

## Examining the Cannabis Clinicians' Role in Cannabinoid Therapy

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### *Instructor's Introduction:*

*All three of the student research assistants participated with the data analysis, particularly Jenna. All three worked together to prepare the poster and presentation. This was conducted during the Summer of 2024.*

*- Thomas Clobes, Assistant Professor of Health Sciences, October 2024.*

Cannabis as a therapeutic agent is accessible to a growing number of people, though research suggests that many medical cannabis users undertake their cannabinoid therapy independent of medical guidance. However, the effects of medical guidance on outcomes of cannabinoid therapy are unknown. Through an online survey, medical cannabis users reported their cannabis usage patterns, outcomes, and collaboration with medical professionals. A secondary analysis of the responses from medical cannabis users was analyzed with a variety of statistical tests to search for differences in medical guidance, usage patterns, and health outcomes between those with medical guidance and those without (n=988). Those who worked with a cannabis clinician reported statistically significant greater efficacy ( $p < .001$ ) as well as higher daily doses of CBD ( $p < .001$ ). Additionally, those working with a cannabis clinician reported more statistically significant benefits to their physical ( $p < .001$ ) and mental health ( $p < .001$ ) and were more likely to seek advice from dispensary staff ( $p < .001$ ). Undergraduate researchers in this study attempted to evaluate the role of medical guidance for those undertaking cannabinoid therapy. The results indicate that undertaking cannabinoid therapy with guidance from a cannabis clinician can lead to better outcomes.

**Keywords:** *example, graduate student, laboratory management, laboratory safety, leadership development*



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### Background

As the legal landscape of medicinal and recreational cannabis has evolved in the United States, both academics and consumers have increasingly desired to gain an understanding of the efficacy of cannabinoid therapies.<sup>1</sup> Extensive evidence exists demonstrating a lack of medical professional involvement in many individuals' cannabinoid therapies,<sup>2,3</sup> but little research has been conducted evaluating how this affects patients' health outcomes. It is essential to understand how therapeutic usage patterns and health outcomes can vary depending upon the presence or absence of a cannabis clinician. This study attempts to evaluate the outcomes of medical guidance for those undertaking cannabinoid therapy.

**Hypothesis:** Medical cannabis patients who collaborate with a cannabis clinician will have better health outcomes, lower THC doses, and higher CBD doses.

### Methods

This was a secondary analysis of survey data collected from current and past medical cannabis users.<sup>4</sup> Medical cannabis users were self-identified and defined as those who currently or previously used cannabis to treat or aid with some sort of medical issue, whether or not with a recommendation or supervision from a medical provider. The specific variables analyzed were efficacy, daily THC & CBD dose, impact to physical and mental health, and advice sought from dispensary staff. Continuous variables were analyzed using an independent sample t-test or Mann-Whitney U test as appropriate. Data was collected anonymously to protect the confidentiality appropriate of the participants. This project was reviewed and approved by the institutional review board at California State University Channel Islands (approval 105662).

### References



### Results

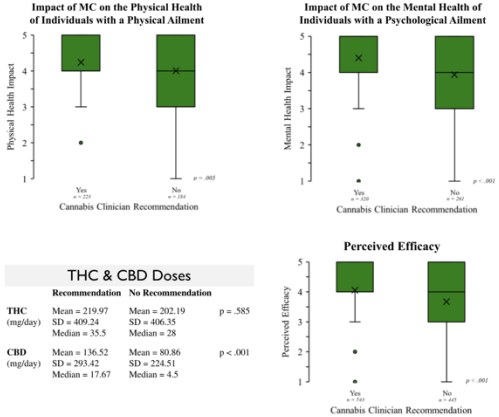
**Efficacy:** The efficacy of medical cannabis for those who had a provider recommendation (mean rank = 537.97) was statistically significantly higher than for those who did not have a provider recommendation (mean rank = 441.45),  $U = 97,211.5$ ,  $z = -5.545$ ,  $p < .001$ . **Dispensary staff:** The median advice seeking frequency for those who had a provider recommendation (3, sometimes) was statistically significantly higher than for those who did not have a provider recommendation (2, rarely),  $U = 87,227$ ,  $z = -7.832$ ,  $p < .001$ ,  $r = .25$ . **Physical Health:** For individuals who use medical cannabis to treat symptoms of physical ailments, the impact that the medical cannabis use had on their physical health was rated significantly more positive for people with a cannabis clinician recommendation ( $M = 4.24$ ,  $SD = 0.77$ ) than for those who did not have a cannabis clinician recommendation ( $M = 4.01$ ,  $SD = 0.88$ ),  $t(405) = 2.838$ ,  $p = .005$ ,  $d = .283$ . **Mental Health:** For individuals who use medical cannabis to treat the symptoms of psychological ailments, the impact that the medical cannabis use had on the mental health of individuals who had a cannabis clinician recommendation to use medical cannabis (mean rank = 326.71) was significantly more positive than the impact that cannabis use had on the mental health of individuals who did not have a cannabis clinician recommendation to use medical cannabis (mean rank = 247.21),  $U = 30,332$ ,  $z = -6.123$ ,  $p < .001$ ,  $r = .25$ . **Cannabinoids:** The daily dose of THC of individuals who had medical cannabis recommended by a licensed medical provider ( $M = 219.97$ ,  $SD = 409.24$ ) was not significantly different than the daily dose of THC of those who did not have medical cannabis recommended by a licensed medical provider ( $M = 202.19$ ,  $SD = 406.35$ ),  $t(736) = 0.546$ ,  $p = .585$ ,  $d = .044$ . On the other hand, the median CBD quantity for those who had a provider recommendation (17.67 mg.) was statistically significantly higher than for those who did not have a provider recommendation (4.5 mg.),  $U = 47,039.5$ ,  $z = -4.715$ ,  $p < .001$ ,  $r = .203$ .

### Discussion

An analysis of the health outcomes between those with cannabis clinician guidance demonstrate statistically significant results. MC patients who received cannabis guidance experienced greater symptom relief in treating their respective ailments. Those working with a cannabis clinician reported MC having greater benefits for their physical and mental health. These findings support the hypothesis that undertaking cannabinoid therapy with medical guidance results in more effective treatment. Furthermore, it was predicted that those working with a clinician would use higher daily doses of CBD and lower daily doses of THC. These usage pattern predictions were partially correct: those working with a cannabis clinician were more likely to use higher amounts of CBD, although other than that, there were no statistically significant variations in average daily THC doses between those that worked with a clinician and those who did not. MC patients who received cannabis guidance also sought advice from dispensary staff more often compared to MC patients who did not receive cannabis guidance.

### Conclusion

Following the guidance of a medical cannabis clinician has shown significant positive results in a multitude of areas. It is important that MC users realize the likely positive outcomes of following the guidance of medical cannabis clinicians so that they can carry out a more organized and effective cannabinoid treatment.



THC & CBD Doses			
	Recommendation	No Recommendation	
THC (mg/day)	Mean = 219.97 SD = 409.24 Median = 35.5	Mean = 202.19 SD = 406.35 Median = 28	p = .585
CBD (mg/day)	Mean = 136.52 SD = 293.42 Median = 17.67	Mean = 89.86 SD = 224.51 Median = 4.5	p < .001

Demographics			
	Overall N = 988	Recommendation n = 543	No Recommendation n = 445
Age, years			
Mean (SD)	41.4 (12.6)	39.7 (11.2)	43.4 (13.9)
Gender, n (%)			
Female	638 (64.6%)	336 (34%)	302 (30.6%)
Male	339 (34.3%)	203 (20.5%)	136 (13.8%)
Non-Binary	10 (1%)	3 (0.3%)	7 (0.7%)
Race, n (%)			
White	776 (78.5%)	426 (43.1%)	350 (35.4%)
Black/African American	155 (15.7%)	94 (9.5%)	61 (6.2%)
Hispanic/Latino/a	145 (14.7%)	84 (8.5%)	61 (6.2%)
Native American	52 (5.3%)	32 (3.2%)	20 (2.0%)
Ailment, n (%)			
Chronic Pain	211 (21.4%)	114 (11.5%)	97 (9.8%)
Insomnia	98 (9.9%)	39 (3.9%)	59 (6%)
Anxiety	225 (22.8%)	125 (12.7%)	100 (10.1%)
Depression	92 (9.3%)	47 (4.8%)	45 (4.6%)
Route of Administration, n (%)			
Smoking	732 (74.1%)	415 (42%)	317 (32.1%)
Vaping	383 (38.9%)	226 (22.9%)	158 (16%)
Edibles	545 (55.2%)	310 (31.4%)	235 (23.8%)
Tinctures	138 (14%)	94 (9.5%)	44 (4.5%)