

Increased Amount of Medical Cannabis Used Per Week is Associated with Less Memory Dysfunction

Michelle L. Woods, M.S., Craig D. Crawford, M.A., & Kristine M. Jacquin, Ph.D.

Abstract

Recreational cannabis use is associated with memory dysfunction. We assessed participants for the correlation between medical cannabis use and memory deficits. An increased use of medical cannabis was associated with fewer memory problems. There were nonsignificant correlations between medical cannabis use and other executive function deficits that were measured.

Introduction

- Prior research suggests recreational cannabis use is associated with neuropsychological deficits, including memory dysfunction (Crane et al., 2013; Savulich et al., 2021; Thames et al., 2014; Woolridge et al., 2005).
- Specifically, increased recreational cannabis use is linked to increased memory deficits (Ashtari et al., 2011; Meier et al., 2012).
- However, the majority of prior research focused on recreational cannabis use.
- There is little research on the relationship between medical cannabis use and neuropsychological deficits, specifically regarding memory dysfunction.

Hypothesis

- Our hypothesis was that medical cannabis users with an increased amount of use would report more neuropsychological impairment including more memory problems.

Method

Participants

- $N = 439$ adults
- Age: $M = 35$, $SD = 12.47$
- Gender identity: 61.5% female, 36% male, 2.3% other, and 0.2% both genders

Participants cont'd

- Ethnicity: 75.9 % Caucasian/White, 8.9% Asian or Asian American, 6.4% Mixed Ethnicity, 4.1% Hispanic or Latinx, 3.4% African American or Black, 0.9% Other, 0.5% Native American/Indigenous First Nation

Procedure

- Participants completed an online survey, which included the Neuropsychological Impairment Scale (NIS), the abbreviated Cognitive Failure Questionnaire (CFQ), and the Daily Sessions, Frequency, Age of Onset, and Quantity of Cannabis Use Inventory (DFAQ-CU).
- The NIS and CFQ were used to measure self-reported memory and other neuropsychological problems.
- The DFAQ-CU was used to measure quantity of medical cannabis use.

Results

- Pearson correlation coefficients were computed to determine the relationship between amount of medical cannabis used and neuropsychological dysfunction on the NIS.
- Quantity of use did not correlate with any NIS scores (e.g., memory $r = .095$, $p = .289$).
- Pearson correlation coefficients were computed to determine the relationship between quantity of medical cannabis used and neuropsychological dysfunction on the CFQ.
- The results indicated a significant negative correlation between the amount of medical cannabis used weekly and memory, $r(127) = -.265$, $p = .003$.



Discussion

- The hypotheses were not supported.
- **Specifically, the only significant finding was a negative correlation between the amount of medical cannabis used weekly and memory, which suggests participants who used a greater amount of medical cannabis per week reported less memory dysfunction.**
- **The findings suggest that greater quantities of medical cannabis do not correlate with increased neuropsychological dysfunction.**
- More research is needed to better understand the relationship between medical cannabis use and memory function.
- Patients may benefit from memory improvement due to feeling better from the illness for which they were prescribed cannabis.

References

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