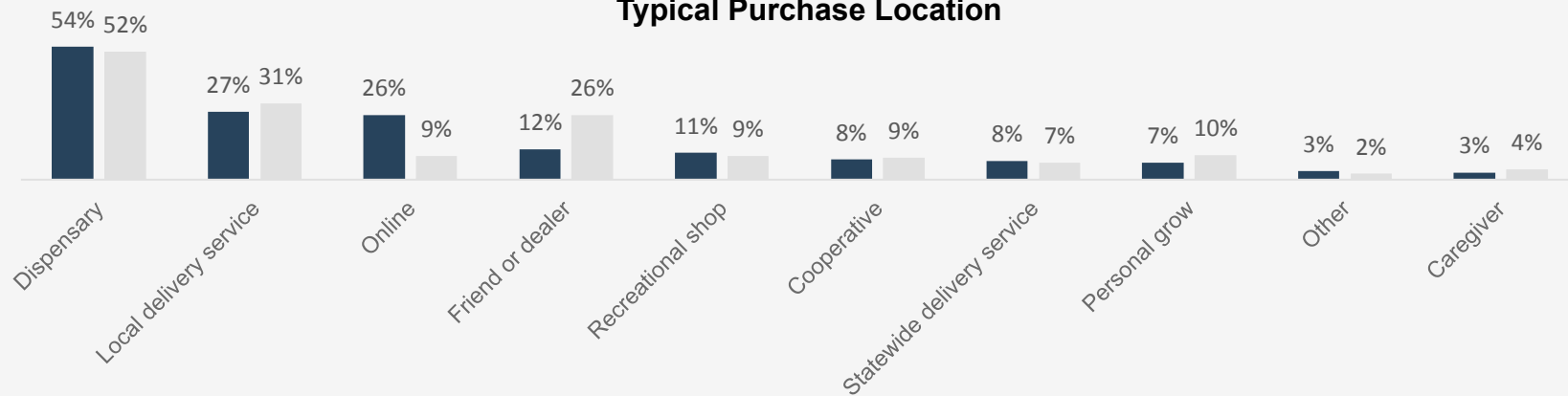
## # of Products Purchased in Past 2 Weeks



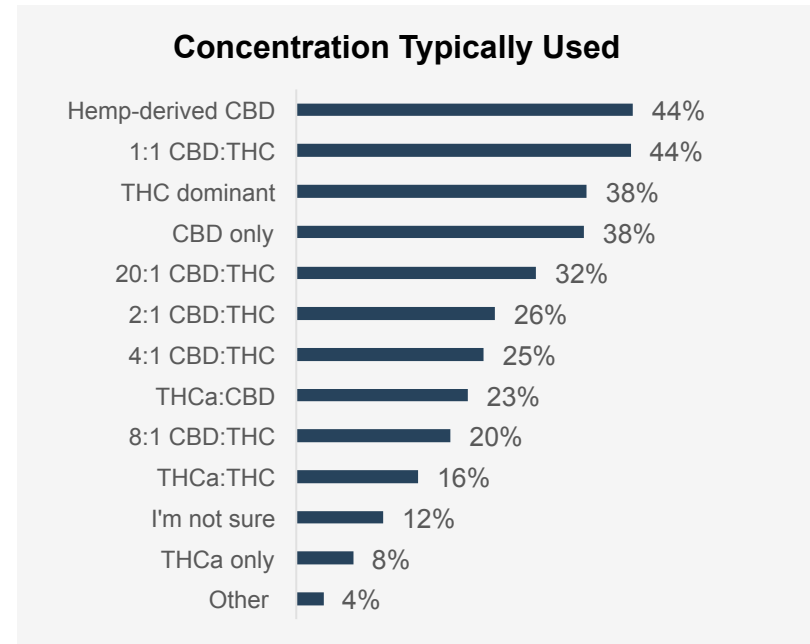
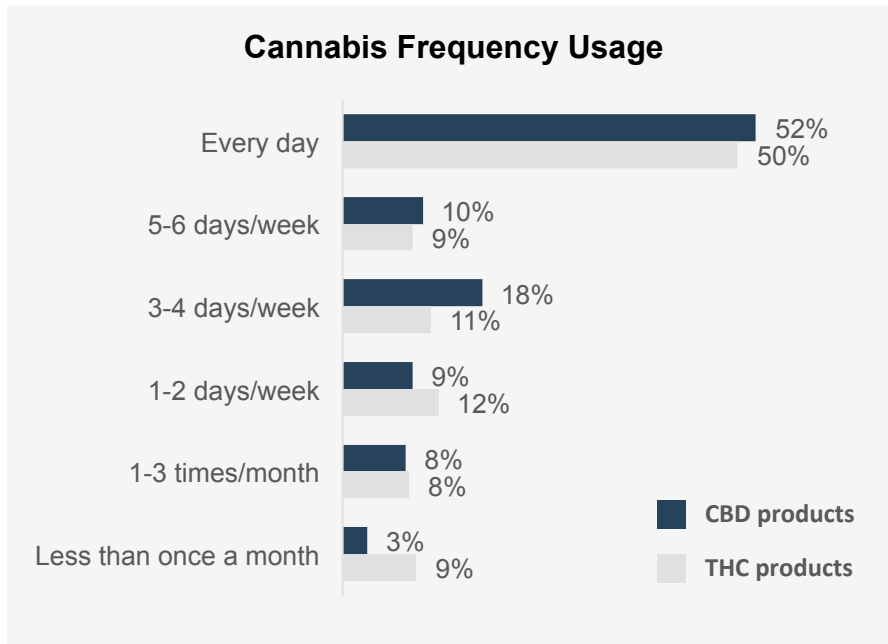
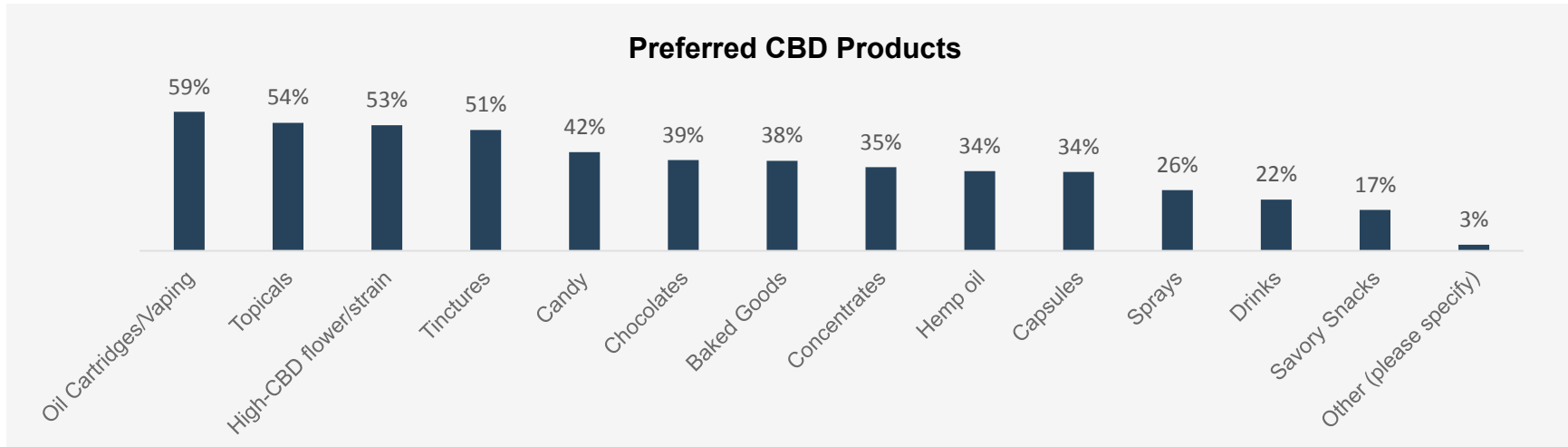
## Average Spending Per Month



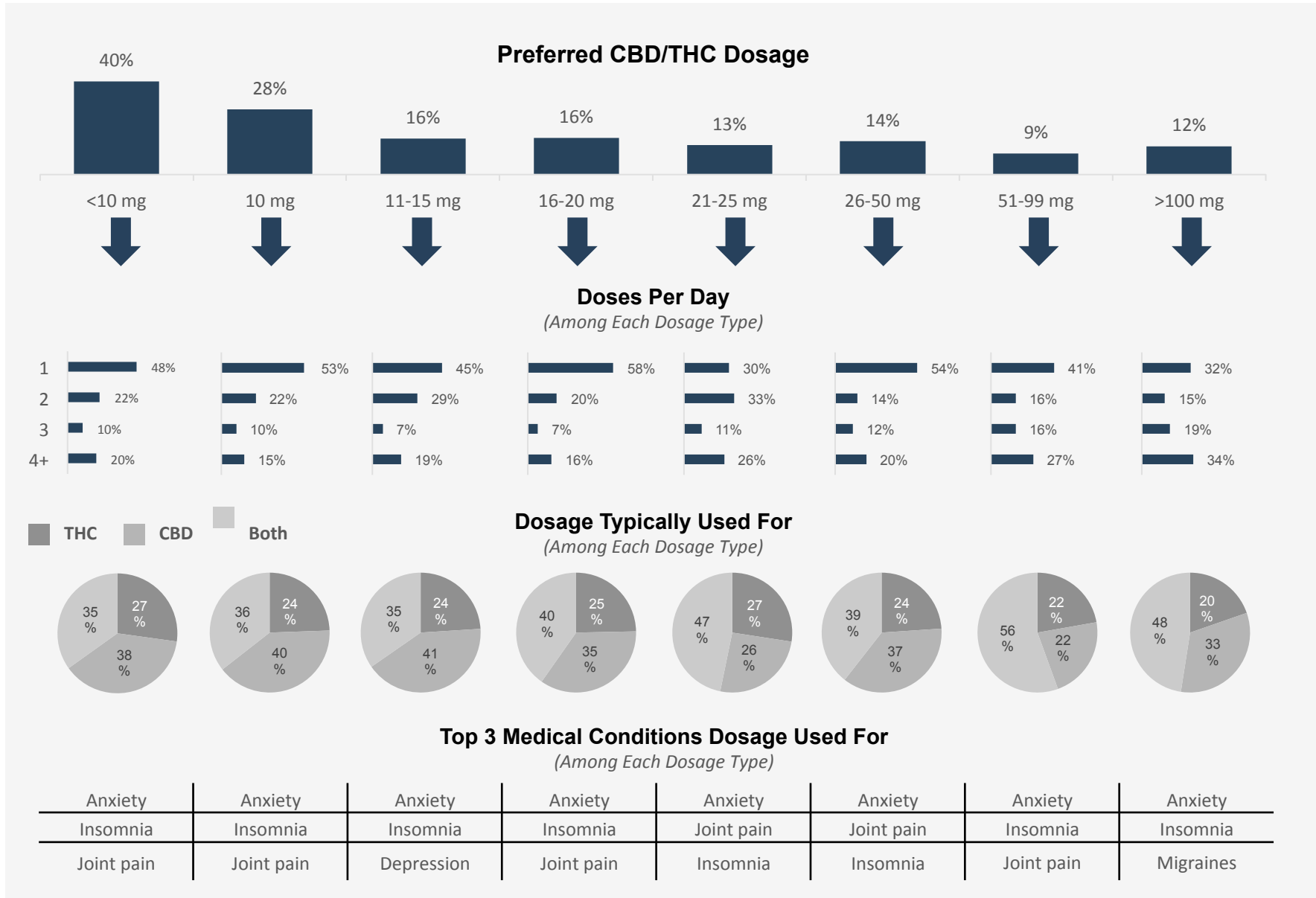
## Typical Purchase Location



# Cannabis Consumption Profile

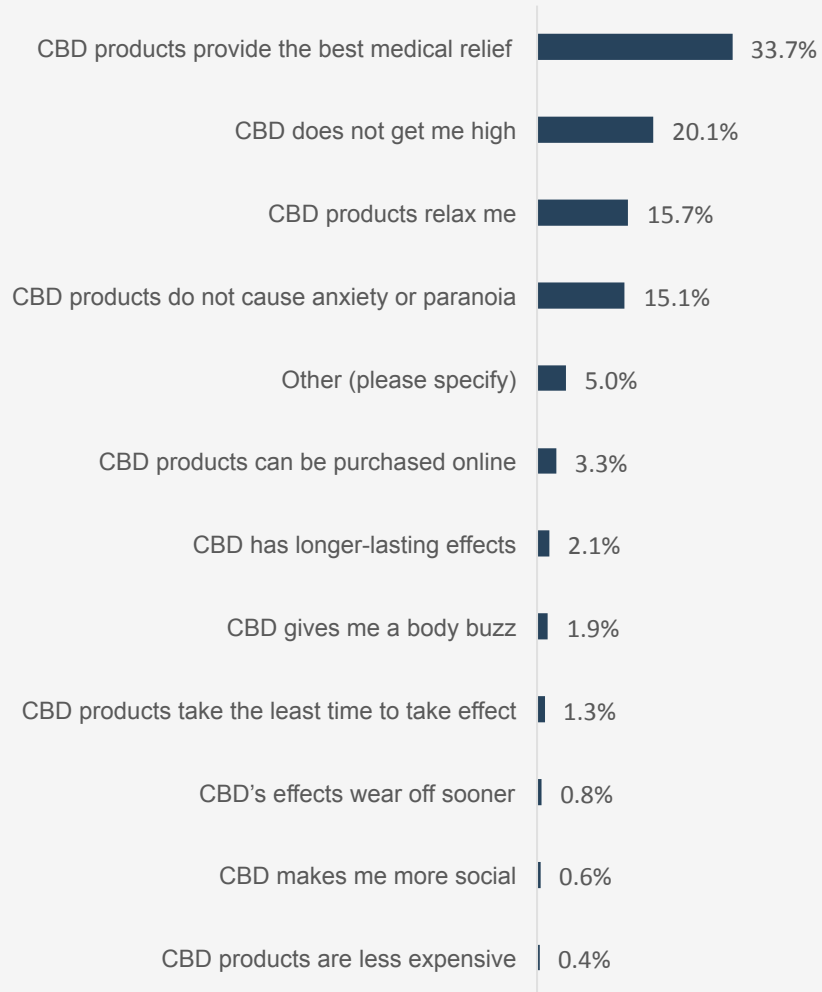


# CBD / THC Dosage Dynamics

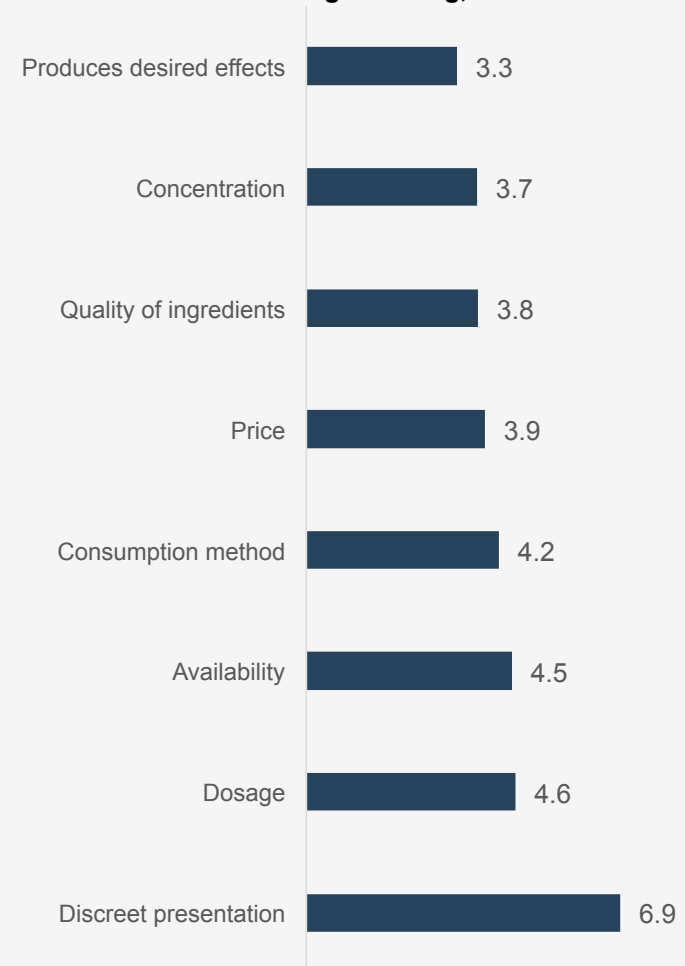


# Top CBD Features & Purchase Drivers

## Best CBD Features



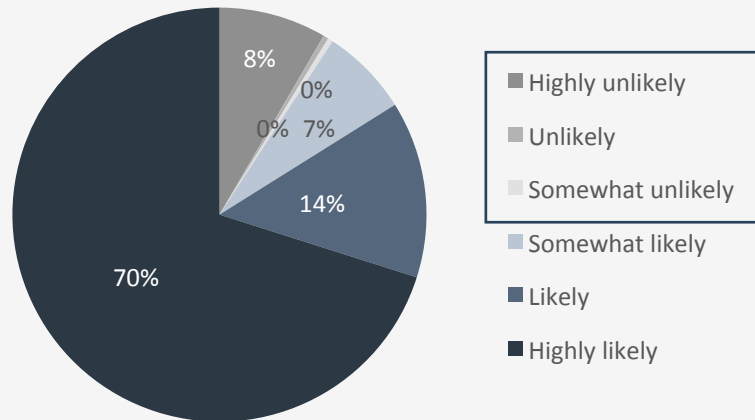
## CBD Purchase Drivers Avg. Ranking, 1-8



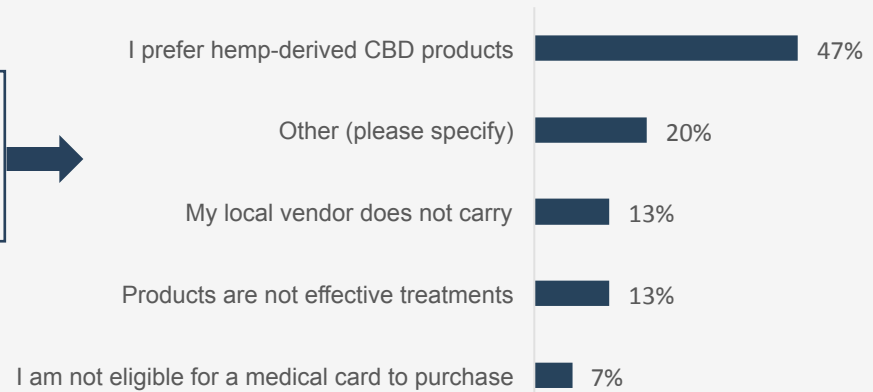
# Purchase Likelihood & Reasons for Unlikely

## Likelihood to Buy Marijuana-Derived CBD

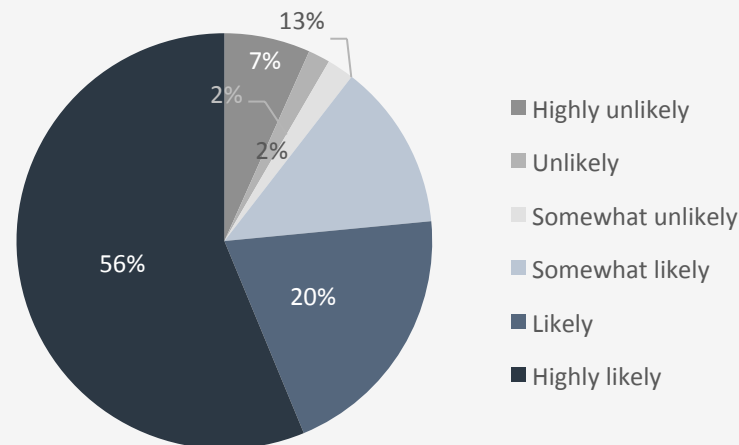
(including CBD-dominant and marijuana-derived CBD-only)



## Why Unlikely to Buy Marijuana-Derived CBD

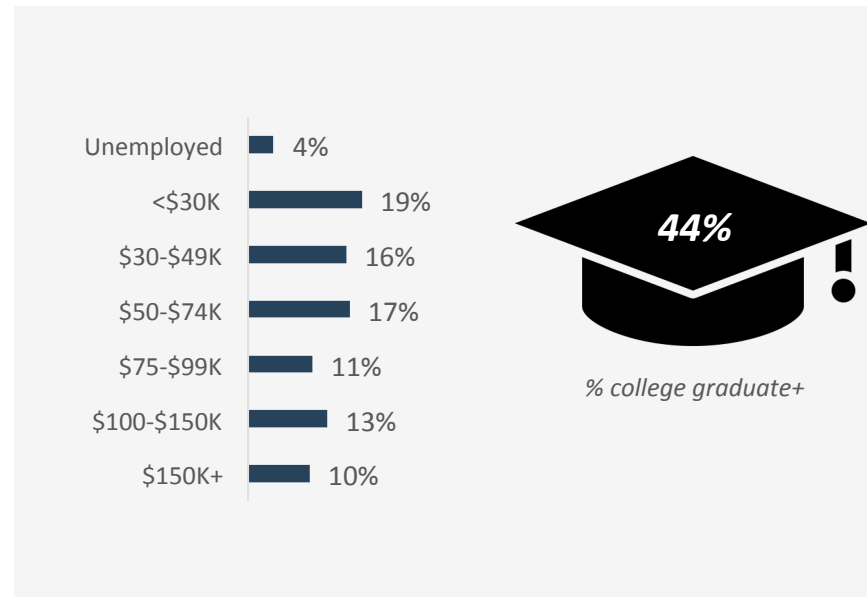
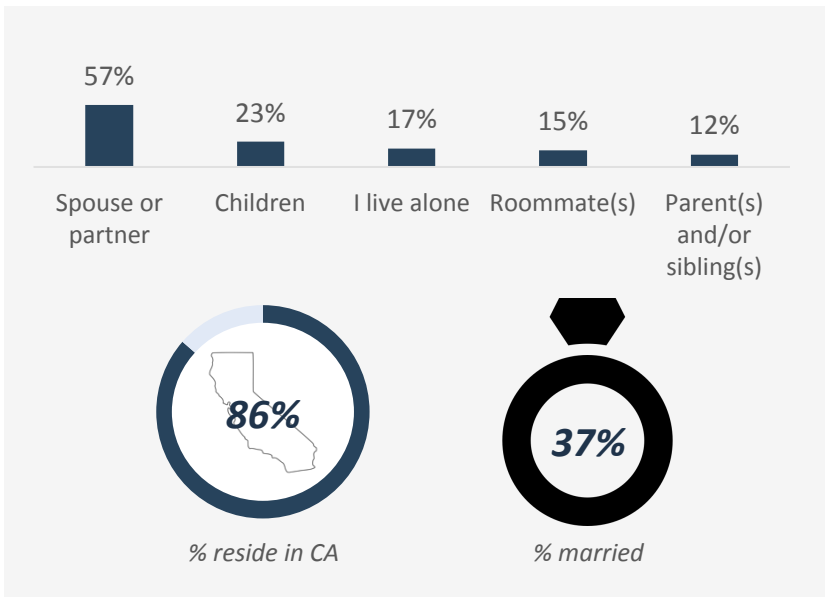
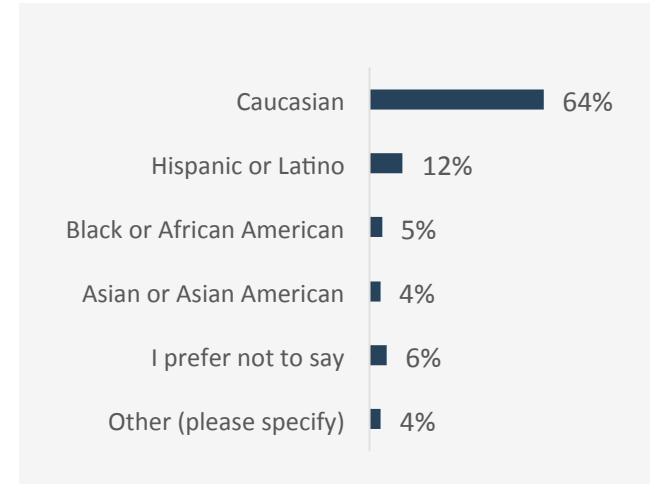
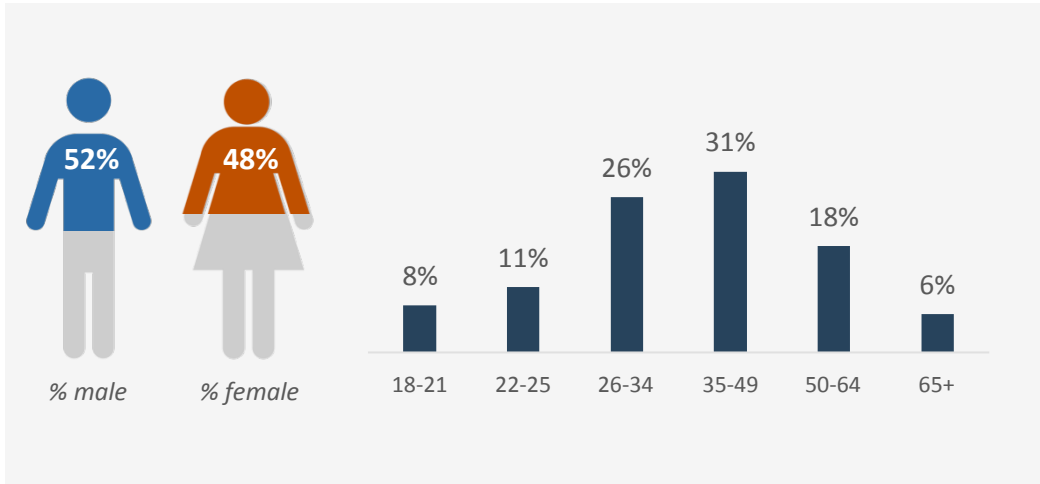


## Likelihood to Buy Hemp-Derived CBD Products



# APPENDIX E: THC-DOMINANT USERS

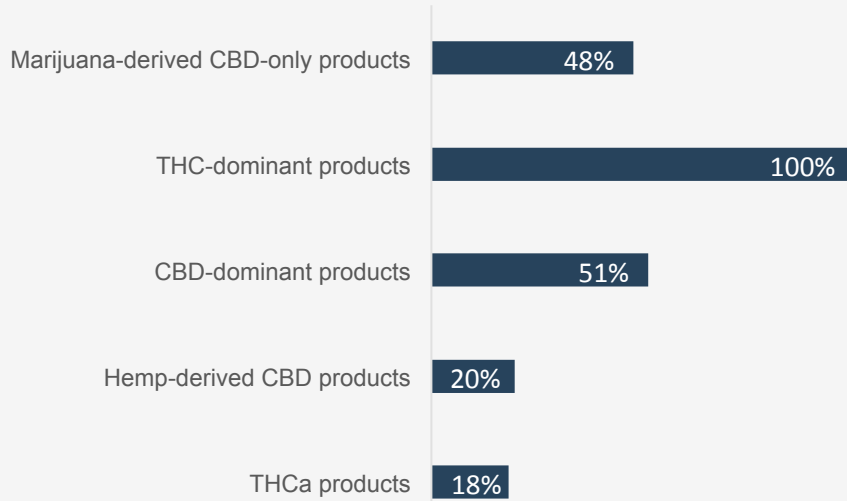
# Key Demographics Scorecard



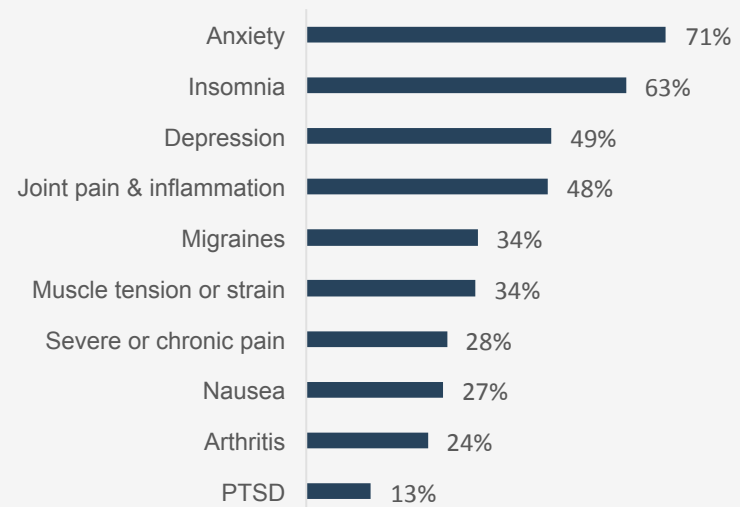
\*Ethnicities <4% not shown

# Cannabis Product Usage & Medical Conditions

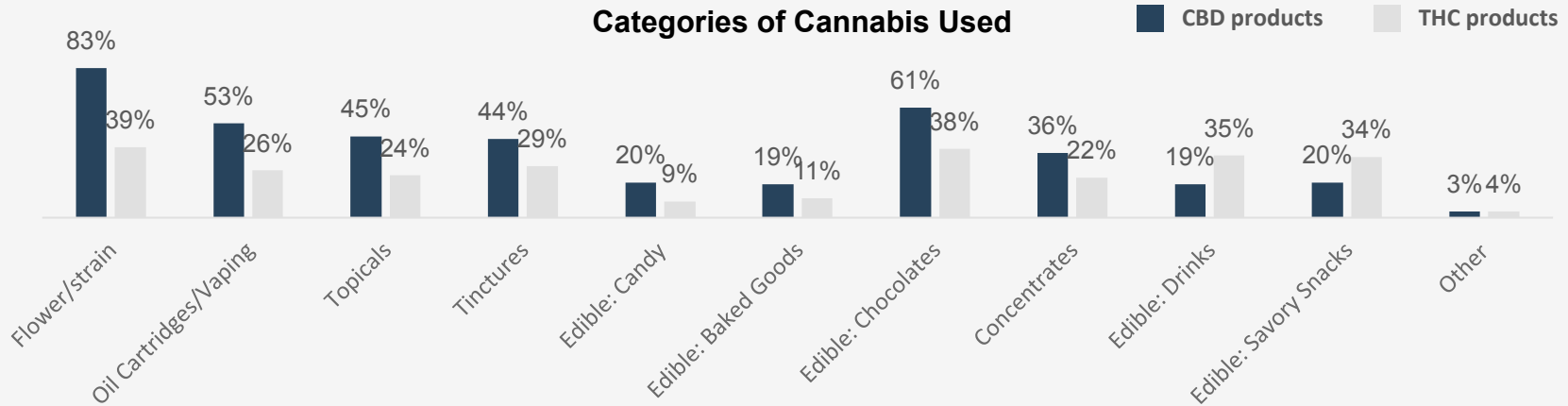
## Cannabis Products Regularly Used



## Top Ten Medical Conditions



## Categories of Cannabis Used

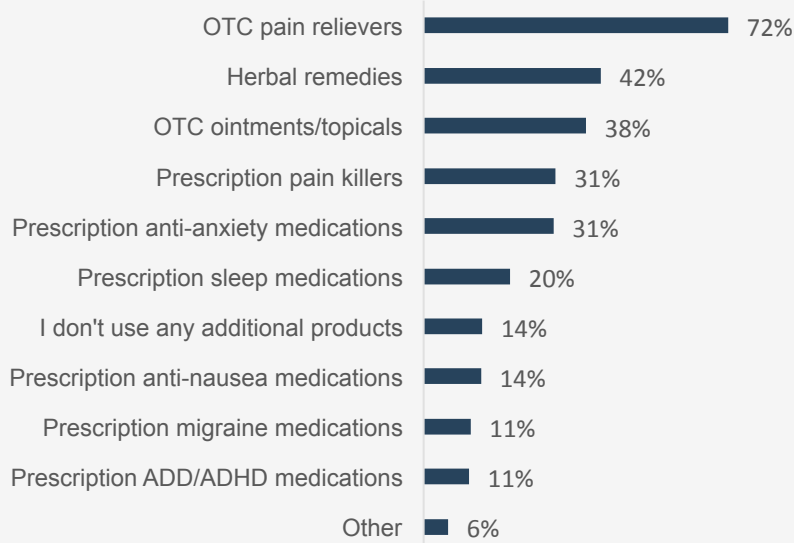




# Cannabis vs. Other Products

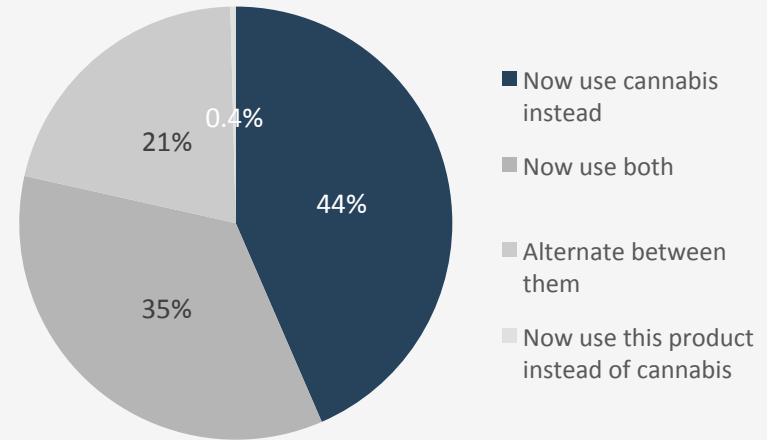
## Other Products Currently or Previously Used

(Among those w/ a medical condition)



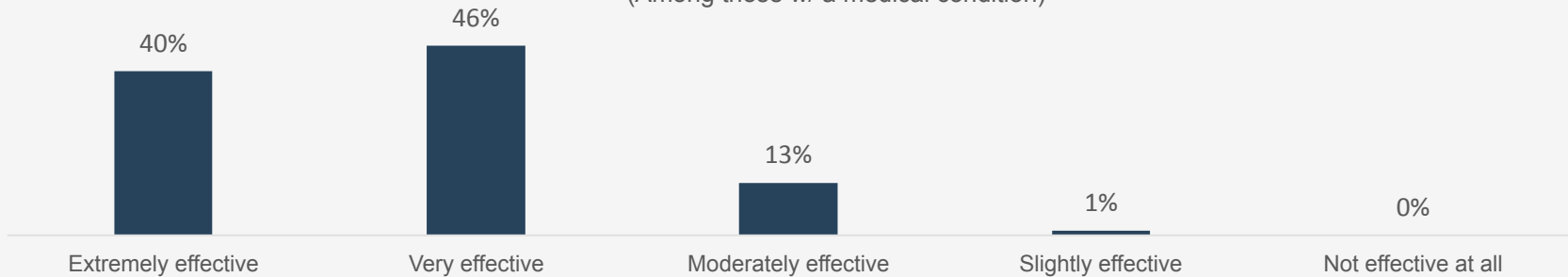
## Cannabis vs. Other Product Usage

(Among those who use another product)



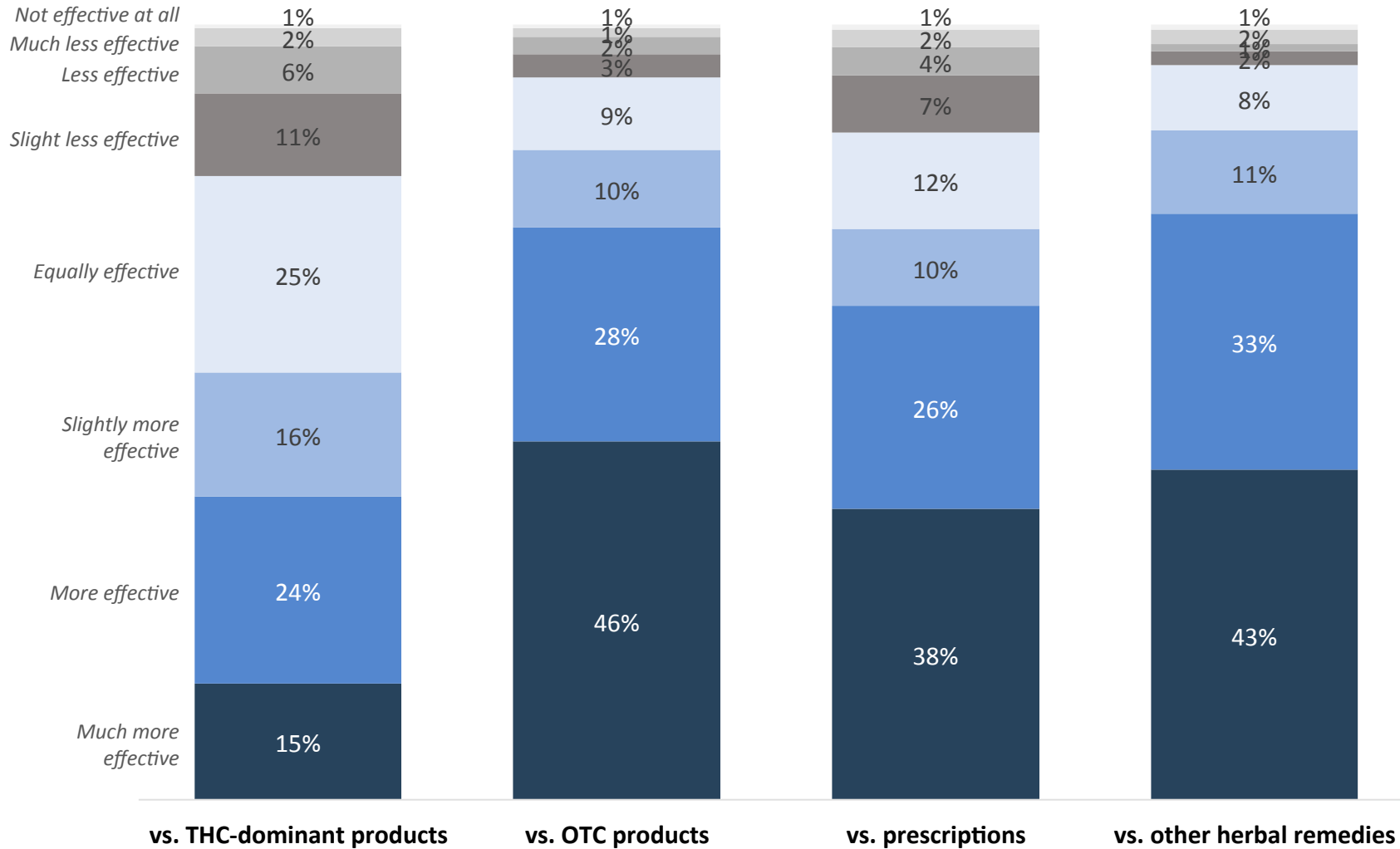
## Effectiveness of Cannabis Products

(Among those w/ a medical condition)



# Comparative Effectiveness of CBD Products

## Effectiveness at Relieving Medical Conditions

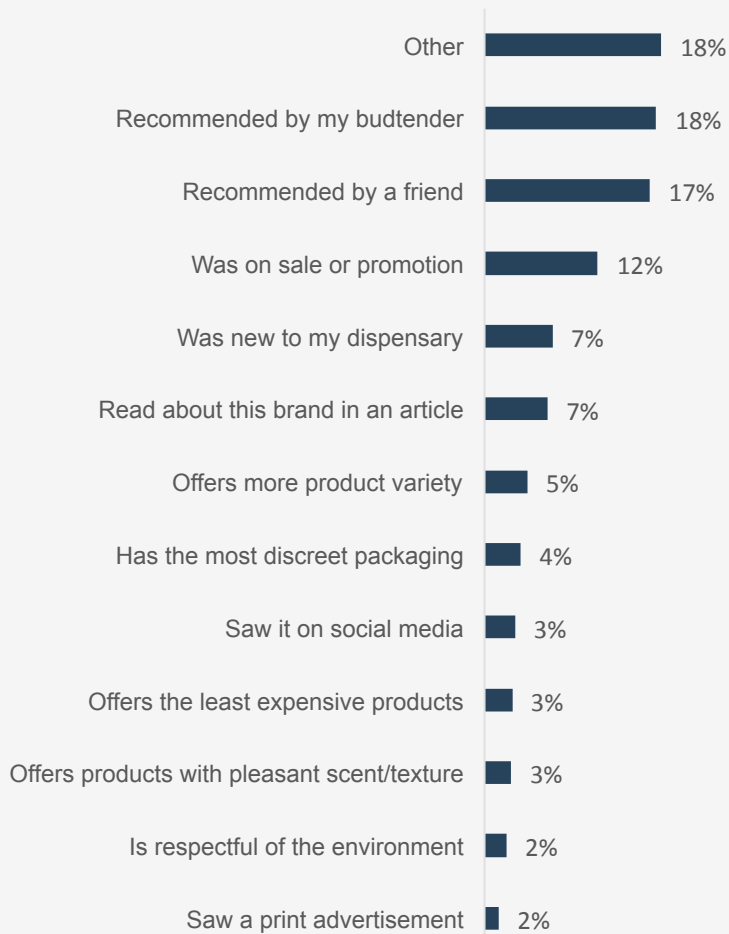


(Each column based to those who use product type)

# CBD Brand Choice Drivers

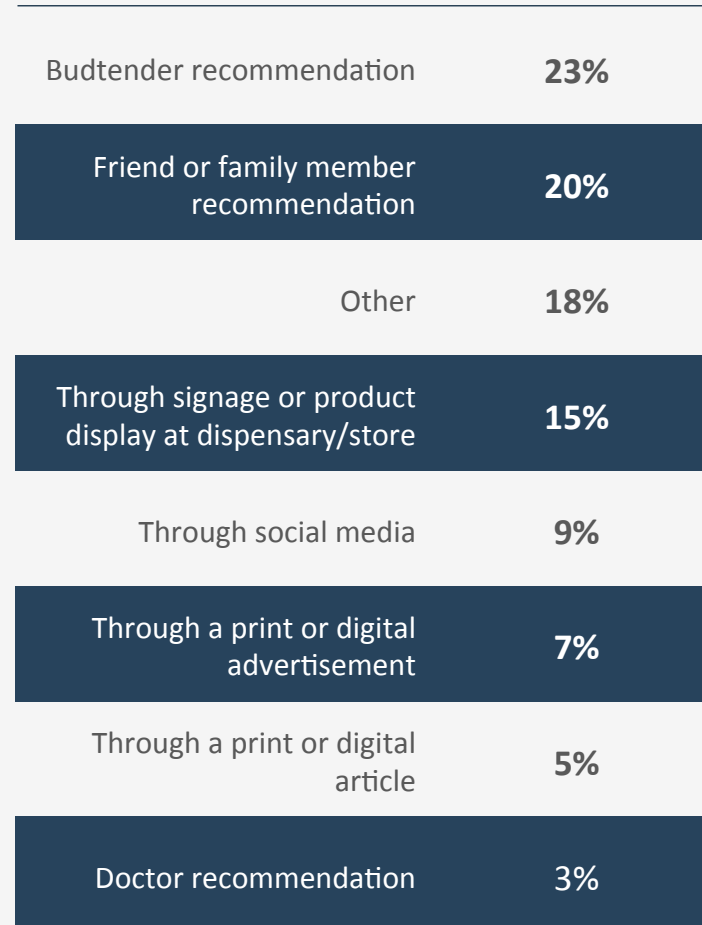
## Motivation for Trying Brand

(Among users likely to buy CBD products)



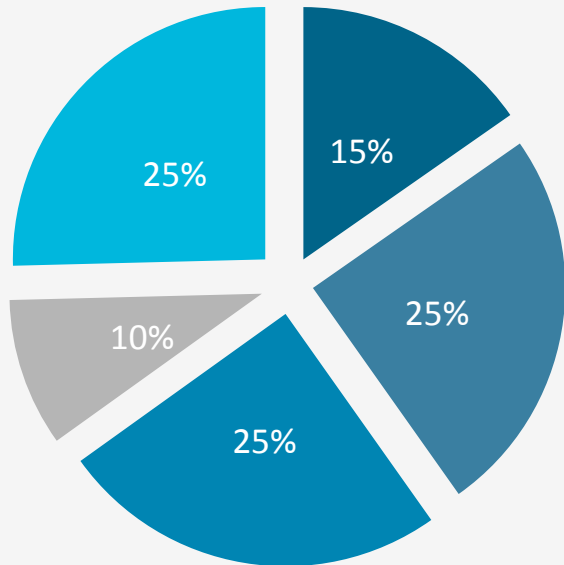
## Source of Brand Awareness

(Among users likely to buy CBD products)



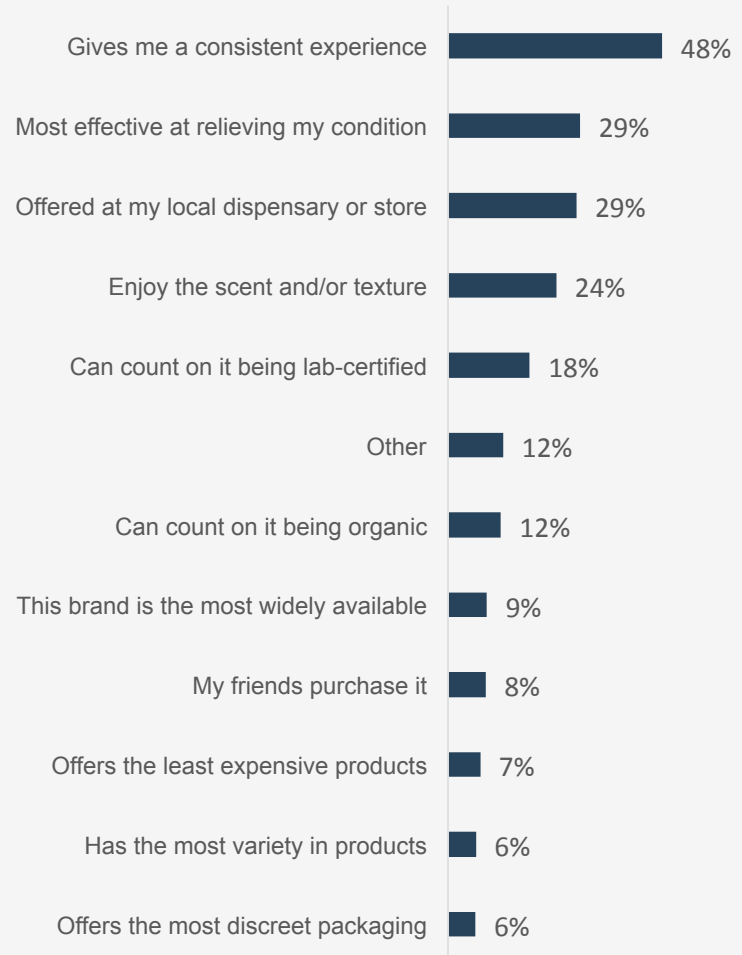
# CBD Brand Loyalty

**Measuring Brand Loyalty**  
(Among those likely to buy CBD products)



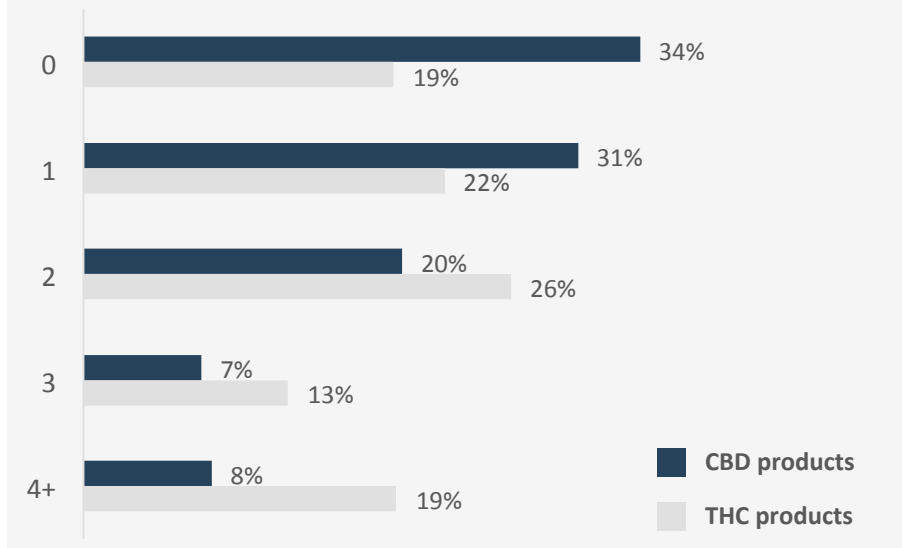
- Only purchase it
- Purchase it at least 75% of the time
- Purchase it at least half of the time
- Purchase it at least 25% of the time
- Purchase it only occasionally

**Top Reasons for Brand Loyalty**  
(Among those likely to buy CBD products)

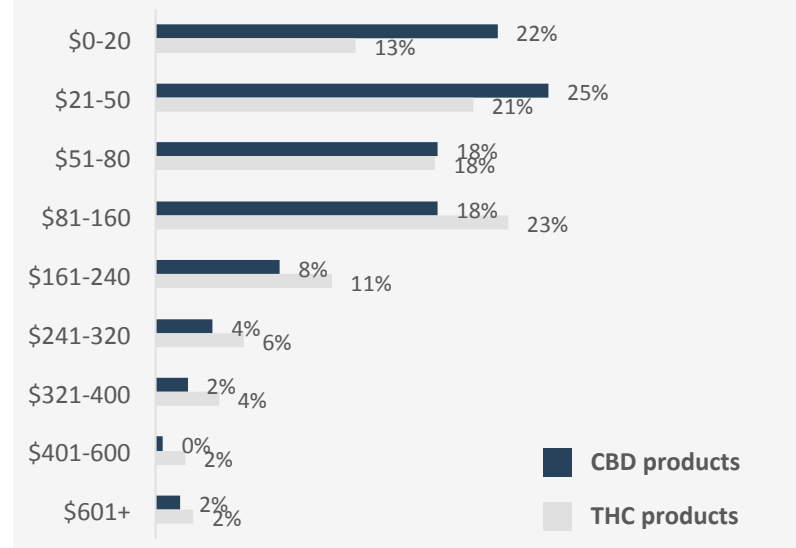


# Cannabis Purchase Dynamics - CBD vs THC-Dominant

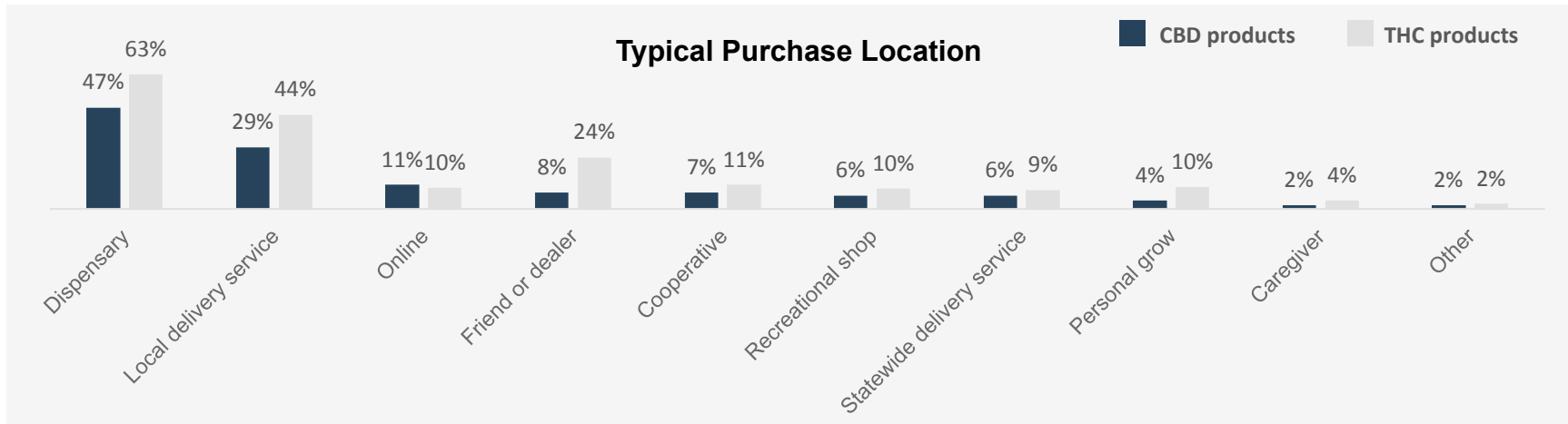
### # of Products Purchased in Past 2 Weeks



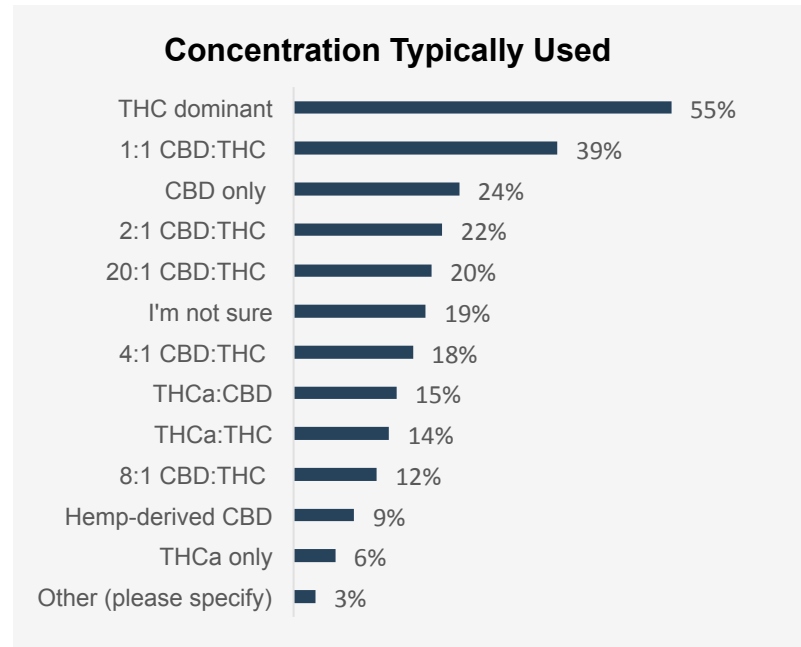
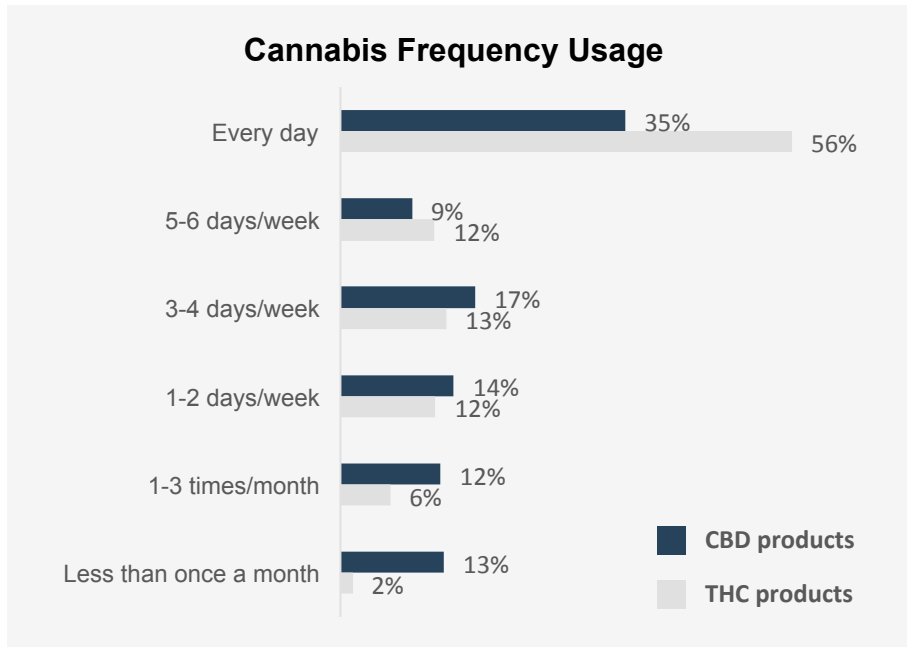
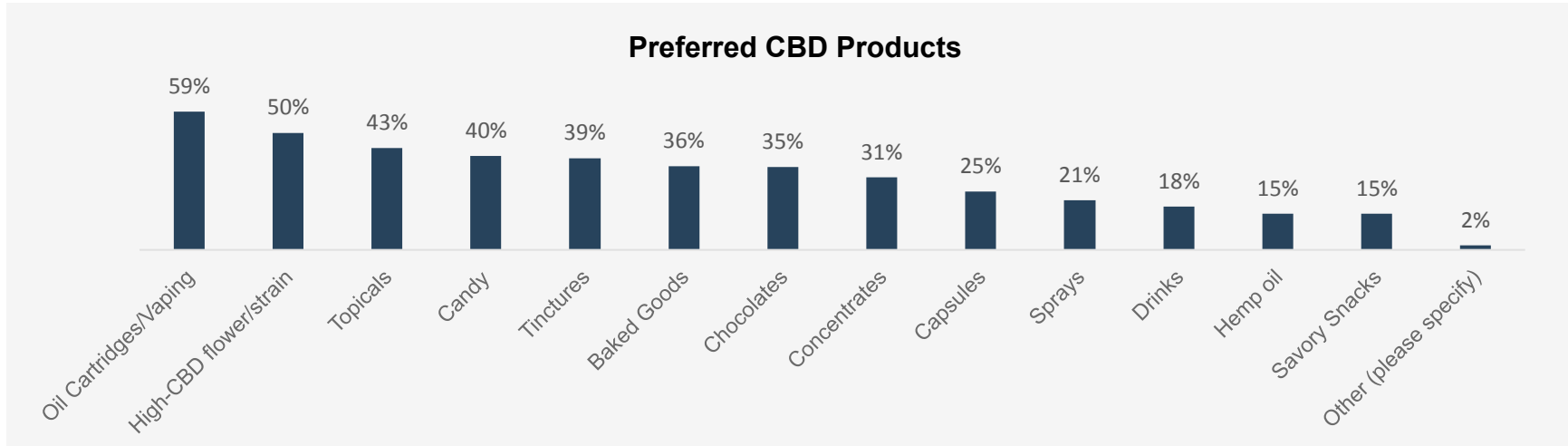
### Average Spending Per Month



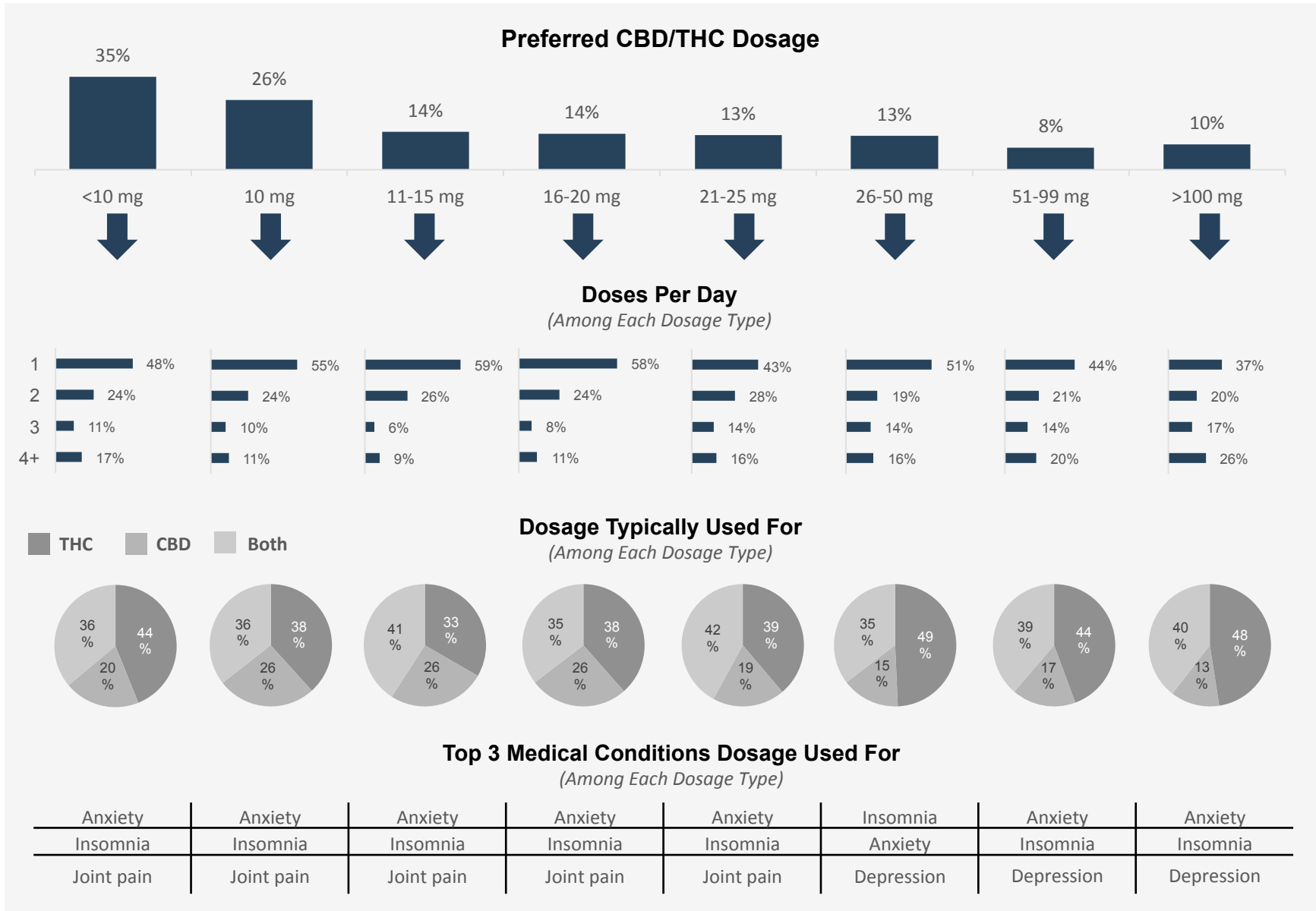
### Typical Purchase Location



# Cannabis Consumption Profile

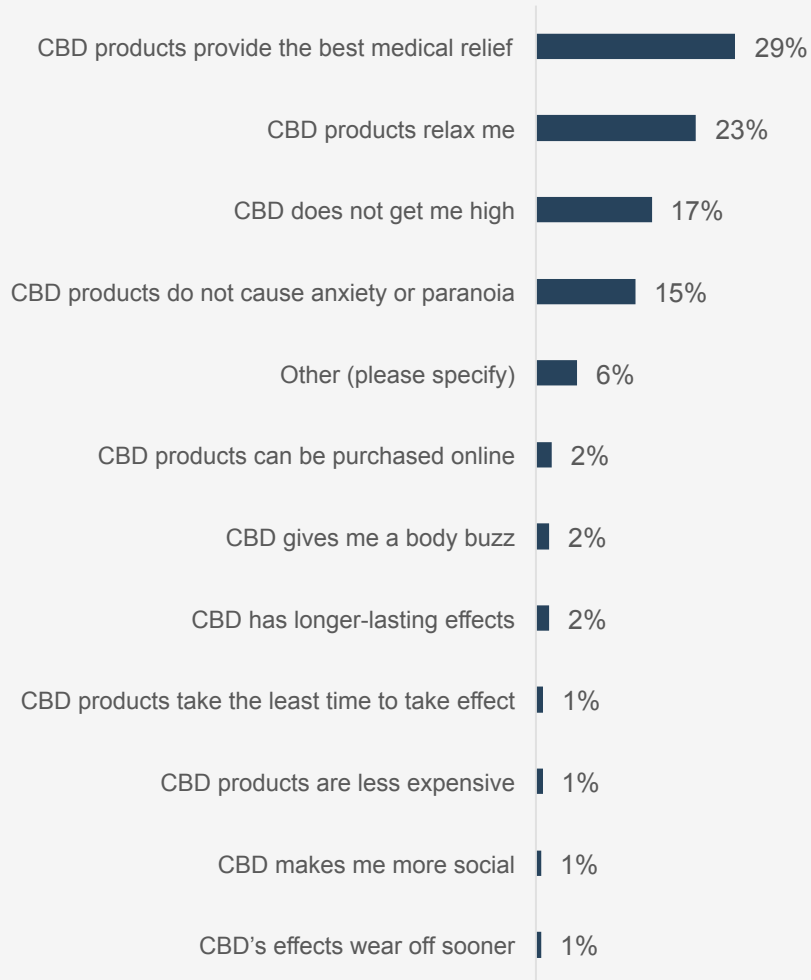


# CBD / THC Dosage Dynamics

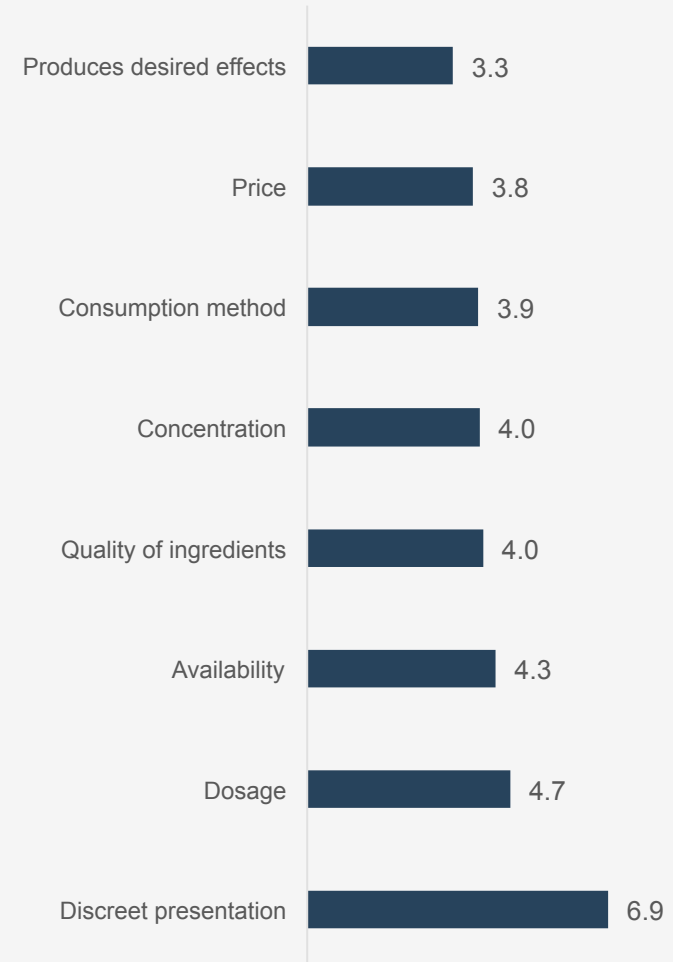


# Top CBD Features & Purchase Drivers

## Best CBD Features



## CBD Purchase Drivers Avg. Ranking, 1-8

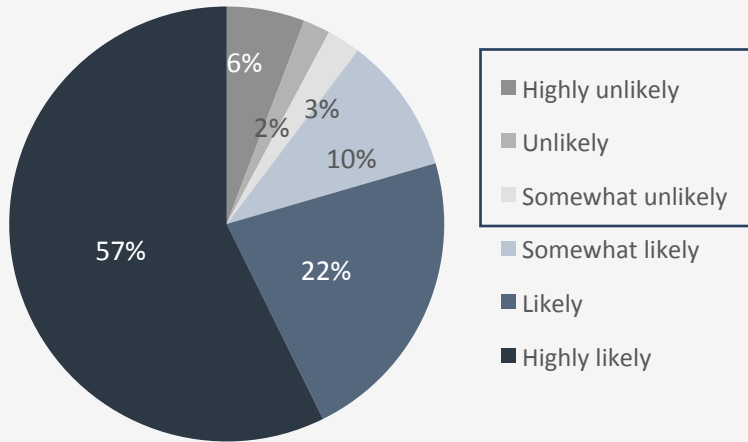




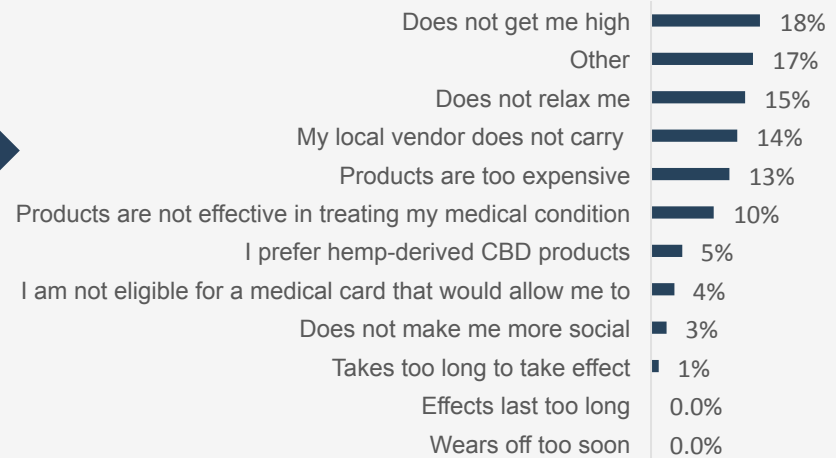
# Purchase Likelihood & Reasons for Unlikely

## Likelihood to Buy Marijuana-Derived CBD Products

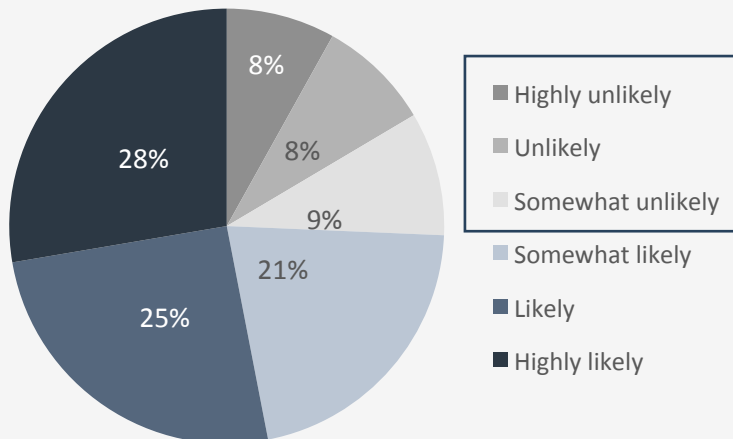
(including CBD-dominant and marijuana-derived CBD-only)



## Why Unlikely to Buy Marijuana-Derived CBD



## Likelihood to Buy Hemp-Derived CBD Products



## Why Unlikely to Buy Hemp-Derived CBD

