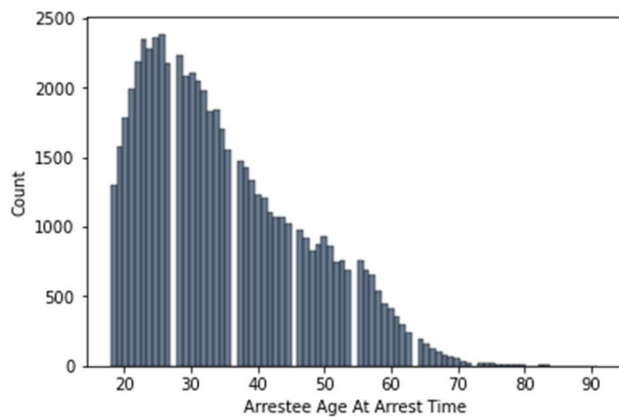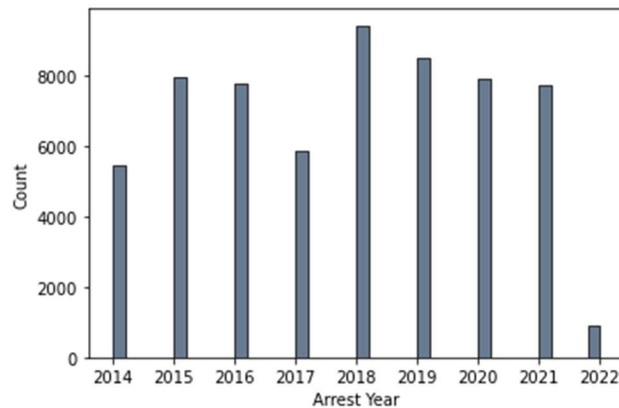Calvin Cusick

Malachai Cravens

Samuel Slomowitz

Race and Police Arrests: What We Can and Cannot Learn from Arrest Data

Introduction

Racial bias exists in use-of-force arrests and white police officers with less experience have a higher arrest rate ("Police Use of;" "Whose Help Is"). Specifically, Black civilians are more likely to be arrested by White officers (Wright and Headley, 2020).

Our dataset, from Kaggle.com, contains Dallas Police Arrest data from 2014 to 2022 (https://www.kaggle.com/datasets/aaronnichowilliams/dallas-police-activity). We sought to determine which years had the most years had the most arrests and which ages had the most prevalence in the arrest data.

Given our objectives, we recognize that we are not criminologists, sociologists, or law-enforcement professionals. We are simply analyzing police arrests data, which includes demographic variables. However, we are not in any way claiming that certain ethnic or racial group are more prone to commit certain crimes, get arrested, or be more dangerous to others. Rather, we are creating data visualizations for more qualified experts to draw their own conclusions. Our analysis and call-to-action is simply our take on the data and does not reflect any compelling statements, which some people may take offense or take out of context. We urge the reader to not use our data analysis to make any uninformed or misguided decisions about others.

Our cleaned data has 4,392 rows and 9 columns (Race, Day, Drug Related, Weapon, Gender, Year, Arrest Count, and Average Age).

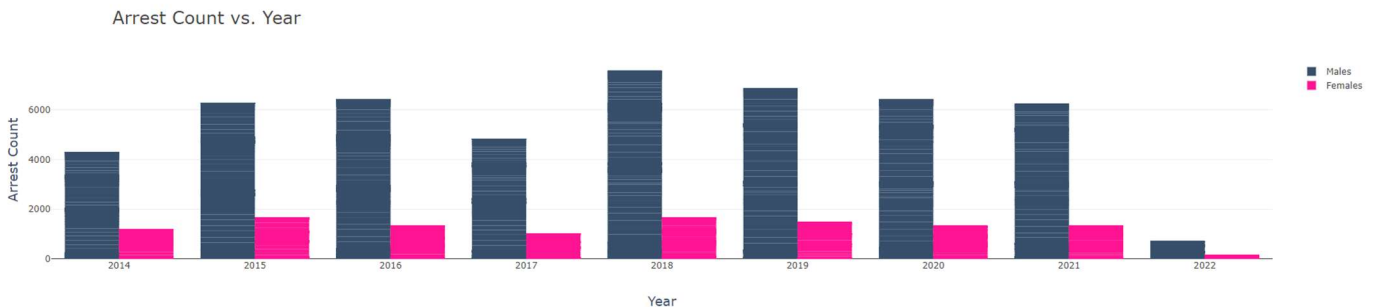|	race	day	drugRelated	weapon	gender	year	genderCount	arrestCount	avgAge
0	American Indian or Alaska Native	Tue	No	None	Female	2014	1	1	50.0
1	American Indian or Alaska Native	Wed	No	None	Female	2014	2	2	39.0
2	American Indian or Alaska Native	Mon	Uknown	None	Female	2014	1	1	45.0
3	American Indian or Alaska Native	Wed	Uknown	None	Female	2014	1	1	46.0
4	Asian	Fri	No	None	Female	2014	1	1	59.0
...	...	...	...	...	...	...	...	...	...
4387	White	Sat	Yes	Unarmed	Male	2022	3	3	32.0
4388	White	Sun	Yes	Unarmed	Male	2022	2	2	44.0
4389	White	Thu	Yes	Unarmed	Male	2022	5	5	45.2
4390	White	Tue	Yes	Unarmed	Male	2022	2	2	25.5
4391	White	Wed	Yes	Unarmed	Male	2022	1	1	33.0

4392 rows × 9 columns

Our data set for the leaflet map has 60,857 rows and 7 columns (Address, Zip Code, Drug Related, Gender, Race, Latitude, and Longitude).

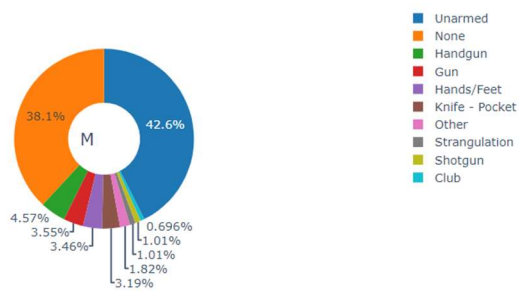|	address	zipcode	drugRelated	gender	race	LAT	LNG
0	500 E JEFFERSON BLVD	75203	No	Male	Hispanic or Latino	32.746823	-96.802681
1	4800 MAPLE AVE	75235	No	Female	White	32.832614	-96.849082
2	13165 N CENTRAL EXPY	75243	No	Male	Black	32.912633	-96.736637
3	1800 CADIZ ST	75201	No	Male	Middle Eastern	32.787760	-96.799427
4	2500 HICKORY ST	75226	No	Female	Black	32.782826	-96.776443
...	...	...	...	...	...	...	...
60852	1100 HOKE SMITH DR	75224	Yes	Male	Hispanic or Latino	32.711405	-96.838591
60853	2800 E LEDBETTER DR	75216	Yes	Male	Black	32.711324	-96.781215
60854	10025 SHOREVIEW RD	75238	Yes	Male	Black	32.878497	-96.707819
60855	1400 N BECKLEY AVE	75203	No	Male	Black	32.746823	-96.802681
60856	10110 TECHNOLOGY BLVD E	75220	No	Male	Hispanic or Latino	32.868529	-96.876118

60857 rows × 7 columns

When considering all race categories, Males were arrested more frequently between 2014 and 2022 in Dallas, TX. This trend was consistent across Black, White, and Latino racial categories. American Indian and other racial groups had too few data points (in the low hundreds vs in the high thousands) to draw similar conclusions.
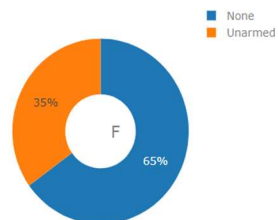

Most weapon types during arrest are None/Unarmed across racial groups.
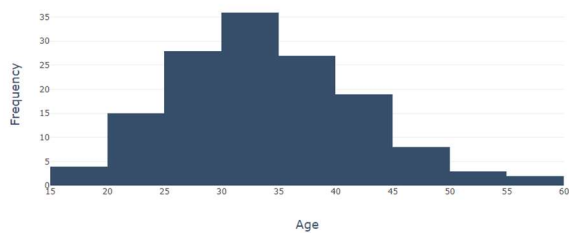
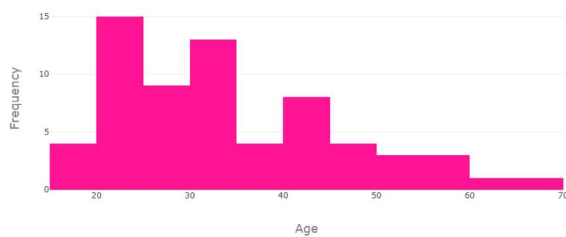Male Gender and Weapon Type — Female Gender and Weapon Type

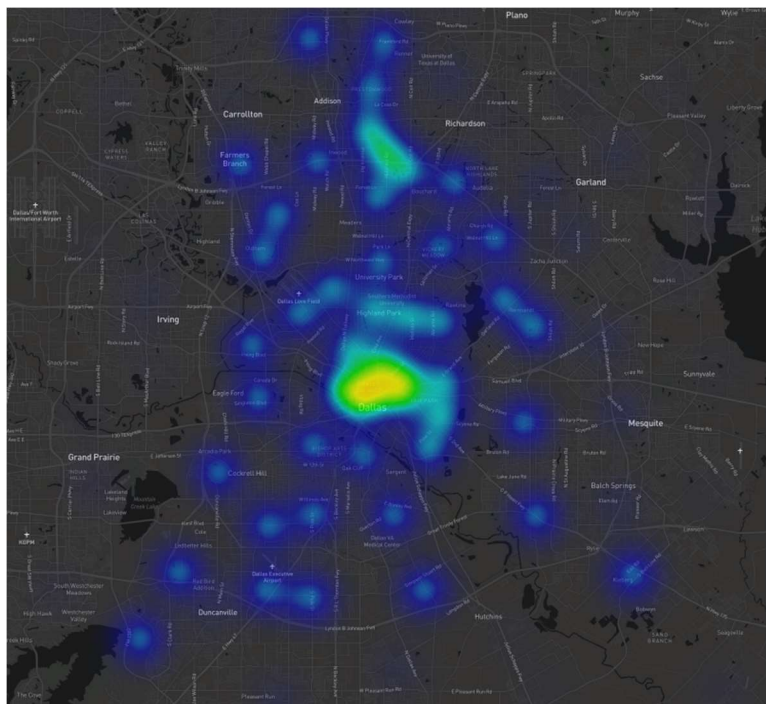The frequency of age in arrest in the upper 20s and low 30s across racial groups.

Male Age Histogram — Female Age Histogram

Most arrest occur in Dallas Downtown zip codes and those near LBJ and I-75.

Conclusions

In conclusion, males are had higher prevalence of arrests than females. In the dataset, Whites, Hispanics, and Blacks racial groups had higher arrest counts while downtown Dallas had higher arrest counts. Most of the weapons in arrests were None/Unarmed, and the average age of arrests was in the 30s.

Limitations

Some limitations include that our data set in limited in time, territorial jurisdiction, amount of numeric data. Further, no statistical tests were done of the data, and the Leaflet map is based on zip code, not addresses.

Call-to-Action

We call on criminologists, sociologists, or law-enforcement professionals to focus on reducing crime in Downtown Dallas as well as near LBJ/I-75. We urge law-enforcement to find methods to identify violent crime and respond to them over non-violent crime. We also call on public officials to create advertisement campaigns against unlawful activity and promote good citizenship among the community.

Works Cited

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   across Civilian and Officer Race." *AEA Papers and Proceedings*,
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Weisburst, Emily K. "'Whose Help Is on the Way?"." *Journal of Human Resources*, 9 Mar.
   2022, http://jhr.uwpress.org/content/early/2022/03/01/jhr.0720-11019R2.abstract.

Wright, II, James E., and Andrea M. Headley. *Police Use of Force Interactions ... -
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   f=R.