Examining Racial, Ethnic, and Sex Differences as Predictors of Cannabis Use Disorder Treatment Retention.

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Background

- Cannabis is the most used federally illicit substance in the US, and nearly 1 million people received cannabis-related treatment in 2019 (1,2)
- Cannabis use and cannabis use disorder (CUD) are increasingly prevalent in men, Native Americans, Black/African Americans, mixed-race adults, and Hispanic/Latinx populations compared to white populations (3,4)
- Despite increased use of cannabis and CUD in diverse populations, treatment trials for CUD tend to lack racial, ethnic, and sex representation
- No literature to date has explored if underrepresented groups are being *retained* in research at the same rates as their non-minority counterparts
- It is essential that research trials consider diversity in race, ethnicity, and sex to ensure that treatments are generalizable and applicable to the increasing diversity in our population

Objective

Evaluate racial, ethnic, and sex differences in cannabis treatment study retention.

Methods

- Data was aggregated from seven pharmacotherapy treatment trials for CUD (N=948) (see figure 1; R21 DA052661)
- Outcomes were retention in treatment, which is defined as study survival (number of days engaged in study) and end of treatment visit (yes/no)
- Mixed effects logistic regression models adjusted for age, years of cannabis use at baseline, and total treatment duration
- Sex stratified analysis was examined through model terms

Results

- Non-Hispanic white participants had longer study engagement duration and higher rates of study completion than all other racial/ethnic groups combined (figure 2, 4)
- In non-Hispanic white participants, females had higher rates of completion than males, but across all racial/ethnic groups, sex does not contribute to study retention (figure 3, 4)

Results (cont.)

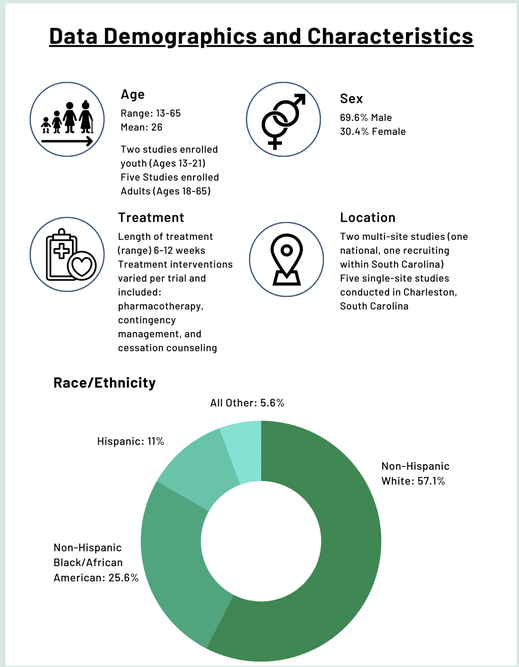

Figure 1: Demographics and Clinical Characteristics of Study Samples Across Cannabis Treatment Trials.

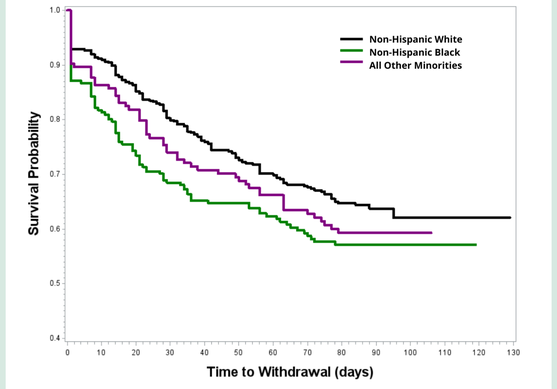

Figure 2: Days Engaged in Study by Race

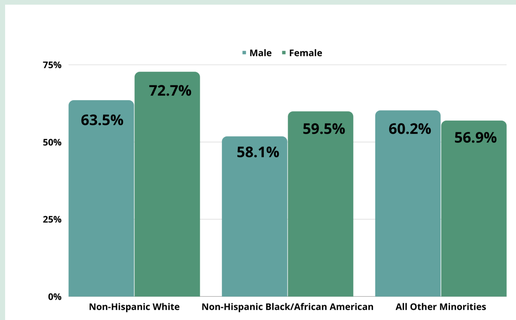

Figure 3: Completion Status by Race

Comparison	% Completion		% Diff	OR (95% CI)	P
Non-Hispanic White Vs. All Others	66.0%	58.7%	7.3%	1.39 (1.02-1.89)	**0.039**
Males	63.5%	58.9%	4.6%	1.21 (0.85-1.72)	0.29
Females	72.7%	58.4%	14.3%	1.97 (1.15-3.38)	**0.014**
Non-Hispanic White Vs. Non-Hispanic Black	66.0%	58.5%	7.5%	1.38 (0.99-1.93)	0.054
Males	63.5%	58.1%	5.4%	1.24 (0.84-1.82)	0.28
Females	72.7%	59.5%	13.2%	1.85 (1.00-3.42)	**0.049**
Non-Hispanic White Vs. Other Minorities	66.0%	59.1%	6.9%	1.40 (0.77-2.34)	0.27
Males	63.5%	60.2%	3.3%	1.16 (0.61-2.22)	0.65
Females	72.7%	56.9%	15.8%	2.13 (0.95-4.80)	0.07
Gender					
Males vs. Females	61.6%	66.2%	-4.6%	0.81 (0.59-1.10)	0.17

Figure 4: Multivariable Model Results; Adjusted for Age, Years of Cannabis Use, and Study Length

Discussion

Implications:
- The lack of diversity in research occurs throughout the research process and is not entirely dependent on recruitment efforts.
- Retaining minority race/ethnic groups is an effort that should be maintained throughout the study timeline to create more representative samples, and ensure final datasets are comprehensive and inclusive of underserved populations.
- Historical relationships with minority race/ethnic groups should be addressed to identify current barriers in minority study retention

Limitations:
- Due to limited sample size on other minority groups, further analysis needs to be done with more diverse samples.
- Studies varied in length and definitions of study completion. Therefore, this analysis defines study completion as a participant presenting at their end-of-treatment visit, rather than tracking study engagement (i.e., number of total visits presented for).

Acknowledgements

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References

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