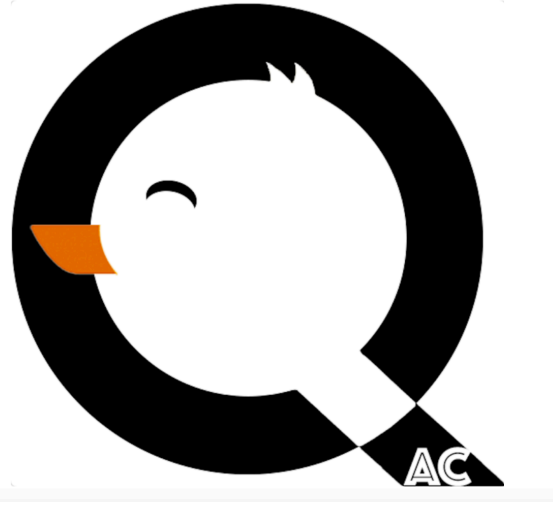




# The Association Between Incarceration History and Cardiovascular Outcomes in U.S. Adults



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## Introduction

- ◆ Cardiovascular disease (CVD) is a leading cause of death in the United States and is especially prevalent among incarcerated and formerly incarcerated populations (CDC, 2023)
- ◆ Incarcerated populations exhibit higher rates of key CVD risk factors, including hypertension, smoking, and increased BMI (Bondolfi et al., 2020)
- ◆ Structural factors (limited healthcare access, chronic stress, and disrupted continuity of care) may contribute to these disparities, which are often concentrated among marginalized populations (Wang et al., 2017)
- ◆ This study examines whether incarceration history is associated with cardiovascular health outcomes in adulthood

## Research Questions

- ◆ Is incarceration history associated with the likelihood of high blood pressure among U.S. adults?
- \* Does this relationship differ by smoking status?

## Methods

### Sample

- ★ Includes respondents with valid data on incarceration and cardiovascular health
- ★ Analytic sample: N = 55,610 adults (age 18+)
- ★ Data from the National Survey on Drug Use and Health (NSDUH)
- ★ Nationally representative sample of U.S. civilians

### Measures

#### Incarceration History

- ◆ Ever arrested and booked
- ◆ Yes / No

#### High Blood Pressure (Outcome)

- ◆ Self-reported diagnosis
- ◆ Yes / No

#### Covariates

- ◆ Age
- ◆ Cigarette use (per day) examined as a potential modifier of the relationship
- ◆ Education
- ◆ Gender

## Results

### Bivariate Findings

- ◆ Individuals with incarceration history had higher rates of high blood pressure
- ◆ **17.6% vs. 10.9%** (incarcerated vs. not)
- ◆ The chi-square test showed a significant association ( $p < .001$ )

### Logistic Regression (Unadjusted)

- ◆ Individuals with a history of incarceration had **1.75 times higher odds** of high blood pressure
- ◆ Relationship was statistically significant ( $p < .001$ )

### Multivariate Results

- ◆ After controlling for other variables:
  - Incarceration remained **significant** (OR = 0.88,  $p = .001$ )
  - Age significantly increased risk (OR = 1.77,  $p < .001$ )
  - Education was also significant
  - Smoking and gender were **not significant**
- ◆ The association between incarceration history and high blood pressure **persisted across smoking groups**, suggesting smoking status does not substantially alter this relationship

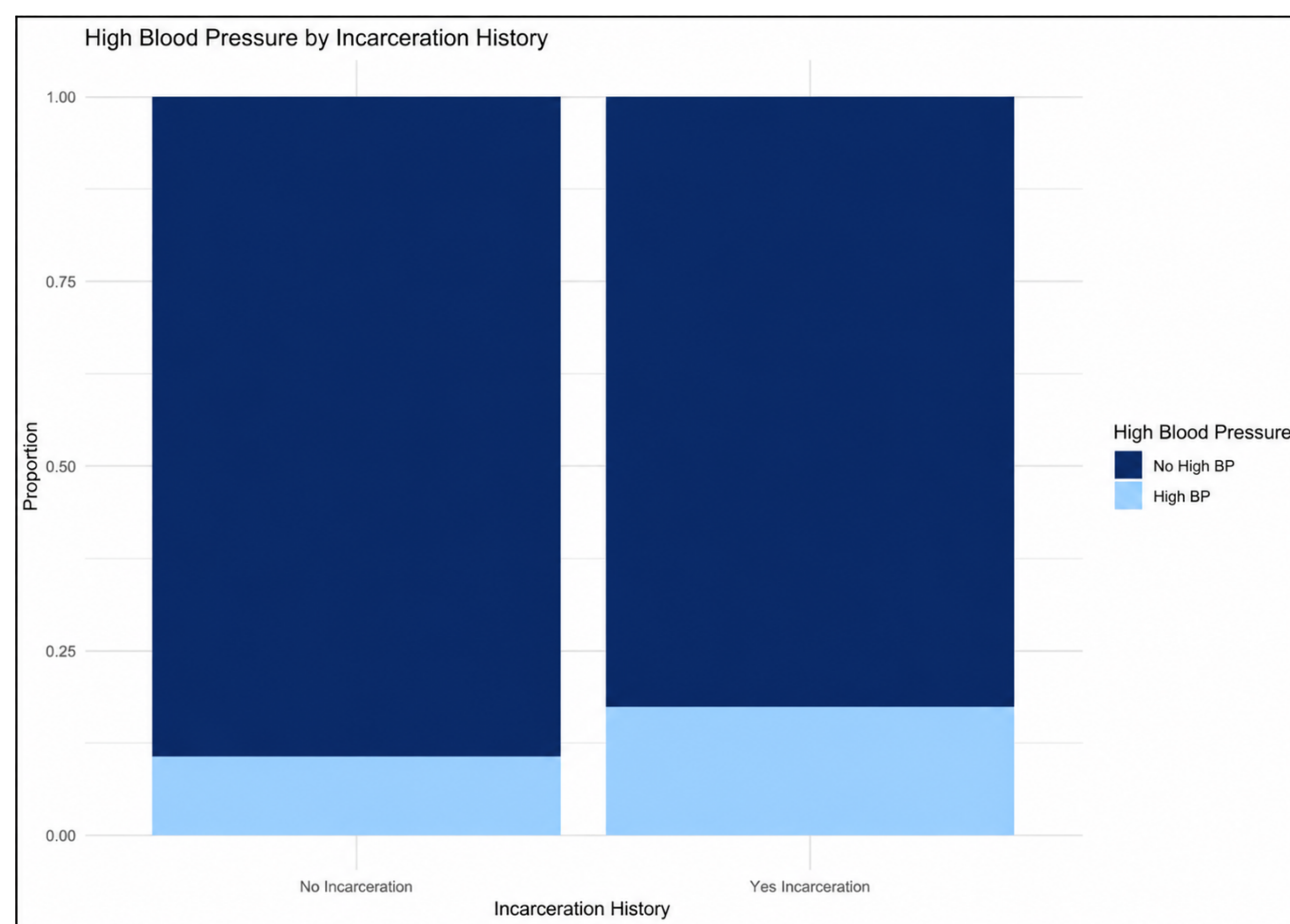


Figure 1. Individuals with a history of incarceration show higher rates of high blood pressure compared to those without incarceration history.

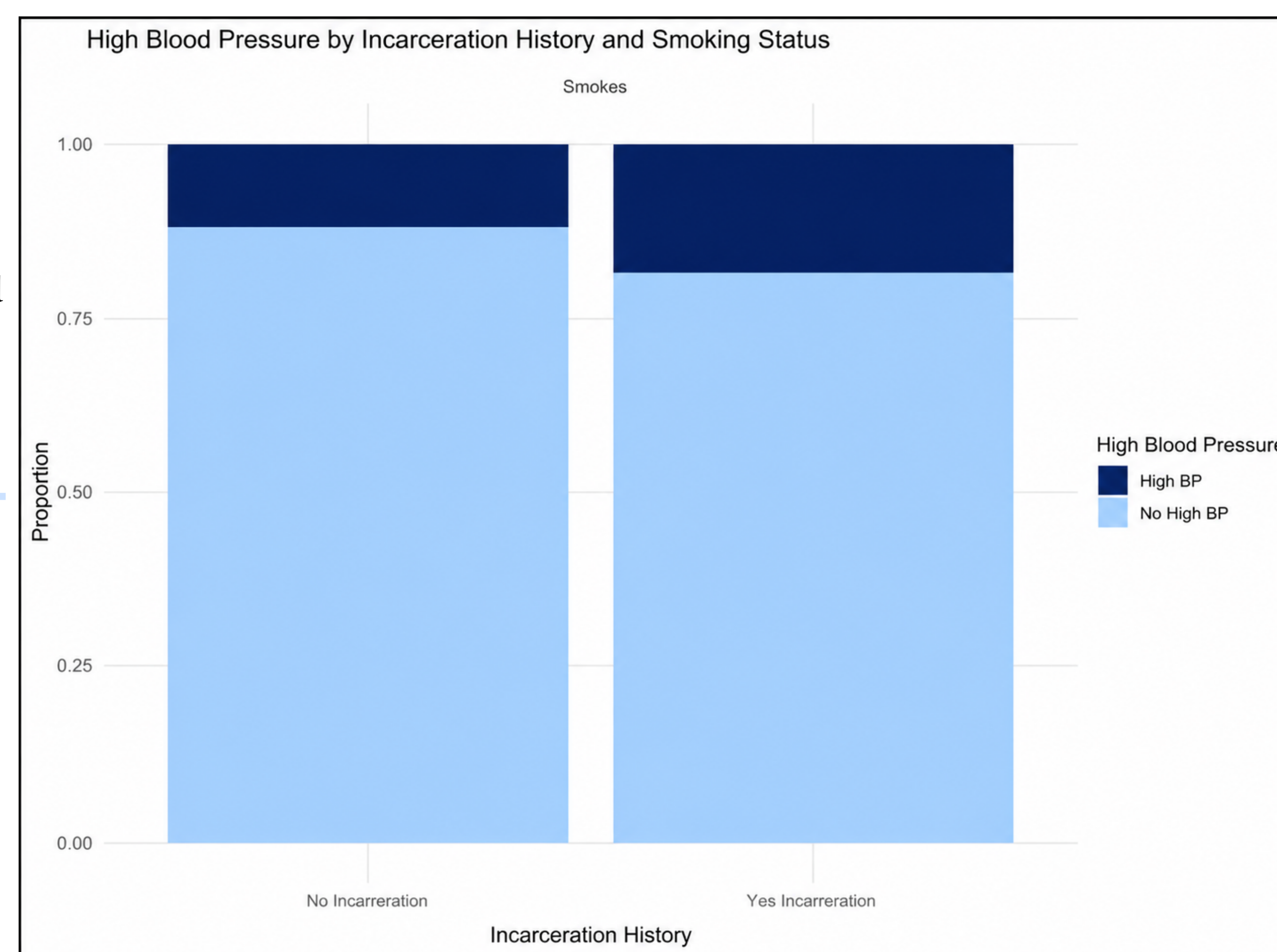


Figure 2. The association between incarceration history and high blood pressure varies by smoking status, suggesting the relationship persists across groups

## Discussion

- ◆ Individuals with a history of incarceration were more likely to report high blood pressure, supporting prior research on incarceration and cardiovascular health disparities
- ◆ This association was **statistically significant** in both the bivariate and unadjusted logistic regression models
- ◆ However, the relationship changed after controlling for demographic and behavioral factors, suggesting that variables such as age may explain part of this association
- ◆ The relationship between incarceration history and high blood pressure persists across smoking groups, suggesting that smoking alone does not explain this association
- ◆ Structural factors, including chronic stress, limited access to healthcare, and disruptions in continuity of care, may contribute to these differences
- ◆ These findings highlight incarceration as an important factor linked to long-term cardiovascular health outcomes
- ◆ Future research should further examine the mechanisms underlying this relationship and explore interventions to reduce cardiovascular risk among formerly incarcerated individuals

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