The association between race, sex, and age and vehicle searches during traffic stops in Connecticut in 2022

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Introduction

- **Importance of observing traffic stops:** 13% of police killings occur during traffic stops (Prison Policy Initiative, 2024)
- **Issues of discrimination in traffic stops:** Black drivers are more than twice as likely to be arrested or searched during a traffic stop as drivers of other racial groups (Prison Policy Initiative, 2024)
- **Younger drivers are more likely to be asked for a vehicle search:** Drivers 15-29 are about 1.5 times more likely to be asked for a consent search than drivers 30 and above (Journal of Ethnicity in Criminal Justice, 2021)
- **Gap in Literature:** There is not comprehensive national data that can be used to determine race's affect in traffic stops (American Journal of Criminal Justice, 2025)

Methods

Sample

- The 2022 CT Traffic Stop Study records every traffic stop occurring in Connecticut in 2022 (313,346 traffic stops)

Measures

- The study records the details of each traffic stop including driver race, driver gender, driver age, and whether or not a vehicle search occurred

Research Questions

- What is the relationship between race, sex, and age and vehicle searches during traffic stops?
- Do sex and age moderate the likelihood of traffic stops differently across racial groups?

Results

Bivariate

(Figure 1)

- Chi-Square analysis shows that there is a significant relation between race and vehicle search (p-value = 0).
- Of traffic stops performed on Black people, 2.84% of them resulted in a vehicle search.
- Conversely, only .45% of traffic stops conducted on Asian drivers resulted in a vehicle search.
- Consequently, Black drivers have their vehicles searched over 6 times as frequently as Asian drivers.
- Logistic regression analyses showed Black drivers were almost twice as likely to receive a vehicle search than White drivers (OR 1.98, p-value = 0).

Multivariate

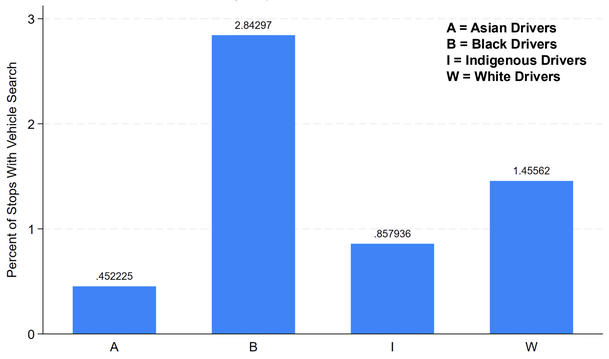
(Figure 2)

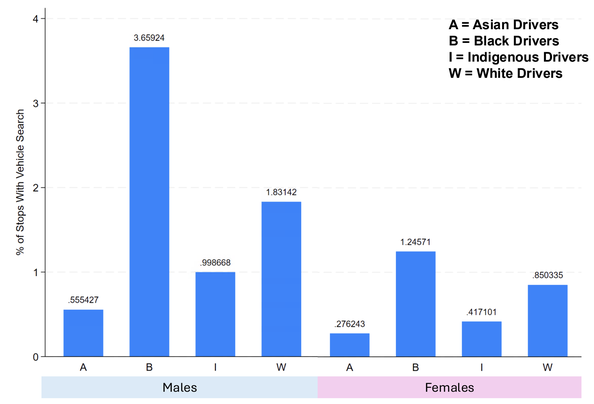
- Driver gender significantly moderates the relationship between race and vehicle search, between males and females (Coef. 0.012, p-value = 0).
- Thus the gender male increases the probability of a traffic stop vehicle search.

(Figure 3)

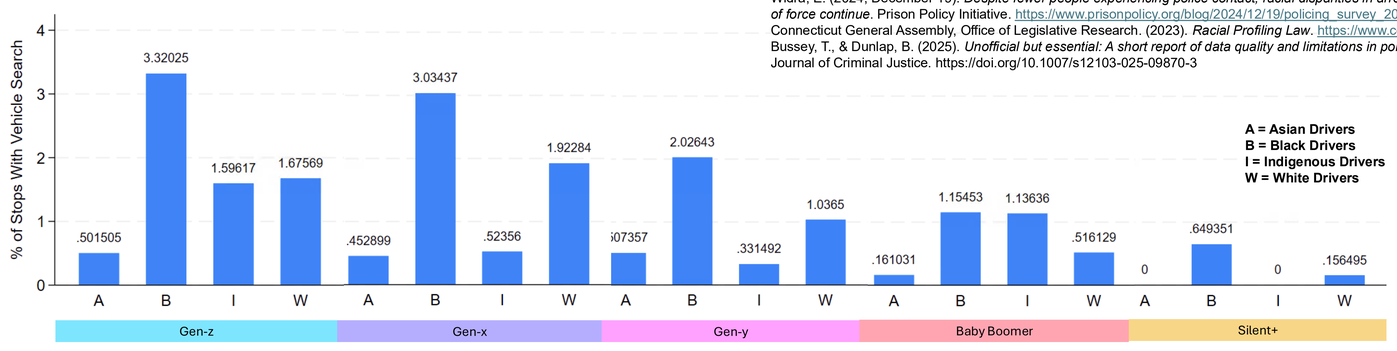
- Driver generation significantly moderates the relationship between race and vehicle search.
- Gen-z Black males are the most likely to receive a vehicle search (for Gen-z: Coef. 0.013, p-value = 0) (Base, baby boomers).
- Gen-y overall has the greatest positive effect on probability of a traffic stop (Coef. 0.014, p-value = 0).
- Although graph 3 groups age by generation, multiple regression shows a similar pattern for driver age by year. It displays a negative relation, for every year older probability of a traffic stop decreases by 0.0003.

Model 1: Vehicle Search Percentages by Racial Group





Model 3: Vehicle Search Percentages by Racial Group (Gen-z, Gen-x, Gen-y, Baby Boomer, Silent+)



Conclusion

- Race is a statistically significant predictor of a vehicle search occurring during a traffic stop.
- Asian drivers are generally the least likely to receive a vehicle search.
- Gen-z Black males are the most likely to receive a vehicle search.
- Age significantly moderates the relationship between race and vehicle search with older drivers generally exhibiting lower probability of vehicle search.
- Gen-y has the strongest positive effect on likelihood of a vehicle search.
- Gender significantly moderates the relationship between race and vehicle search with males exhibiting higher probability of vehicle search.
- The findings of this research suggest that racial discrepancies are not the same across all demographics and vary based on identity markers sex and age.
- This information observes trends in Connecticut which can be compared against other states to reach more nuanced conclusions.
- More data, detailing every state could provide insights as to what policies or police training programs are affective in reducing discrimination during traffic stops

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