

# Sex Differences in Abnormal Blood Pressure among Heavy Cannabis Consumers Compared to Low-to-Moderate Cannabis Consumers within the Herbal Heart Study



Kylee Krivijanski, BS<sup>1</sup>, Amrit Baral, MBBS, MPH, PhD<sup>1,2</sup>, Bria-Necole Diggs, MSPH<sup>1,2</sup>, Ranya Marrakchi, MPH<sup>1</sup>, Claudia Martinez, MD<sup>2</sup>, Denise C. Vidot, PhD<sup>1,2</sup>

www.herbalheartstudy.com

University of Miami School of Nursing and Health Studies<sup>1</sup>; University of Miami School of Medicine<sup>2</sup>

## BACKGROUND

- Cannabis use has been shown to have diverse effects on blood pressure (BP).
- The relationship between cannabis use and BP remains inconsistent.
- Sex differences in the relationship between cannabis and BP have been largely unexplored.

## OBJECTIVE

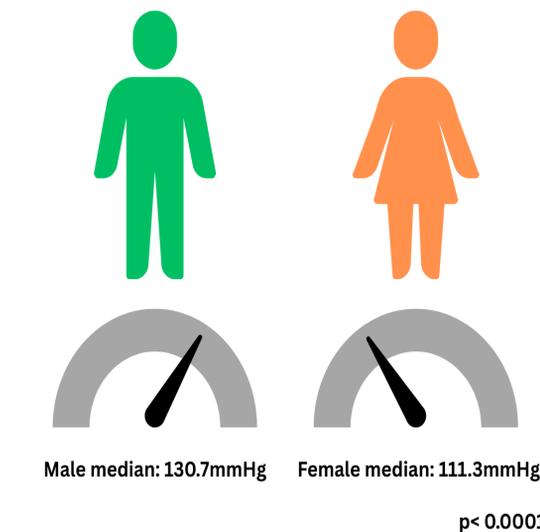
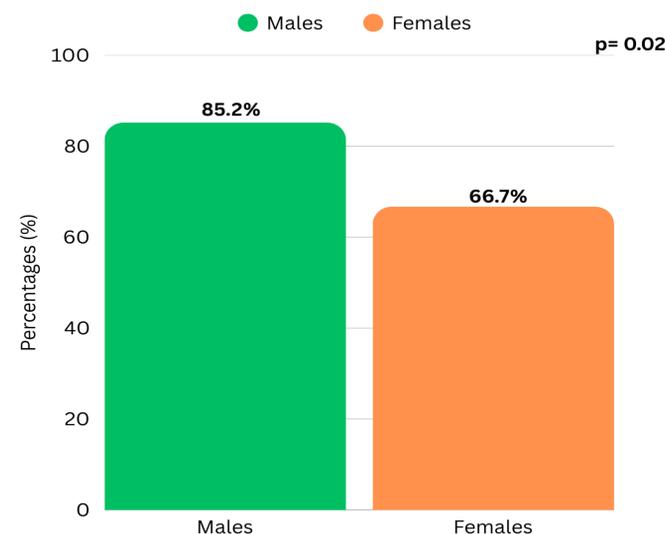
- To examine sex-differences in objectively measured abnormal BP among low-to-moderate and heavy cannabis consumers.

## METHODS

- Data are from 18-to-35-year-olds (N=200) enrolled in the Herbal Heart Study in South Florida.
- Cannabis use was urine-verified.
- Heavy cannabis use was defined as use  $\geq 21$  days per month.
- Abnormal BP was based on an average of three American Heart Association-standardized measurements of systolic and diastolic BP:  $\geq 130$ mmHg systolic and  $\geq 85$ mmHg diastolic.
- Descriptive statistics and Chi-squared tests assessed associations between cannabis use, sex, and BP.
- Logistic regression estimated the odds abnormal BP by cannabis use.

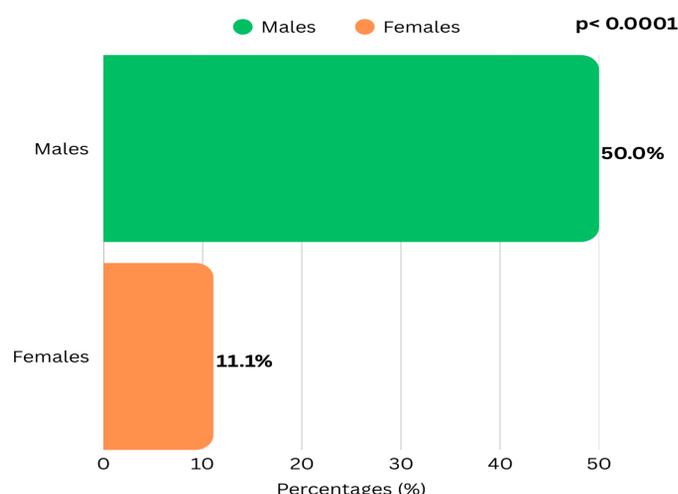
## RESULTS

**Figure 1: Prevalence of Heavy Cannabis Consumption by Sex**



**Figure 2: Median Systolic Blood Pressure by Sex Among Cannabis Consumers**

**Figure 3: Prevalence of Abnormal Blood Pressure Among Cannabis Consumers by Sex**



## KEY FINDINGS

- Cannabis consumption was reported more frequently among males (77.1%,  $p=0.0024$ ) compared to females.
- Heavy cannabis consumption (consuming  $\geq 21$  days a month) was found to be more prevalent among males (85.2%) than females (66.7%,  $p=0.02$ ).
- Male cannabis consumers were found to have a higher median systolic BP compared to females (130.7mmHg vs 111.3mmHg,  $p<0.0001$ ).
- Abnormal BP was identified in 50.0% of male cannabis consumers compared to 11.1% of female cannabis consumers ( $p<0.0001$ ).
- Male heavy cannabis consumers had a higher prevalence of abnormal BP than female heavy cannabis consumers (52.2% vs 14.6%).
- Heavy cannabis consumers had a higher odds of presenting with abnormal BP than non-consumers (AOR: 2.72, 95% CI: 1.10-6.76).

## CONCLUSION

- Heavy cannabis use was associated with increased odds of abnormal BP.
- Specifically, male cannabis consumers with heavy use exhibited higher systolic BP and a greater prevalence of abnormal BP compared to females.

## ACKNOWLEDGEMENTS

National Heart, Lung, And Blood Institute of the National Institutes of Health under Award Number R01HL153467 (VIDOT)