

Analysis of Hispanic-White Differences in Traffic Stops and Searches in Jacksonville, NC, 2002-2013

Frank R. Baumgartner, Derek Epp, and Kelsey Shoub¹
University of North Carolina at Chapel Hill
Department of Political Science
<http://www.unc.edu/~fbaum/traffic.htm>

Contact: Frankb@unc.edu

August 31, 2015

¹ Baumgartner is the Richard J. Richardson Distinguished Professor of Political Science at UNC-Chapel Hill. Epp and Shoub are graduate students in political science. We thank UNC undergraduates Katherine B. Elliott, Amirah Jiwa, Morgan Herman, and Reena Gupta for assistance on the logistics of this project. We also acknowledge the assistance of the NC Department of Justice and State Bureau of Investigation for making available the official statistics on which this analysis relies, and for answering technical questions about the organization of this complex database.

Table 1. Overview of the Data

Data Subsets	Observations
Total stops	159,759
-2014	5
-Passengers	3,012
-Checkpoint stops	217
Stops for analysis	156,529
Searches	6,164
Search Rate = 3.94	

Figure 1. Number of Traffic Stops per Year

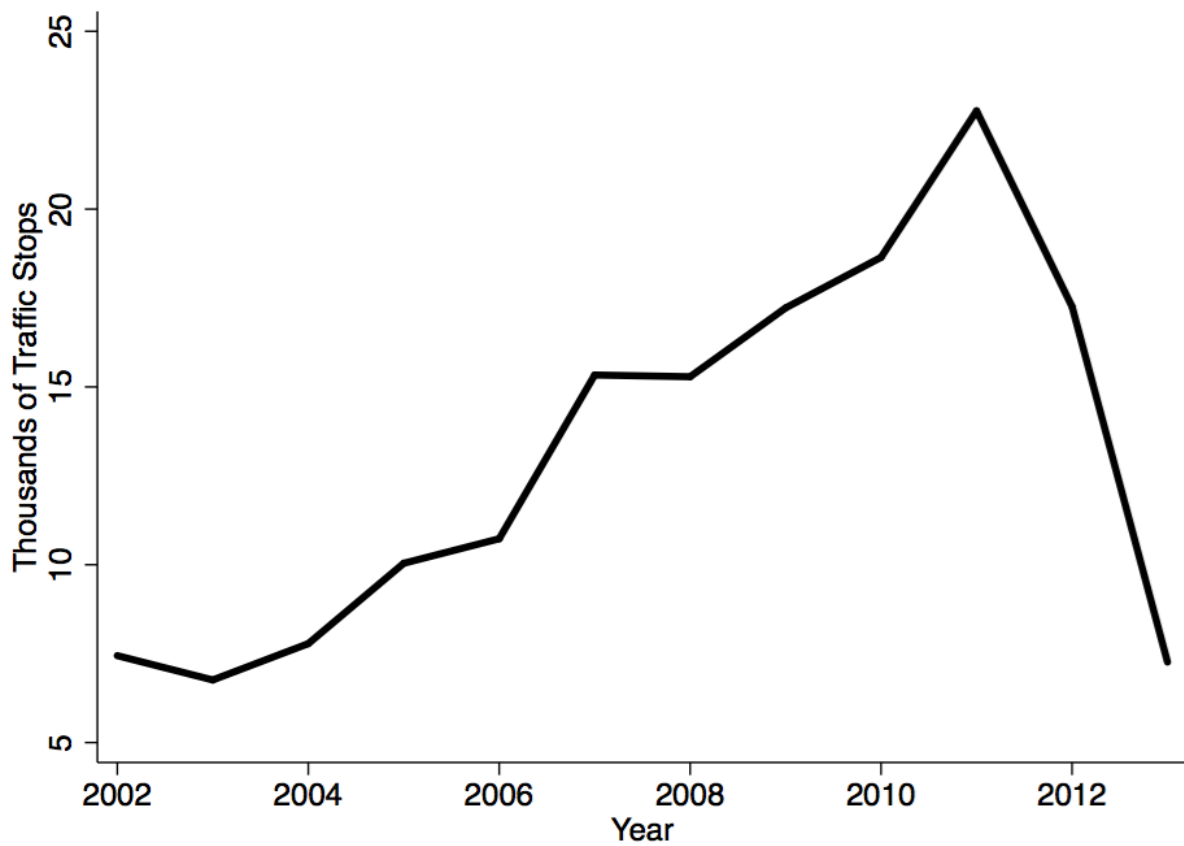


Figure 2. Ethnic Composition of Traffic Stops by Year

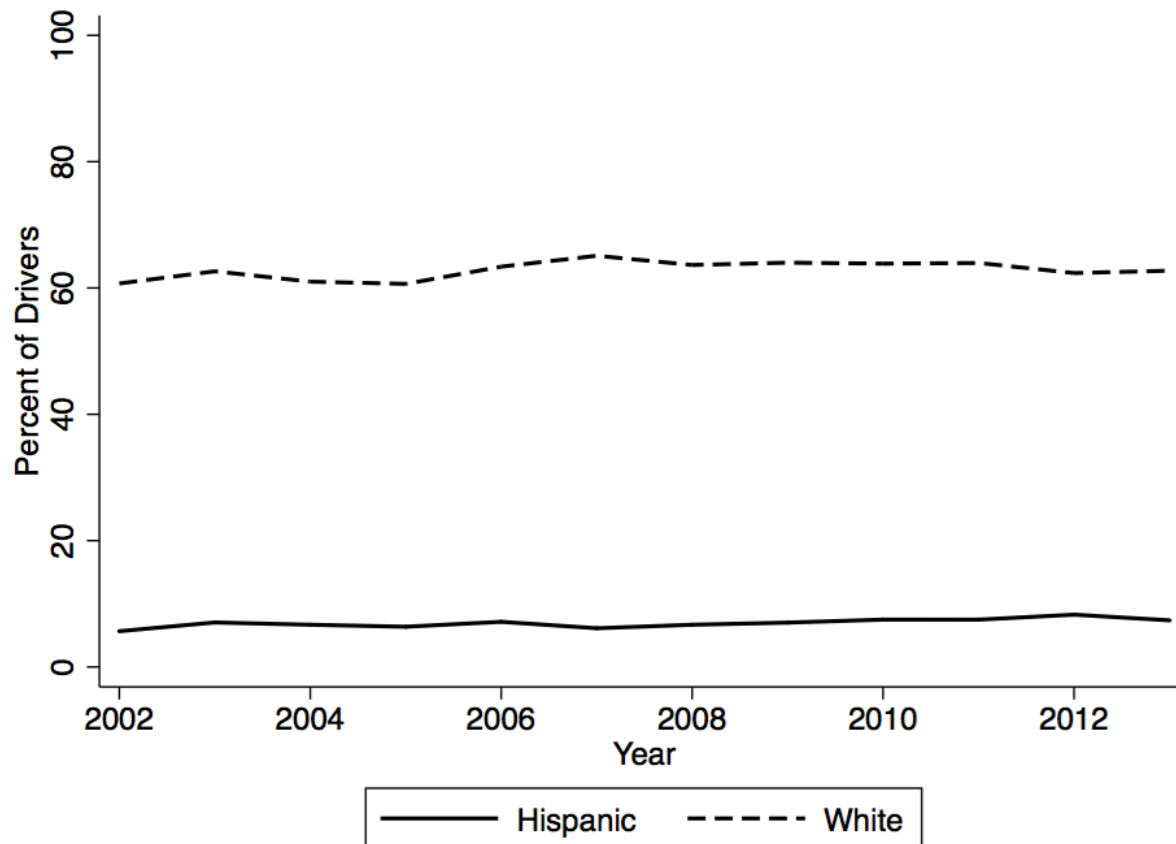


Table 2. Ethnic Composition of Traffic Stops by Purpose, Drivers

Purpose	Number	Percent	
		White	Hispanic
Total Stops	156,529	68.00	7.07
Speed Limit	78,528	73.68	6.88
Stop Light/Sign	15,112	66.42	7.40
Driving Impaired	1,124	65.80	10.77
Safe Movement	9,421	68.65	8.13
Vehicle Equipment	14,249	55.77	7.30
Vehicle Regulatory	16,416	62.75	6.60
Seat Belt	6,261	63.46	4.74
Investigation	5,934	51.00	8.54
Other Vehicle	9,484	63.85	7.68

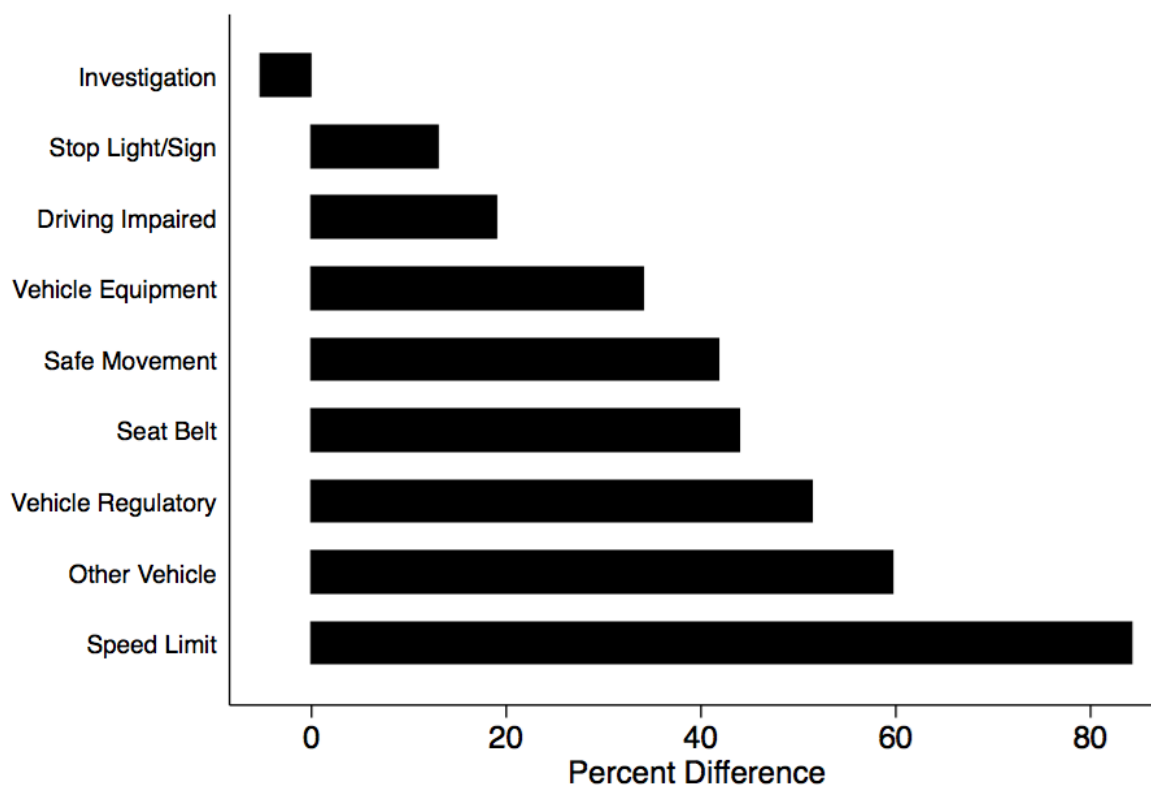
Note: Includes only drivers. Excludes 217 checkpoint stops. Excludes 3,012 passengers.

Table 3. Percent Searched by Ethnicity and Purpose of Stop

Purpose	Number	% Total	% White	% Hispanic	Ratio
					Hispanic:White
Total Stops	156,529	-	68.00	7.07	-
Total Searches	6,164	3.94	2.53	4.07	1.61
Speed Limit	78,528	1.55	1.12	2.06	1.84
Stop Light/Sign	15,112	2.47	1.58	1.79	1.13
Driving Impaired	1,124	32.38	33.33	39.67	1.19
Safe Movement	9,421	4.03	2.95	4.18	1.42
Vehicle Equipment	14,249	7.07	4.59	6.15	1.34
Vehicle Regulatory	16,416	5.18	3.17	4.80	1.51
Seat Belt	6,261	5.99	3.04	4.38	1.44
Investigation	5,934	19.25	15.39	14.60	0.95
Other Vehicle	9,484	4.77	3.09	4.95	1.60

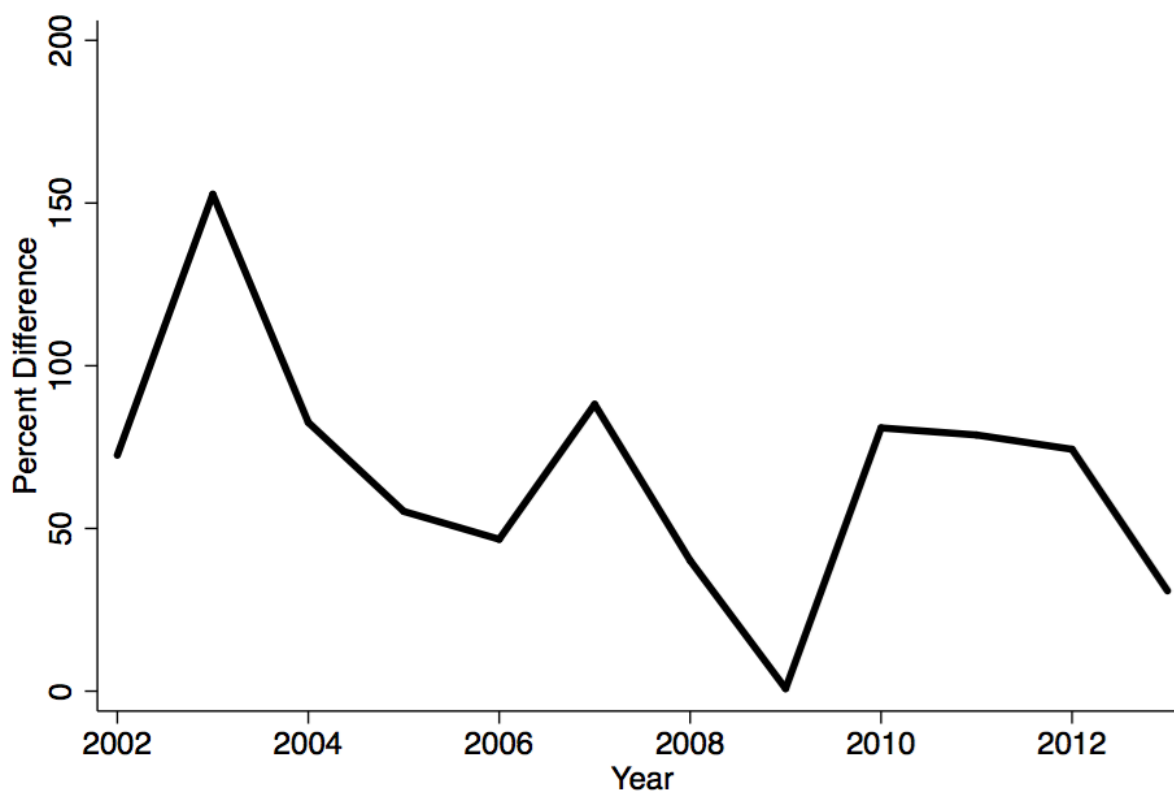
Note: See the appendix for this same table broken down for Men and Women.

Figure 3. Difference in Likelihood of Being Searched, by Ethnicity and Type of Stop



The figure shows the percentage difference in the likelihood of Hispanics being searched as compared to Whites by purpose of stop.

Figure 4. Ethnic Differences in the Likelihood of Search



The figure shows the percentage difference in the likelihood of Hispanics being searched as compared to Whites.

Figure 5. Ethnic Differences in the Likelihood of Search by Gender



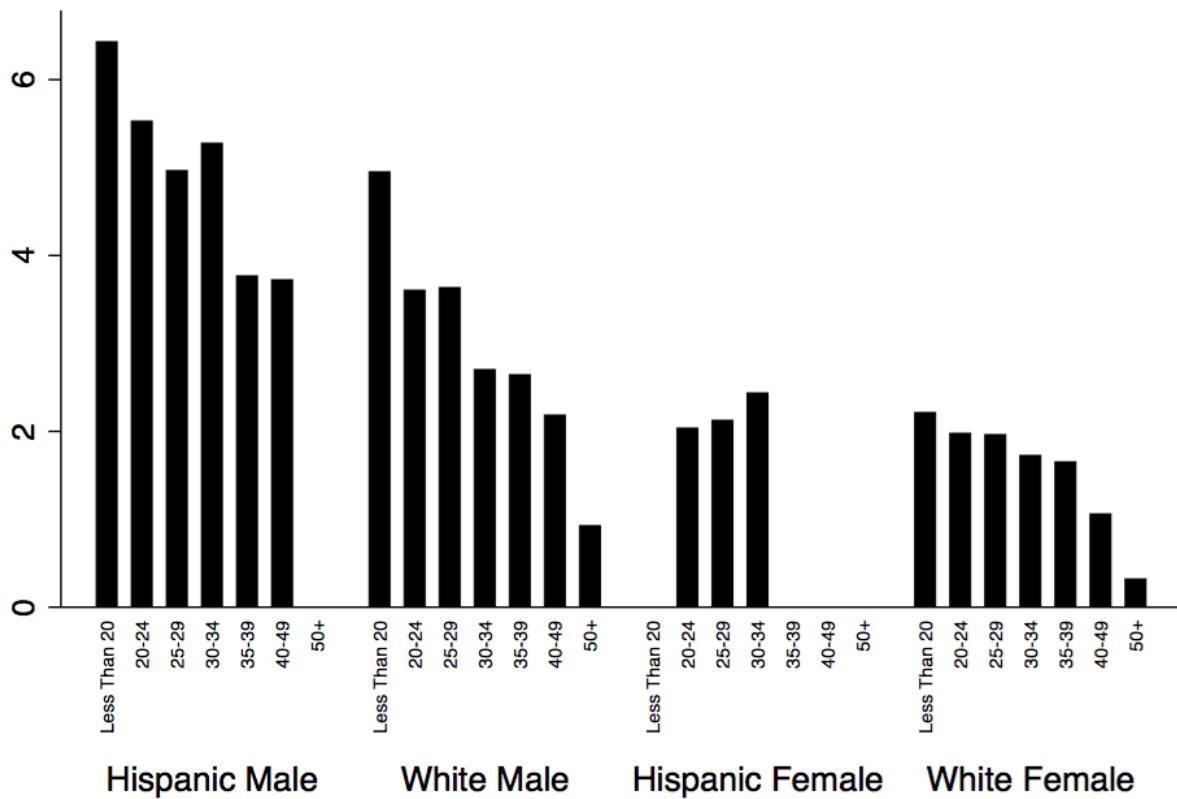
The figure shows the percentage difference in the likelihood of Hispanics being searched as compared to Whites by gender.

Figure 6. Ethnic Differences in the Likelihood of Search by Gender, for Drivers Under 30



The figure shows the percentage difference in the likelihood of Hispanics being searched as compared to Whites by gender for motorists under 30.

Figure 7. Search Rates by Ethnicity, Gender, and Age Group



Based on 156,529 traffic stops from 2002 through 2013, and 6,164 searches. Overall rate of search: 3.94 percent.
 No data are presented for categories with fewer than 10 searches.

Figure 8. Number of Stops, by Ethnicity and Gender

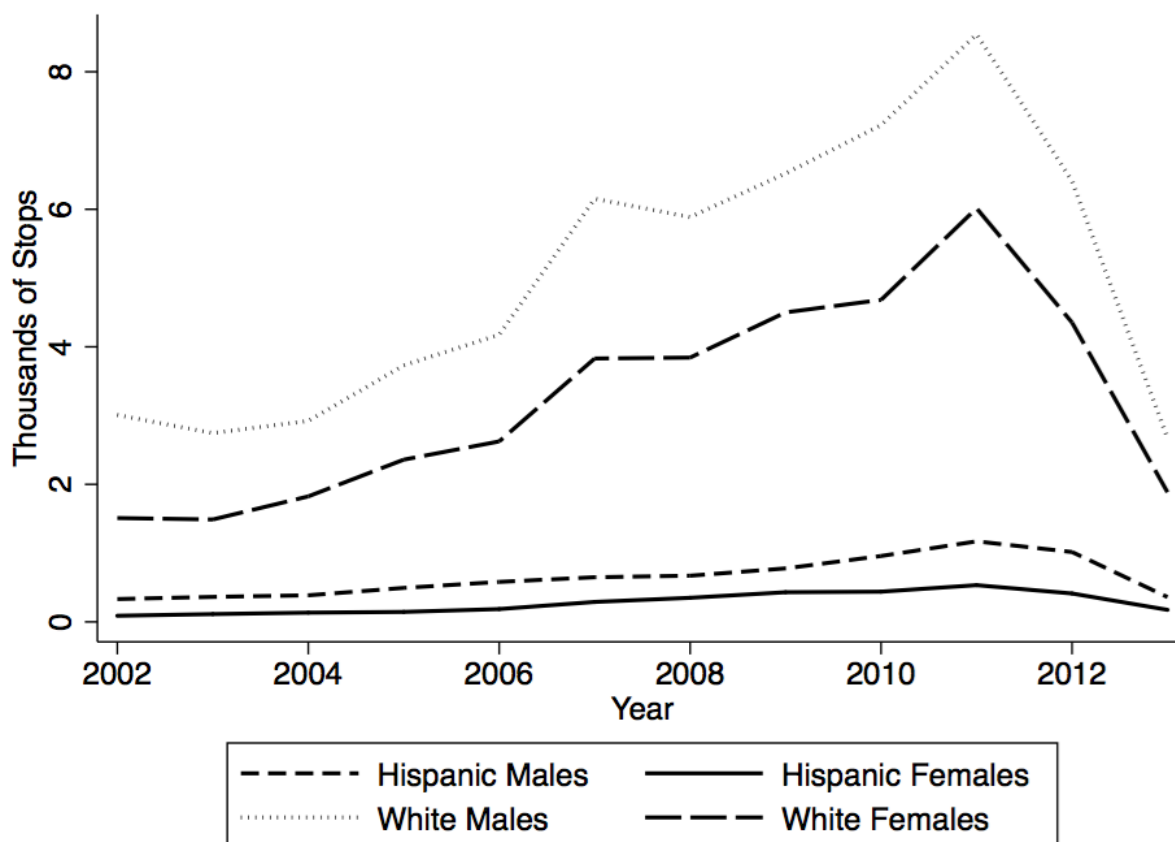


Figure 9. Percent of Stops Resulting in a Search, by Ethnicity and Gender

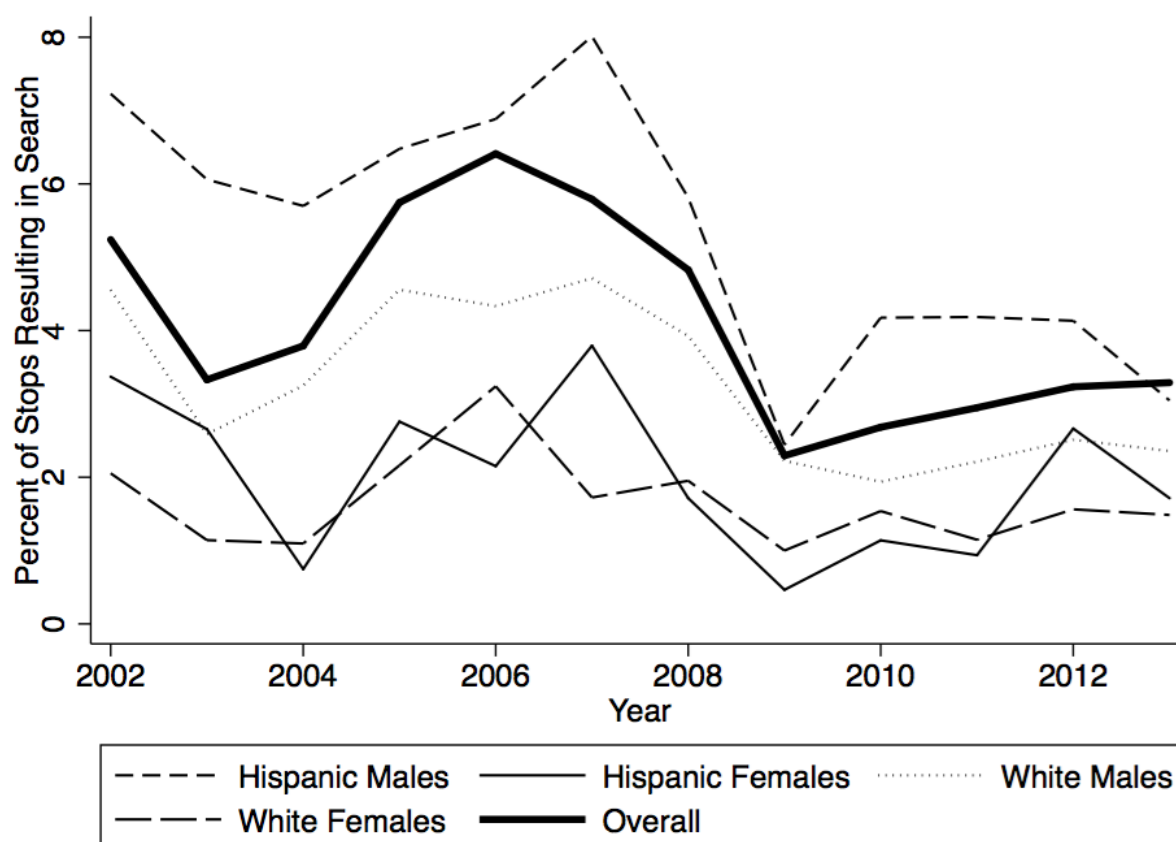


Table 4. Type of Search by Ethnicity

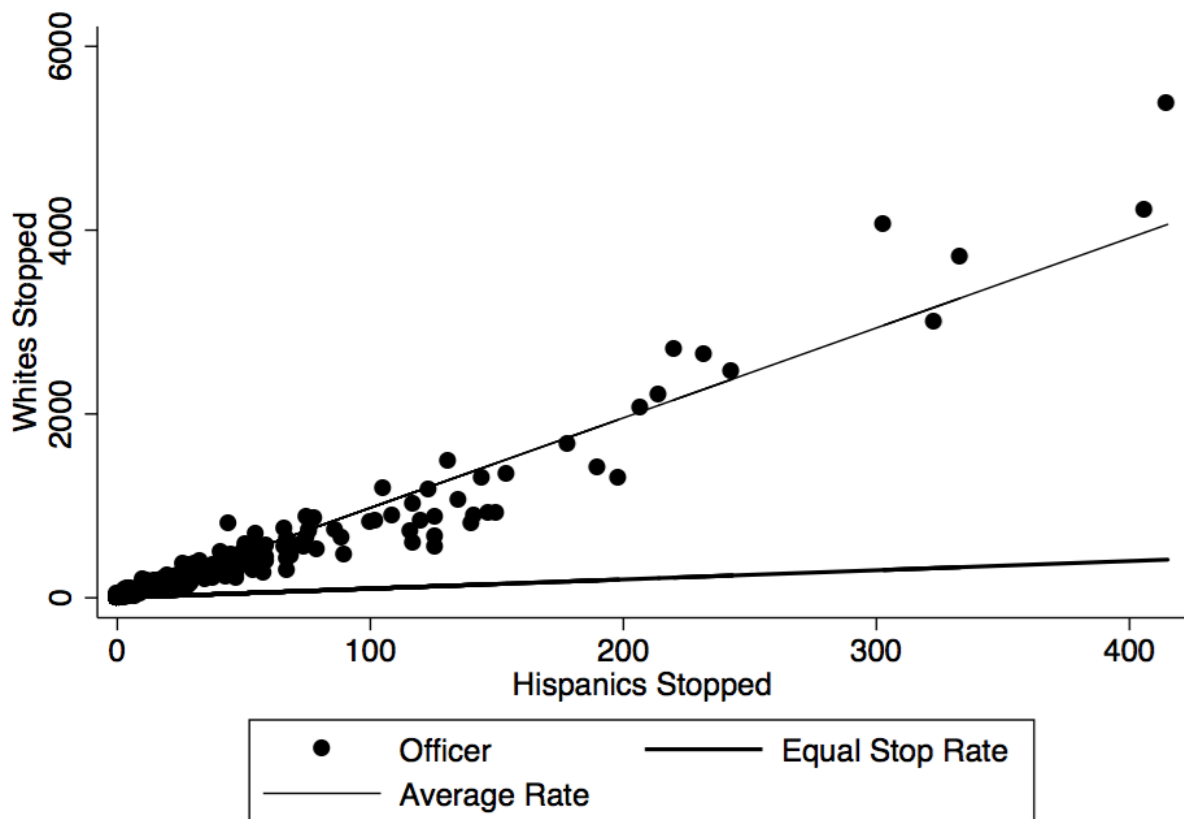
Search Type	Number	% Total	% White	% Hispanic	Ratio
					Hispanic:White
Total Stops	156,529	-	68.00	7.07	-
Total Searches	6,164	3.94	2.53	4.07	1.61
Consent	2,604	1.66	1.08	1.49	1.38
Search Warrant	29	0.02	0.02	0.01	0.50
Probable Cause	897	0.57	0.30	0.61	2.03
Incident to Arrest	2,532	1.62	1.08	1.84	1.70
Protective Frisk	102	0.07	0.04	0.12	3.00

Note: See the appendix for this same table separately for Men and Women.

Table 5. Distribution of Officer IDs by Stop

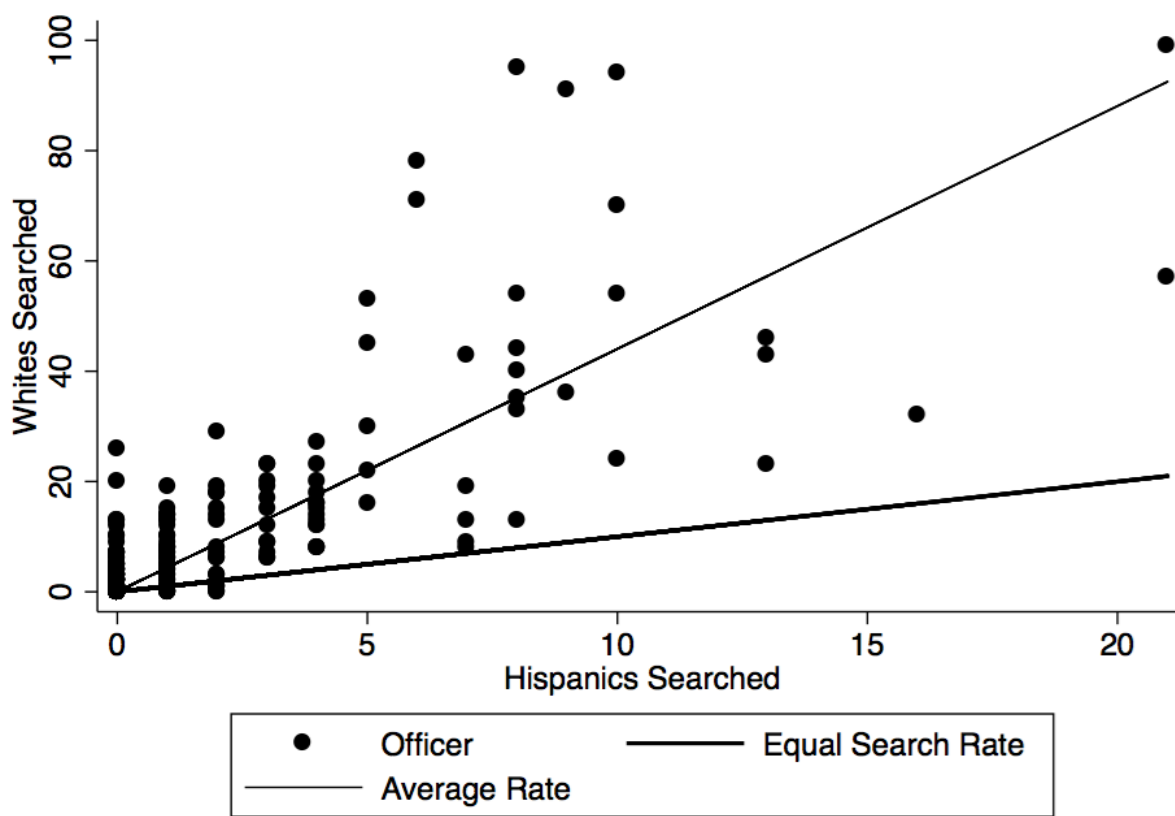
Number of Stops	Officers w/ this many Stops	Percent of Officers	Cumulative Percent	Percent of Stops	Cumulative Percent
1	200	40.40	40.40	0.13	0.13
2 – 10	74	14.95	55.35	0.17	0.30
11 – 100	45	9.09	64.44	1.35	1.65
101 – 1,000	130	26.26	90.71	34.41	36.06
1,001 +	46	9.29	100.00	63.94	100.00
Total	495	100	-	100	-

Figure 10. Number of Hispanic and White Motorists Stopped, by Officer



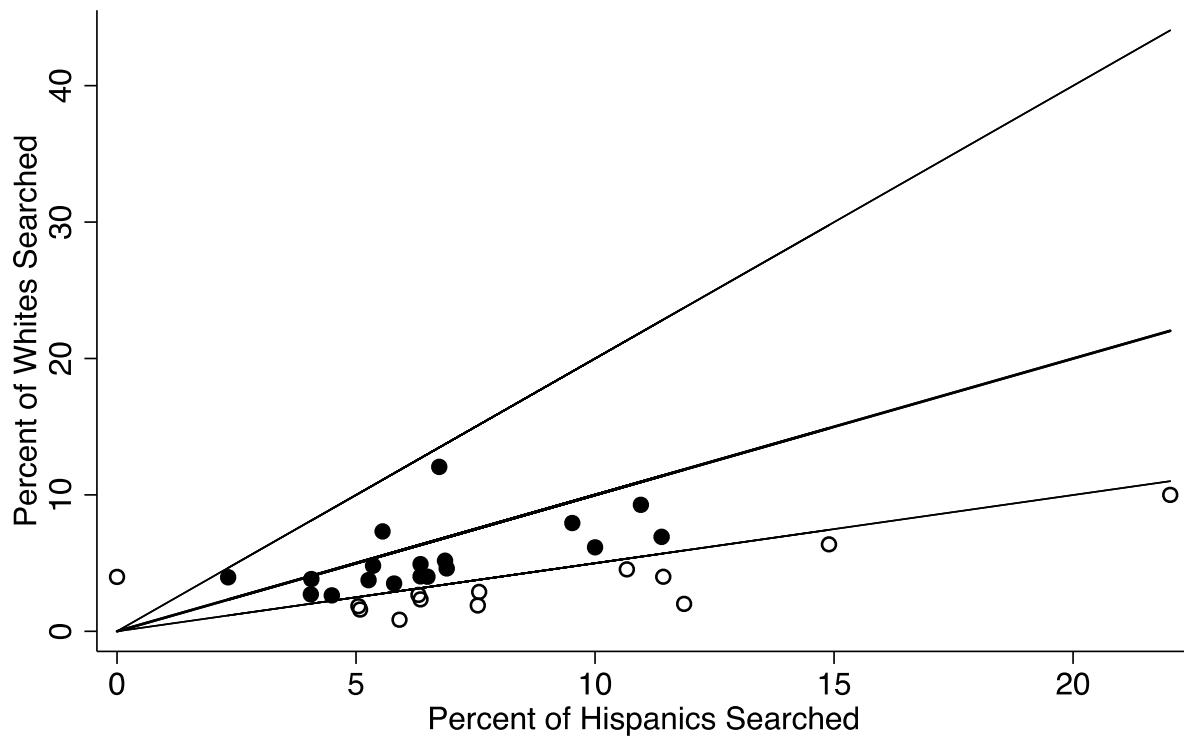
On average, officers stop 9.79 Whites for each Hispanic stopped.

Figure 11. Number of Hispanic and White Motorists Searched, by Officer



On average, officers search 4.40 Whites for each Hispanic searched.

Figure 12. Percent of White and Hispanic Drivers Searched, by Officer



Includes 31 officers with a minimum of 50 White stops, 50 Hispanic stops, and a search rate above the department average of 3.94 for either ethnicity. The hollow circles indicate high disparity officers. 1 officers search Whites at more than twice the rate that they search Hispanics. 12 officers search Hispanics at more than twice the rate that they search Whites.

Appendix

Table A1. Ethnic Composition of Traffic Stops by Purpose, Passengers

Purpose	Number	Percent	
		White	Hispanic
Total Stops	3,008	36.88	7.25
Speed Limit	455	46.00	9.23
Stop Light/Sign	172	23.12	6.98
Driving Impaired	78	70.15	14.10
Safe Movement	171	45.62	6.43
Vehicle Equipment	566	32.60	4.06
Vehicle Regulatory	378	36.21	7.94
Seat Belt	208	26.90	5.29
Investigation	773	34.31	7.63
Other Vehicle	207	43.09	9.18

Table A2. Percent of Men Searched by Ethnicity and Purpose of Stop

Purpose	Number	% Total	% White	% Hispanic	Ratio
					Hispanic:White
Total Stops	97,649	-	66.75	7.95	-
Total Searches	4,956	5.08	3.12	5.05	1.62
Speed Limit	47,408	2.13	1.48	2.74	1.85
Stop Light/Sign	9,230	3.14	1.92	2.10	1.09
Driving Impaired	839	34.21	34.85	40.20	1.15
Safe Movement	6,585	4.48	3.02	4.78	1.58
Vehicle Equipment	9,151	8.81	5.67	7.87	1.39
Vehicle Regulatory	9,580	6.88	3.92	6.46	1.65
Seat Belt	4,004	8.07	3.95	5.29	1.34
Investigation	4,260	21.41	16.36	16.67	1.02
Other Vehicle	6,592	5.67	3.46	5.11	1.48

Table A3. Percent of Women Searched by Ethnicity and Purpose of Stop

Purpose	Number	% Total	% White	% Hispanic	Ratio
					Hispanic:White
Total Stops	58,880	-	70.02	5.60	
Total Searches	1,208	2.05	1.61	1.76	1.09
Speed Limit	31,120	0.67	0.59	0.49	0.83
Stop Light/Sign	5,882	1.41	1.08	1.12	1.04
Driving Impaired	285	27.02	29.80	36.84	1.24
Safe Movement	2,836	3.00	2.78	2.49	0.90
Vehicle Equipment	5,098	3.94	2.82	2.44	0.87
Vehicle Regulatory	6,836	2.81	2.21	1.18	0.53
Seat Belt	2,257	2.30	1.66	2.78	1.67
Investigation	1,674	13.74	13.16	8.53	0.65
Other Vehicle	2,892	2.70	2.29	4.44	1.94

Table A4. Type of Search by Ethnicity: Men

Search Type	Number	% Total	% White	% Hispanic	Ratio Hispanic:White
Total Stops	97,649	-	66.75	7.95	
Total Searches	4,956	5.08	3.12	5.05	1.62
Consent	2,120	2.17	1.34	1.88	1.40
Search Warrant	24	0.02	0.02	0.01	0.50
Probable Cause	743	0.76	0.38	0.75	1.97
Incident to Arrest	1,984	2.03	1.32	2.27	1.72
Protective Frisk	85	0.09	0.06	0.14	2.33

Table A5. Type of Search by Ethnicity: Women

Search Type	Number	% Total	% White	% Hispanic	Ratio Hispanic:White
Total Stops	58,880		70.02	5.60	
Total Searches	1,208	2.05	1.61	1.76	1.09
Consent	484	0.82	0.69	0.58	0.84
Search Warrant	5	0.01	0.01	0.00	-
Probable Cause	154	0.26	0.18	0.27	1.50
Incident to Arrest	548	0.93	0.71	0.85	1.20
Protective Frisk	17	0.03	0.02	0.06	3.00

Figure A1. Stops by Day of the Week

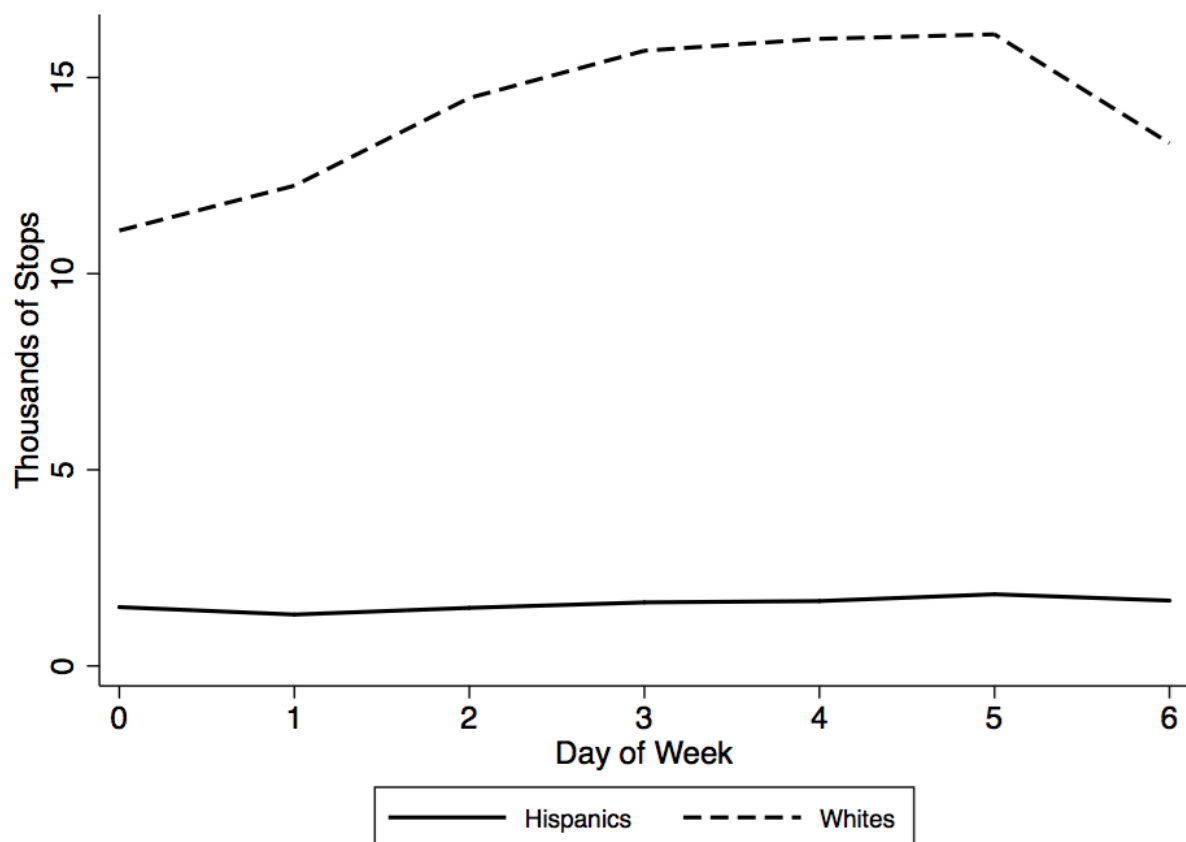


Figure A2. Searches by Day of the Week

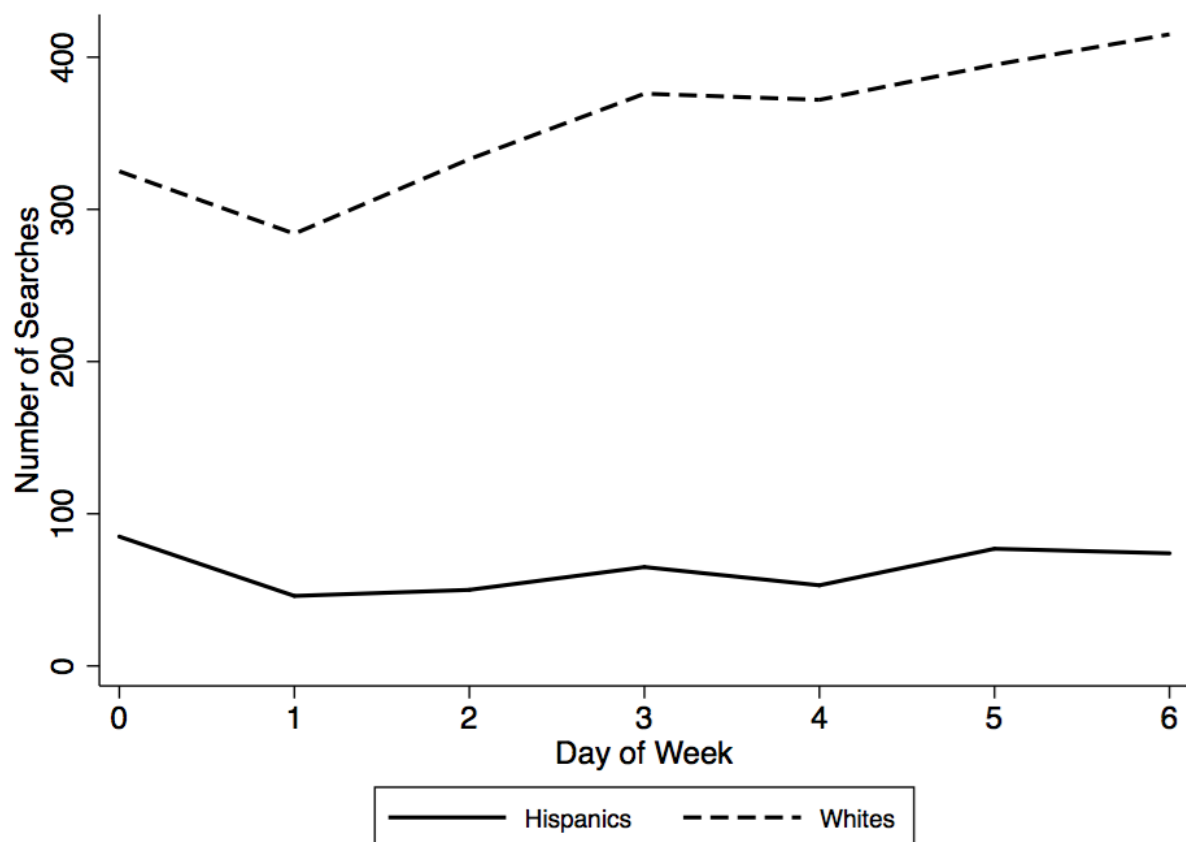
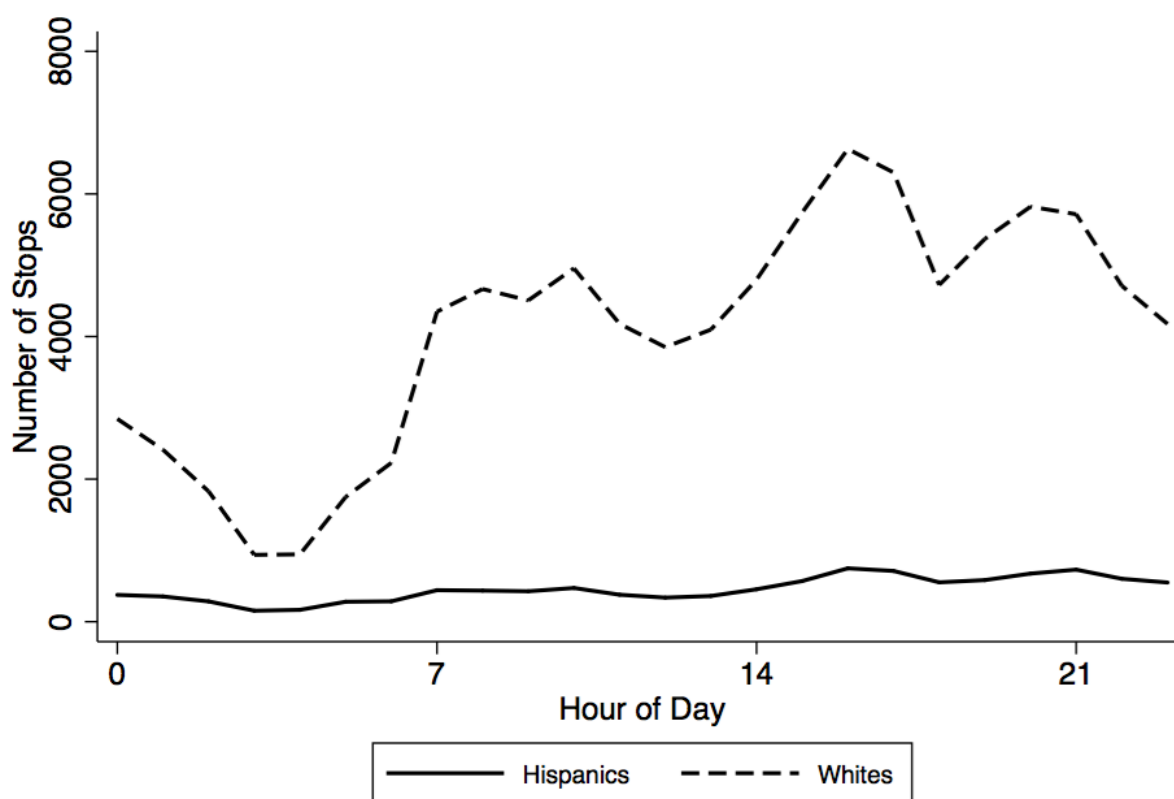
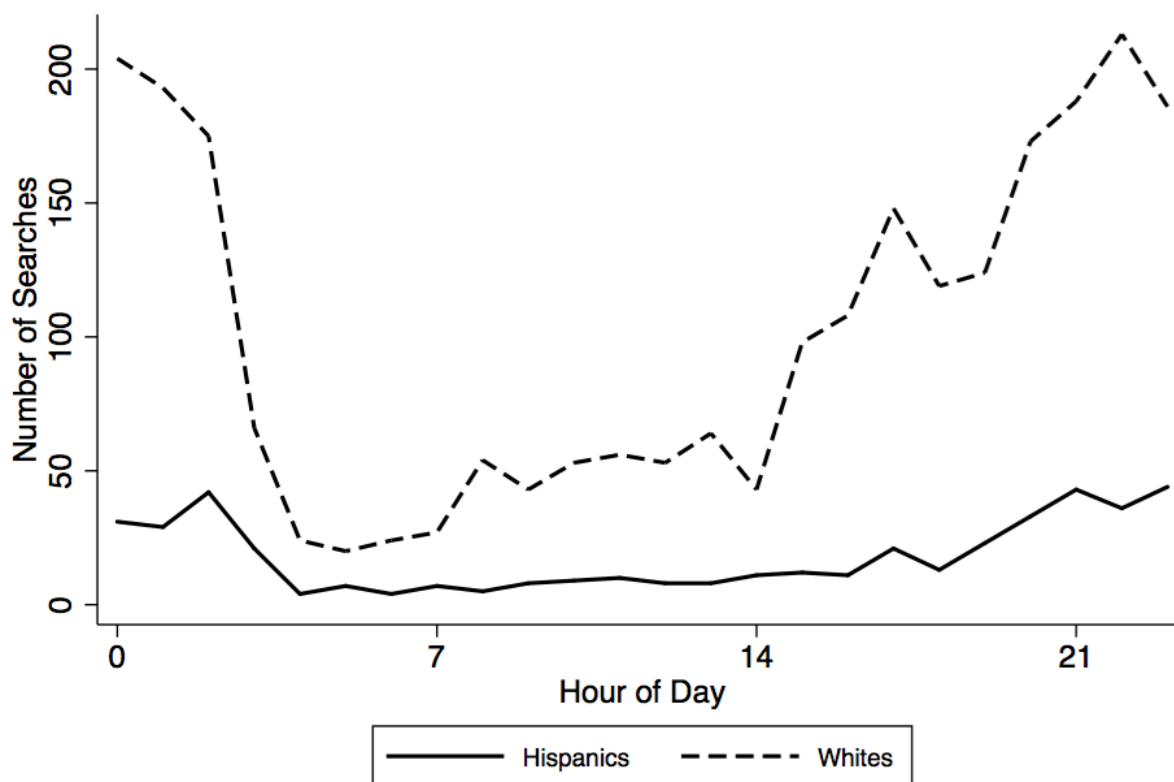


Figure A3. Stops by Hour of the Day



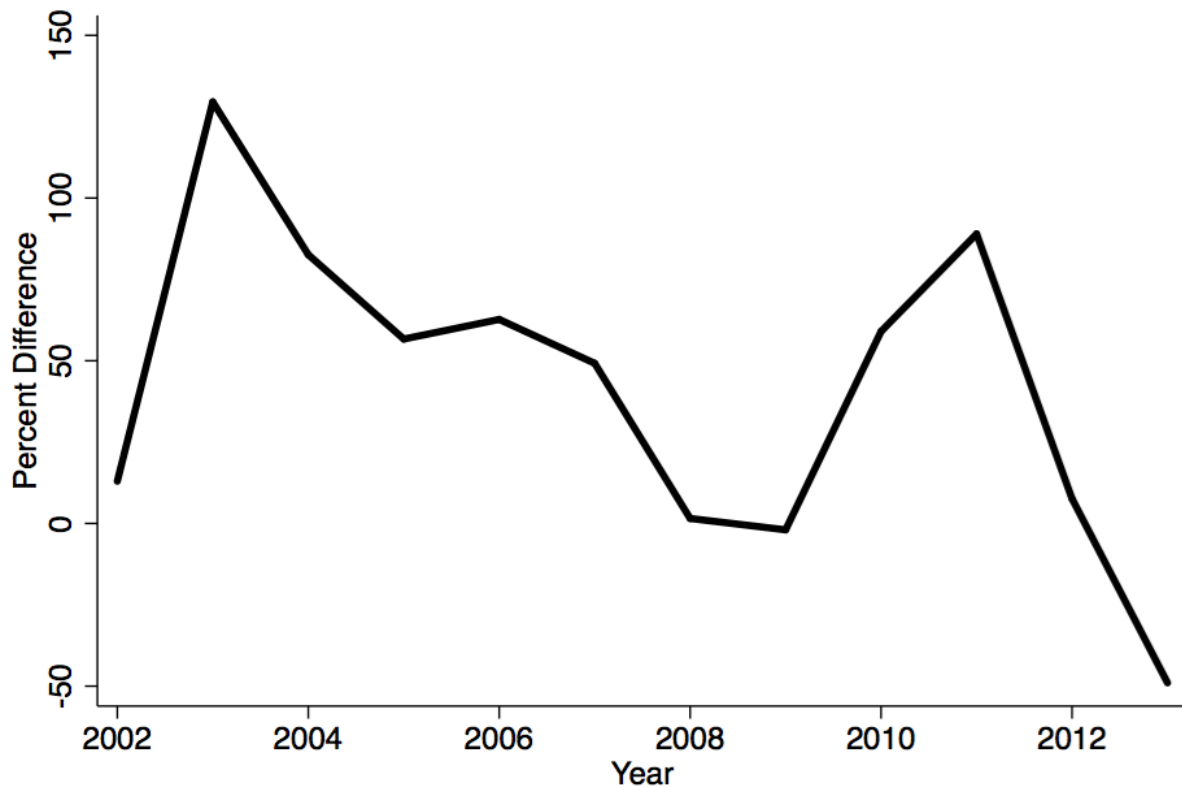
The figure excludes cases where the hour and minute was exactly 0:00. These cases were presumed to be missing data.

Figure A4. Searches by Hour of the Day



The figure excludes cases where the hour and minute was exactly 0:00. These cases were presumed to be missing data.

Figure A5. Ethnic Differences in the Likelihood of Search: Consent Searches Only



The figure shows the percentage difference in the likelihood of Hispanics being searched as compared to Whites; consent searches only.

Table A6. Likelihood of Finding Contraband Given a Search, by Ethnicity

Contraband	Number	% Total	% White	% Hispanic
Yes	1,549	25.13	25.52	20.44
No	4,615	74.87	74.48	79.56
Total	6,164	100.00	100.00	100.00

Table A7. Differential Outcomes by Whether or not a Search Occurs

Race	Search Occur	N	No Action	Verbal Warning	Written Warning	Citation Issued	Arrest	Total
White	No	96,413	2.06	15.61	15.45	66.04	0.85	100.00
Hispanic	No	10,609	1.98	14.41	13.28	69.12	1.21	100.00
Total	No	150,365	2.31	16.12	15.62	64.88	1.08	100.00
White	Yes	2,500	2.80	5.44	5.80	29.40	56.56	100.00
Hispanic	Yes	450	3.56	3.56	4.22	33.78	54.89	100.00
Total	Yes	6,164	2.89	4.64	6.42	30.69	55.35	100.00