



Racial Identity Profiling: Quantifying Disparities in Police Stops in California

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Introduction

Police stops are the everyday interactions between law enforcement offices (LEOs) and civilians and act as the frontend to the justice system. A 2015 California bill requires LEOs to report information about each police stop, including who they stop and the circumstances around the stop.

Contra Costa County: diverse county in California, site of intervention study/training.

Research goals:

1. Visualize, describe, and measure racial disproportionality in stops among youth (10-17) in Contra Costa County (CCC)
2. Analyze disproportionalities in reasons for stops, actions taken during stops, results of stops, and durations of stops

Data

Dataset: 1478 youth stopped in Contra Costa County in 2021 and 2022

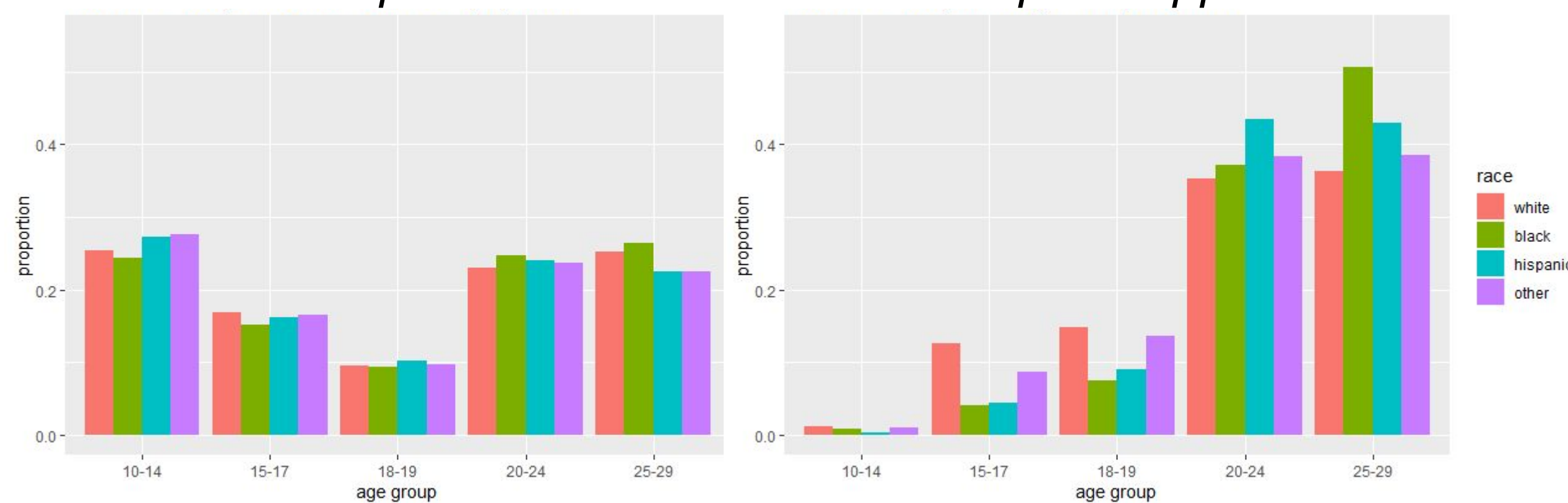
Variables of interest (categorical & numerical): race, duration of stop, reason for stop, action during stop, result of stop.

Population: 5-year estimates of youth population by race and age from 2022 ACS results

Distribution of Proportions of Race by Age Group

Full Population

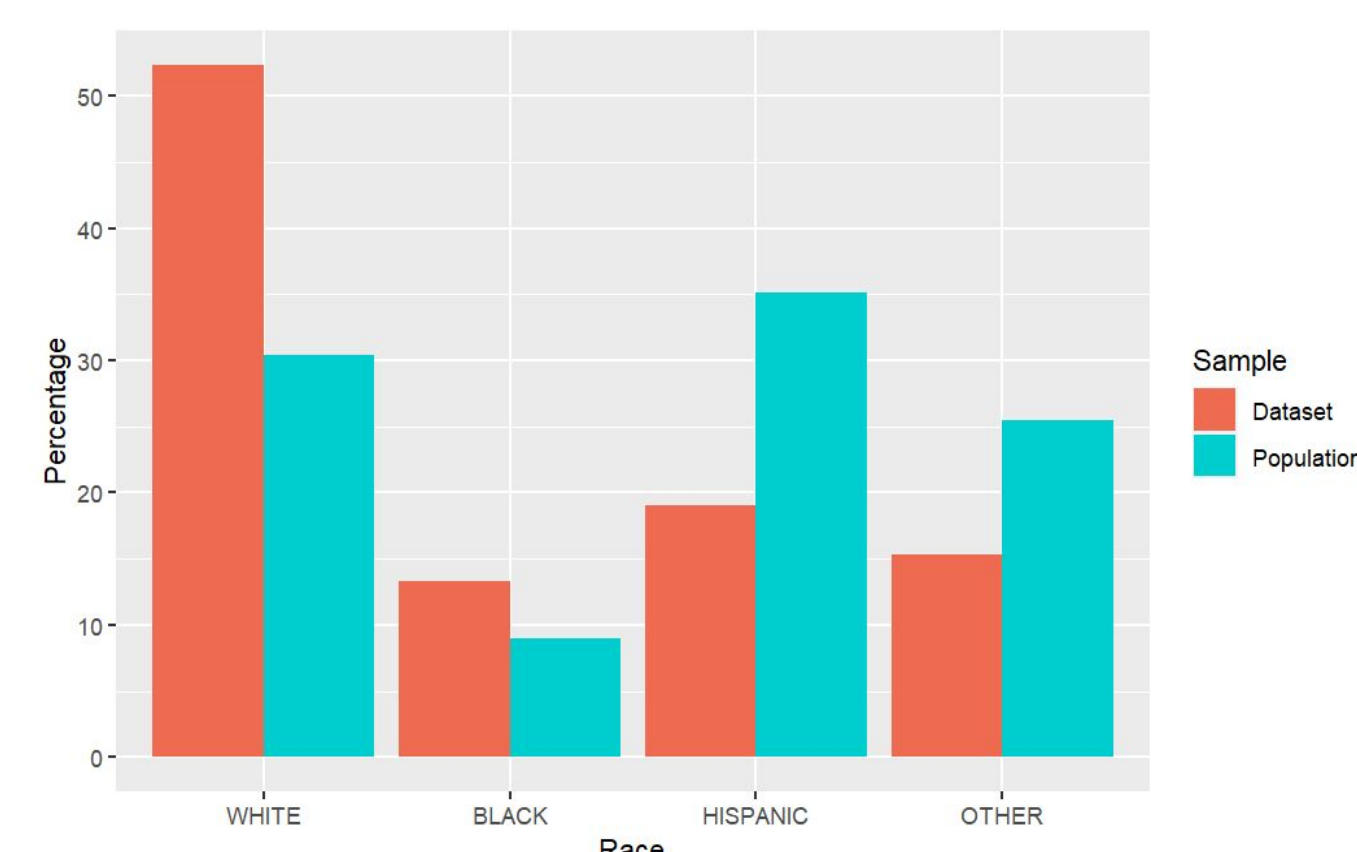
People Stopped



Compared to full population, we see steeper increases in the proportion of people stopped and identified as Black between 15-19 to 20-24 age groups vs the proportion of people stopped and identified as White.

Racial Demographics: Dataset vs Population

- White and Black youth are overrepresented in stops, Hispanic youth and youth of other races are underrepresented in stops.
- Logistic Regression reveals that percentage of Hispanic youth stopped is significantly lower than percentage of White youth



Analysis and Results

REASON FOR STOP

1. **Traffic Violation**
2. **Reasonable Suspicion** (of committing a crime)
3. **Other** (includes Suspected Truant (skipping school), Consensual Search, Wanted Person, Education Code, Mandatory Supervision, School Policy)

Percentage of Youth Stopped for Various Reasons, by Race

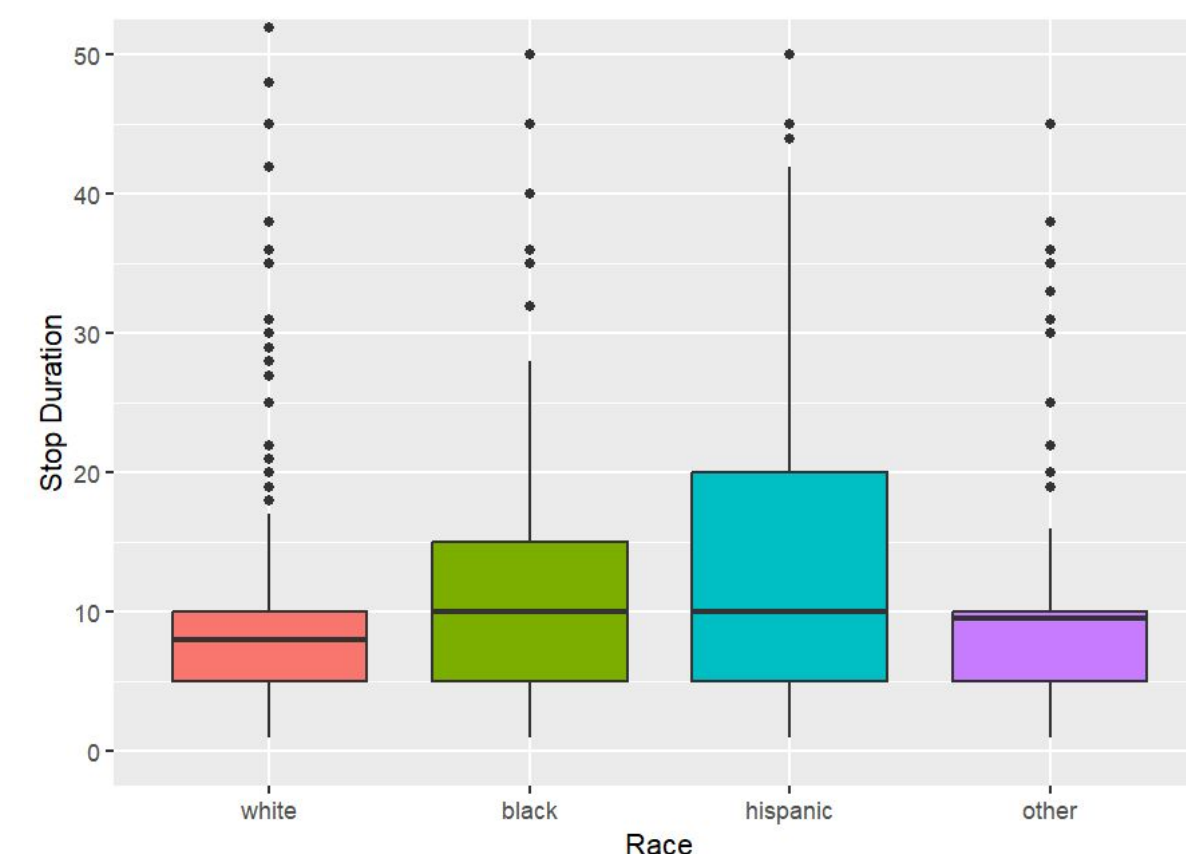
	White	Black	Hispanic	Other
Traffic Violation	76.3	49.7	70.8	80.2
Reasonable Suspicion	21.7	44.6	21.0	16.7
Other Reason	1.9	5.56	8.2	3.1

- Chi-square test of independence reveals the reason an individual is stopped depends on their race.
- Logistic regression shows Black, Hispanic youth have higher odds of being stopped than White youth for crimes that are not traffic violations.

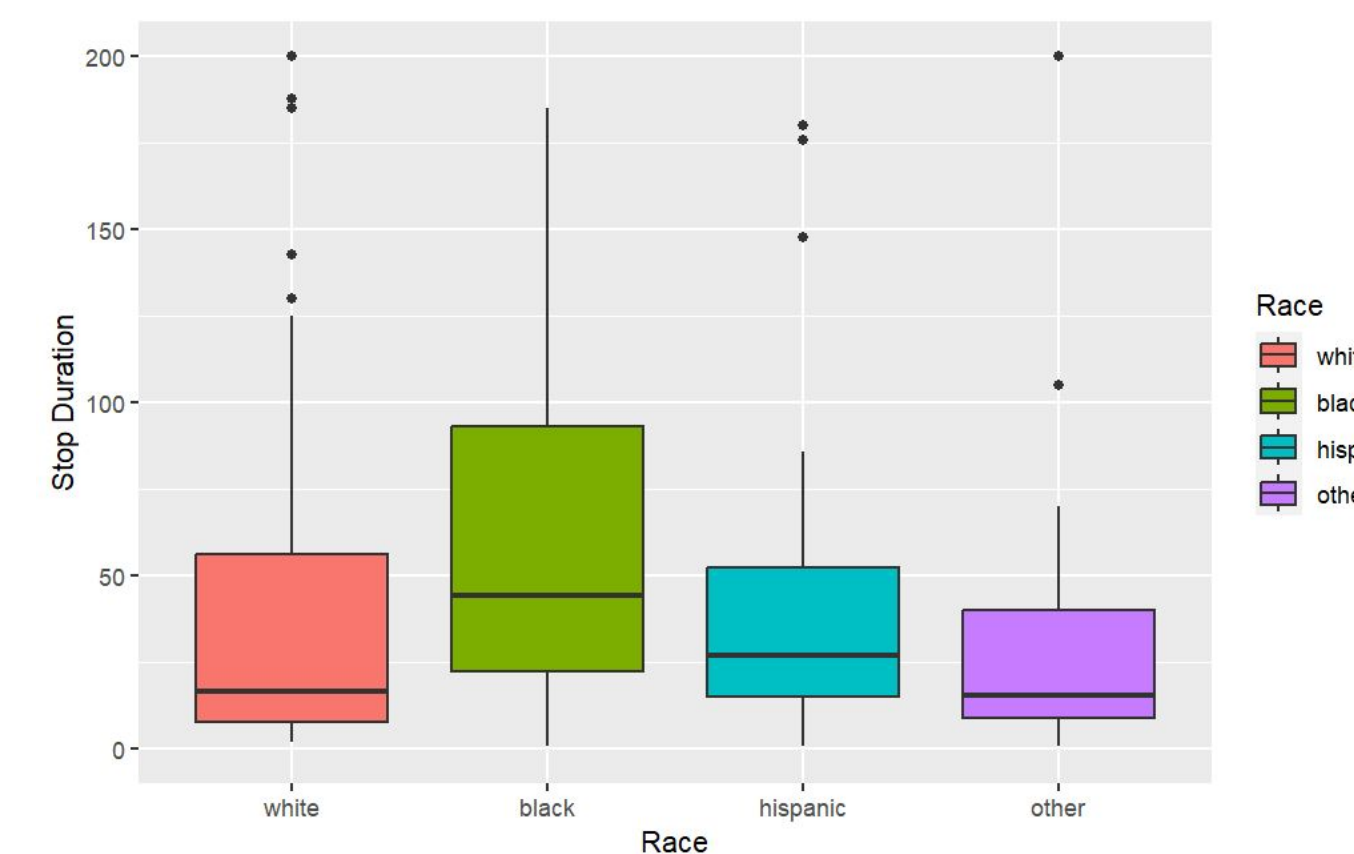
STOP DURATION

Distribution of Stop Duration, by Race

Traffic Violations



Reasonable Suspicion



- Two sample t-tests showed no significant differences in mean stop duration between individuals stopped for traffic violations or "other" reasons.
- Two sample t-tests showed that Black youth, on average, are stopped for significantly longer than White youth for reasonable suspicion, and Hispanic youth, on average, are stopped for significantly longer than White youth for truancy.

ACTION TAKEN DURING STOP

Non-Severe Actions	Severe Actions
Curb Detention, Photo Request to Search Person/Property, Written Statement, Other Contact	Removal from Vehicle, Sobriety Test, Handcuffing, Patrol Car Detention, Canine Search/Bite, Firearm Use, Person/Property Search, Vehicle Impounding

- Logistic regression shows that whether the reason is a traffic violation or reasonable suspicion, Black and Hispanic youth have higher odds (between 2-3x more likely) of severe actions being taken against them than White youth.

Chi-squared tests and logistic regression reveal racial disparities in terms of the specific actions taken by officers during stops in addition to their severity.

- Removal from vehicle by order, curbside detention, and searches are more likely for Hispanic youth than White youth when stopped for traffic violations.
- Handcuffing, patrol detention, and searches are more likely for Black youth than White youth when stopped for reasonable suspicion.

RESULT OF STOP

Using logistic regression, we found that Black youths, Hispanic youths, and youths of other races were more likely to have a severe result of stop than White youths when stopped for reasonable suspicion. Specifically, stops for Black youth are more likely to result in custodial arrest without warrant, and stops for youth of other races are more likely to result in being placed in a psychiatric hold.

Non-Severe Results	Severe Results
Warning, Citation, In Field Cite and Release, Field Interview, Non-Criminal Transport, Contact Legal Guardian, Referral to School Admin, Referral to School Counselor	Placed in Psych Hold, Custodial Arrest with Warrant, Custodial Arrest Without Warrant, Contact US Homeland Security

Conclusions

Compared to demographic data, some minorities are underrepresented in the dataset and others are overrepresented compared to White youth. Examining the circumstances around the stops, we find disproportionalities in the opposite direction. Black and Hispanic youths are more likely to be stopped than White youths for reasons besides traffic violations. Black youths are stopped significantly longer than White youths for reasonable suspicion. Black and Hispanic youths are more likely to have severe actions taken against them during the stop compared to White youths, and all minority groups are more likely to have a severe result of stop compared to White youths.