

Cannabis use among young adults in the State of Florida: A comparison of medical cannabis patients and non-patient cannabis users

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Introduction

As state laws regulating cannabis use have changed over the years there has been a corresponding increase in the prevalence of cannabis use. Data from the National Survey on Drug use and Health show an increase in past-year prevalence of cannabis from 11% in 2010 to 17% among U.S. adults aged 18 or older.

Since the repeal of a ban on smoking medical cannabis in 2019, the state of Florida has seen a dramatic increase in both the number of treatment centers and qualified patients. As of May 2022, the Florida Office of Medical Marijuana Use reported 719,366 qualified patients, a substantial increase from the 220,320 qualified patients reported in May 2019.

The primary goal of the current research is to compare medical cannabis patients (MCP) to non-patient cannabis users (NPCU) along demographic characteristics, patterns and characteristics of cannabis use, the social context of cannabis use, and health-related conditions including those associated with the COVID-19 pandemic. Prior research on populations outside of Florida has identified important differences between MCP and NPCU. The current study focuses on young adults, the population with the highest rates of cannabis and other drug use.

Research Methods

Data: The Florida Young Adult Cannabis Study included respondents aged 18 to 34, who had used cannabis products at least three times in the past 90-days and were residents of the state of Florida during the previous 12-months. Participants were recruited during the winter of 2020 via an online Qualtrics survey panel program. Participants included 900 individuals who submitted complete survey data, including 415 MCP and 485 NPCU.

Measures: A respondent was considered a MCP if they had a recommendation from a doctor to medically use cannabis in the State of Florida. Any respondent who reported cannabis use without a doctor's recommendation was considered a NPCU.

Analytic Strategy: A series of t-tests and chi-square tests were estimated to identify significant differences between MCP and NPCU across sociodemographic characteristics, characteristics and patterns of cannabis use, the social context of cannabis use, various health-related conditions, and health problems associated with the COVID-19 pandemic.

Table 1: Demographic Characteristics

	Total	NPCU	MCP	Significance ¹
Age (mean)	25.30	24.91	25.75	$p = 0.011$
Gender				
Female	59.67%	65.98%	52.29%	$p = 0.000$
Male	36.44%	31.13%	42.65%	$p = 0.000$
Race				
White	44.67%	44.74%	44.58%	$p = 0.961$
Black	25.44%	23.92%	27.23%	$p = 0.256$
Hispanic	19.56%	20.41%	18.55%	$p = 0.484$
Multiracial	6.33%	8.25%	4.10%	$p = 0.011$
Sexual Identity				
Heterosexual	72.78%	70.10%	75.90%	$p = 0.050$
Gay/Lesbian	6.33%	5.77%	6.99%	$p = 0.456$
Bisexual	17.33%	19.79%	14.46%	$p = 0.035$
Education				
Less than HS	4.67%	6.60%	2.41%	$p = 0.003$
HS graduate	27.22%	31.13%	22.65%	$p = 0.004$
Some College	42.78%	44.95%	40.24%	$p = 0.155$
College Grad.	25.33%	17.32%	34.70%	$p = 0.000$
Married	19.78%	14.43%	26.02%	$p = 0.000$
Employed	72.33%	63.92%	82.17%	$p = 0.000$
Income less than \$25,000	36.89%	43.30%	29.40%	$p = 0.000$
Covered by Health Insurance	75.00%	68.45%	82.65%	$p = 0.000$

1. A t-test was used to determine significance for age, while chi-square tests were used for all dichotomous variables.

Findings

There were several significant differences between MCP and NPCU regarding demographic characteristics (see Table 1) including age, gender, sexual identity, educational attainment, marital status, employment, income, and health insurance coverage.

Table 2: Characteristics and patterns of cannabis use

	Total	NPCU	MCP	Significance ¹
Cannabis Forms				
Bud or Flower	84.00%	83.71%	84.34%	$p = 0.798$
Edibles	71.67%	68.66%	75.18%	$p = 0.030$
CO ₂ Vape Oil	62.22%	58.97%	66.02%	$p = 0.030$
Concentrates	45.89%	39.38%	53.49%	$p = 0.000$
Liquid Sugar	44.78%	35.26%	55.90%	$p = 0.000$
Moon Rocks	36.89%	28.45%	46.75%	$p = 0.000$
Topicals/Creams	34.56%	25.36%	45.30%	$p = 0.000$
Capsules	30.00%	15.67%	46.75%	$p = 0.000$
Tinctures	26.56%	17.94%	36.63%	$p = 0.000$
Rick Simpson Oil	26.11%	15.88%	38.07%	$p = 0.000$
Microdosed	66.56%	57.73%	76.87%	$p = 0.000$
CBD-dominant user	50.84%	37.34%	64.58%	$p = 0.000$
Patterns of Use (mean)				
Age of initiation	20.01	19.06	21.13	$p = 0.000$
Days Used (90-days)	37.59	42.79	31.54	$p = 0.000$
Typical hits per day	18.83	18.43	19.30	$p = 0.642$
Ingest edibles per day	8.63	6.67	10.92	$p = 0.001$
Money normally spent	\$106.06	\$98.76	\$114.59	$p = 0.191$

1. T-tests were used to determine significance for the measures associated with patterns of use, while chi-square tests were used for all dichotomous variables.

Findings

While there was no difference in the use of buds/flower between MCP and NPCU (see Table 2), MCP were more likely to have tried several different forms of cannabis. Additionally, respondents who microdosed or were CBD-dominant user were more likely to be MCP. Respondents who initiated regular cannabis use at a younger age and those who used cannabis more frequently in the past 90-days were more likely to be NPCU. Respondents who more frequently consumed edibles or spent more money on cannabis were more likely to be MCP. Lastly, there were no significant differences between NPCU and MCP regarding preferred strains (e.g., indica, sativa) of cannabis.

Table 3: Social context of cannabis use

	Total	NPCU	MCP	Significance ¹
Sources ²				
Dispensary (friend)	49.56%	49.48%	49.64%	$p = 0.963$
Non-dispensary	45.89%	45.98%	45.78%	$p = 0.953$
Dispensary (dealer)	39.78%	36.70%	43.37%	$p = 0.041$
Unknown Source	39.56%	40.62%	38.31%	$p = 0.481$
Dispensary (partner)	32.11%	24.12%	41.45%	$p = 0.000$
Dispensary (family)	31.44%	24.33%	39.76%	$p = 0.000$
Used with ³				
Friends	71.56%	71.96%	71.08%	$p = 0.772$
Spouse/Partner	52.33%	52.16%	52.53%	$p = 0.913$
Family	50.89%	49.28%	52.77%	$p = 0.296$
Roommates	31.56%	27.63%	36.14%	$p = 0.006$
Co-workers	28.00%	24.33%	32.29%	$p = 0.008$
Strangers	22.44%	14.85%	31.33%	$p = 0.000$
Information ⁴				
Family/Friends	62.11%	65.98%	57.59%	$p = 0.010$
Internet	60.89%	56.29%	66.27%	$p = 0.002$
Social Media	51.33%	41.24%	63.13%	$p = 0.000$
Dispensary	48.56%	40.62%	57.83%	$p = 0.000$
Product Label	47.67%	44.33%	51.57%	$p = 0.030$
Doctor/Physician	38.00%	21.44%	57.35%	$p = 0.000$

1. A chi-square test was used to determine statistical significance.
2. Includes different sources of cannabis in the past 90-days.
3. Measures who the respondent used cannabis with in the past 90-days.
4. Identifies different sources of information regarding cannabis.

Findings

Respondents who obtained cannabis from a dealer, partner, or family member (who bought at a dispensary) were more likely to be MCP (see Table 3). People who used with roommates, co-workers or strangers were more likely to be MCP. People who obtained information about cannabis from family of friends were more likely to be NPCU, while people who obtained information from several other sources were more likely to be MCP.

Respondents who reported pain interfering with daily activities or suicidal ideation were more likely to be MCP (see Table 4). Respondents who reported various symptoms associated with PTSD were more likely to be MCP.

Findings

Respondents who tested positive for COVID-19, were hospitalized due to COVID-19, or had access to medical care or medications disrupted by COVID-19 were more likely to be MCP. However, respondents who reported experiencing various mental health problems as a result of the COVID-19 pandemic were more likely to be NPCU (see Table 4).

Table 4: Health-related conditions

	Total	NPCU	MCP	Significance ¹
Experience Pain	80.67%	79.79%	81.69%	$p = 0.473$
Pain Interferes	77.22%	72.37%	82.89%	$p = 0.000$
Suicidal Ideation	31.78%	22.68%	42.41%	$p = 0.000$
PTSD ²				
Felt Numb	42.78%	43.71%	41.69%	$p = 0.541$
Avoid things	41.78%	38.14%	46.02%	$p = 0.017$
Had nightmares	38.33%	32.16%	45.54%	$p = 0.000$
Felt guilty	37.44%	33.20%	42.41%	$p = 0.004$
On Guard	36.67%	35.05%	38.55%	$p = 0.277$
COVID-19				
Tested positive	16.44%	10.93%	22.89%	$p = 0.000$
Hospitalized	10.00%	3.09%	18.07%	$p = 0.000$
Access to care	20.11%	13.61%	27.71%	$p = 0.000$
Access to meds	16.44%	9.69%	24.34%	$p = 0.000$
Health Problems ³				
Anxiety	52.67%	57.32%	47.23%	$p = 0.003$
Depressed mood	48.67%	52.99%	43.61%	$p = 0.005$
Sleep difficulty	45.22%	47.22%	42.89%	$p = 0.194$
Irritability	45.22%	48.25%	41.69%	$p = 0.049$
Loneliness	44.67%	48.04%	40.72%	$p = 0.028$
Less motivated	43.67%	47.36%	38.80%	$p = 0.006$
Appetite changes	41.44%	44.54%	37.83%	$p = 0.042$
Trouble coping	39.22%	41.86%	36.14%	$p = 0.080$
Hopelessness	39.00%	41.65%	35.90%	$p = 0.078$
Restlessness	37.67%	40.41%	34.46%	$p = 0.066$
Breathing difficulties	19.67%	17.11%	22.65%	$p = 0.037$

1. A chi-square test was used to determine statistical significance.
2. The Primary Care PTSD Screen for the DSM-5 was used.
3. Respondents were asked if they experienced the following problems because of the COVID-19 pandemic.

Conclusions

The current study identified several significant differences between NPCU and MCP. While this is important, we did find that patient status does not always align with primary motive for cannabis use. About 31% of NPCU identified their cannabis use as being for primarily or exclusively self-treatment motives (e.g., to treat or cope with any physical ailments or psychological conditions), while only 13% of MCP identified their cannabis use being for primarily or exclusively for recreational motives (e.g., to make experiences more pleasurable, interesting, or exciting). Future research should assess differences associated with motive for use as well.

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