

2023 Case Study

Analysis of Racial Disparities in LMPD Traffic Stops

The problem

Define the research

- Investigate whether racial disparities exist in LMPD traffic stops.
- Identify potential biases and systemic issues in policing practices.
- Explore how statistical methods, such as chi-squared tests, can help determine patterns in data.

Identifying Stakeholders & Their Needs

LMPD Leadership

Addressing concerns about potential racial bias and improving community trust.

City Gov & Policy makers

Using data to guide policing reforms and legislation.

Media and Advocacy groups

Advocating for fair and just law enforcement practices.

Increasing transparency and accountability in policing.

Questions

to consider for stakeholders:

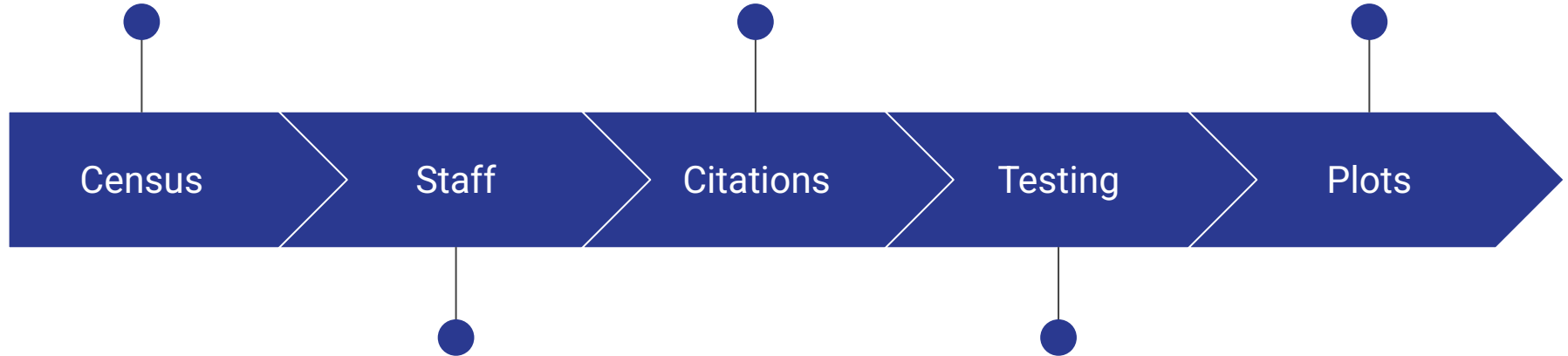
- How do different racial groups experience traffic stops in Louisville?
 - Is there an identifiable bias in policing based on officer demographics?
 - What policy recommendations can be made based on statistical evidence?
-

Implementation

Census Data – Provides demographic context for comparison.

LMPD Citations – Includes data on traffic stops and driver demographics.

Interpretation of Findings - Key takeaways and implications of the findings.



LMPD Staff Details – Contains officer demographics.

Chi-Squared Test & Hypothesis Testing

Results

of the Chi-Squared Test

Chi-Squared Statistic: 122.92 (high value, suggests a strong relationship).

P-Value: 8.20e-17 (extremely low, strong statistical significance).

Interpretation:

- A low p-value (<0.05) means we reject the null hypothesis.
 - The observed differences in stop patterns are unlikely due to random chance.
-

Interpretation

of Findings

Key Takeaway: The officer's race and the driver's race are not independent of each other.

Implication:

- Certain racial groups may experience different policing behaviors.
 - This highlights potential systemic biases in traffic stops.
-

Next Steps

For LMPD & City Leaders:

- Review officer training programs on implicit bias.
- Implement data-driven policy changes.

For Community Advocacy Groups:

- Use findings to push for fairer policing practices.

For Researchers & Analysts:

- Conduct further studies with additional factors (location, time of day, reason for stop).

Conclusion

Strong statistical evidence suggests racial disparities in LMPD traffic stops.

Further **action is needed** to ensure equitable law enforcement practices.

Transparency & policy adjustments can help address racial bias in policing.