

Are Black Officers Underrepresented in Police Departments across the United States?

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Abstract

The authors examine to what extent police diversity among Blacks has changed over time relative to their state's Black constituency across all states in the U.S. between 2000 and 2020. Using data from the Law Enforcement Management and Administrative Statistics (LEMAS) surveys in 2000 and 2020 together with Census estimates of each state's Black population both years, the authors compare the ratio of the percentage of Black police officers to the percentage of Blacks in each state. Although Black police officer representation relative to Blacks' overall share of their state's population has increased in most states over the 20-year period, this ratio was less than 1.0 in 14 states in both years. The most severe underrepresentation of Black police officers relative to their Black populations was in the states of Virginia and both Carolinas.

Keywords

Police, Black Officers, Workforce Diversity

1. Introduction

The disparity between the racial makeup of each police department's full-time sworn officers and the communities they serve has been the subject of academic debate long before Rodney King was severely beaten by a group of white Los Angeles Police Department officers on March 3, 1991. On May 25, 2020, George Floyd, an African-American, was murdered by a white police officer in Minneapolis. This debate resurfaced with increased intensity.

Periodic Law Enforcement Management and Administrative Statistics (LEMAS) surveys have been used to assess minority representation in police departments. Gustafson (2013) used a 2000 LEMAS survey to examine a national sample of 180 cities/municipalities with at least 100 officers serving populations of 50,000

or more. He found that the proportions of Black and Latino representation in administrative police roles are greater in larger departments paying higher salaries. [Wilson and Grammich \(2022\)](#) used LEMAS surveys in 1997 and 2016 to assess how police diversity had changed between both years. The police departments in their sample were limited to 12 communities—three randomly chosen in each of the four U.S. census regions.

This paper examines whether Black police officers reflect the racial makeup of the states they serve and protect. To do this, the authors used Department of Justice statistics on the racial makeup of police agencies in each state across the U.S. in 2000 and 2020. These figures were then compared with estimates of the state's Black population in both years. The present study examines how Black police officer representation relative to Blacks' overall share of the state population has changed between 2000 and 2020.

2. The Data

The 2000 Law Enforcement Management and Administrative Statistics (LEMAS, 2008) survey collected data from 2985 state and local enforcement agencies in the United States with at least one full-time sworn officer. Full-time sworn officers are those with general arrest powers who work 35 or more hours per week. The top five states with the highest number of police departments and sheriff's offices included in the 2000 survey were Texas (191), California (161), New Jersey (144), Illinois (137), and Pennsylvania (127). The 2020 LEMAS (2023) survey collected data from 3499 state and local enforcement agencies. The top five states with the highest number of police departments and sheriff's offices included in this survey twenty years later were Texas (268), Illinois (174), Pennsylvania (164), Ohio (154), and California (150).

For each survey, the authors summed the number of Black and all full-time sworn officers across all police agencies within each of the 50 states and the District of Columbia. The statewide officer totals are unweighted counts from sampled agencies (including local and county police departments, sheriffs' offices, and primary state police departments) employing 100 or more full-time equivalent sworn personnel. Smaller agencies were sampled from strata based on the number of full-time equivalent sworn officers and type of agency. Because police departments and sheriffs' offices (hereafter, police agencies) frequently serve overlapping populations and geographic areas, this jurisdictional overlap makes collecting data on the precise percentage of the Black population served problematic. The state Black population was therefore chosen as the benchmark for representation. The number of Black full-time sworn officers was expressed as a percentage of all full-time sworn officers in each state. This percentage was compared to the percentage of Blacks in each state as of 2000 and 2020 ([Census Bureau, 2021](#); [CensusScope, 2001](#)). These two percentages as well as the ratio of the former to the latter are presented in [Table 1](#) (for the year 2000) and [Table 2](#) (for the year 2020).

[Figure 1](#) shows how the aforementioned ratio varies across states in 2000.

Table 1. Black Representation in police departments and Black percentage of population in 2000, by state.

State	Percentage of Black Police Officers (1)	Percentage of Population that is Black (2)	Ratio of Column (1) to Column (2)
Alabama	27.04	25.93	1.04
Alaska	5.10	3.50	1.46
Arizona	2.81	3.01	0.93
Arkansas	13.51	15.63	0.86
California	7.81	6.55	1.19
Colorado	4.18	3.70	1.13
Connecticut	10.07	8.98	1.12
Delaware	13.15	18.99	0.69
District of Columbia	66.11	60.00	1.10
Florida	10.91	14.47	0.75
Georgia	24.73	28.61	0.86
Hawaii	1.19	1.73	0.69
Idaho	0.42	0.41	1.03
Illinois	18.54	15.01	1.23
Indiana	10.91	8.30	1.31
Iowa	1.72	2.04	0.84
Kansas	5.52	5.60	0.99
Kentucky	9.41	7.27	1.29
Louisiana	26.49	32.32	0.82
Maine	0.25	0.47	0.52
Maryland	24.26	27.72	0.88
Massachusetts	10.78	5.31	2.03
Michigan	27.14	14.10	1.92
Minnesota	3.62	3.41	1.06
Mississippi	33.61	36.33	0.93
Missouri	11.52	11.12	1.04
Montana	0.34	0.26	1.31
Nebraska	4.74	3.94	1.20
Nevada	6.32	6.63	0.95
New Hampshire	0.63	0.73	0.87
New Jersey	12.47	13.40	0.93
New Mexico	1.88	1.84	1.02

Continued

New York	11.07	15.74	0.70
North Carolina	15.32	21.54	0.71
North Dakota	0.22	0.57	0.38
Ohio	15.26	11.35	1.34
Oklahoma	6.52	7.49	0.87
Oregon	1.80	1.55	1.16
Pennsylvania	20.44	9.87	2.07
Rhode Island	3.12	4.32	0.72
South Carolina	18.38	29.48	0.62
South Dakota	0.64	0.60	1.07
Tennessee	17.09	16.34	1.05
Texas	11.15	11.44	0.98
Utah	0.95	0.72	1.32
Vermont	0.99	0.49	2.02
Virginia	17.57	19.55	0.90
Washington	4.38	3.14	1.39
West Virginia	3.01	3.10	0.97
Wisconsin	8.88	5.60	1.59
Wyoming	0.87	0.63	1.38

Sources: United States Department of Justice. Office of Justice Programs. Bureau of Justice Statistics (2008). Law Enforcement Management and Administrative Statistics (LEMAS): 2000 Sample Survey of Law Enforcement Agencies. Inter-university Consortium for Political and Social Research [distributor], 2008-12-08. <https://doi.org/10.3886/ICPSR03565.v2> and CensusScope (2001), "Percent Black/African American Ranking, 2000" at [https://censuscope.org/us/rank_race_blackafricanamerican.html](https://censusscope.org/us/rank_race_blackafricanamerican.html).

Table 2. Black representation in police departments and Black percentage of population in 2020, by state.

State	Percentage of Black Police Officers (1)	Percentage of Population that is Black (2)	Ratio of Column (1) to Column (2)
Alabama	42.48	29.80	1.43
Alaska	5.73	3.70	1.55
Arizona	4.86	5.76	0.84
Arkansas	24.86	17.10	1.45
California	10.38	6.30	1.65
Colorado	7.63	5.19	1.47
Connecticut	11.13	10.88	1.02

Continued

Delaware	25.18	22.11	1.14
District of Columbia	74.60	41.41	1.80
Florida	20.60	17.11	1.20
Georgia	48.93	33.03	1.48
Hawaii	1.57	1.60	0.98
Idaho	2.90	0.99	2.93
Illinois	30.82	16.19	1.90
Indiana	16.33	10.60	1.54
Iowa	3.49	5.14	0.68
Kansas	8.14	5.79	1.41
Kentucky	13.91	8.09	1.72
Louisiana	51.93	33.13	1.57
Maine	1.10	1.90	0.58
Maryland	40.59	32.01	1.27
Massachusetts	8.59	7.09	1.21
Michigan	28.85	15.76	1.83
Minnesota	6.10	7.08	0.86
Mississippi	49.30	37.94	1.30
Missouri	15.16	11.40	1.33
Montana	2.24	0.50	4.48
Nebraska	3.28	5.77	0.57
Nevada	10.53	10.80	0.98
New Hampshire	2.11	1.50	1.41
New Jersey	20.41	15.19	1.34
New Mexico	3.41	2.28	1.49
New York	20.88	16.89	1.24
North Carolina	19.23	23.50	0.82
North Dakota	1.87	3.90	0.48
Ohio	19.88	12.58	1.58
Oklahoma	6.43	7.39	0.87
Oregon	3.26	2.26	1.44
Pennsylvania	26.27	11.30	2.32
Rhode Island	11.11	5.78	1.92
South Carolina	27.17	27.09	1.00
South Dakota	1.45	2.24	0.65

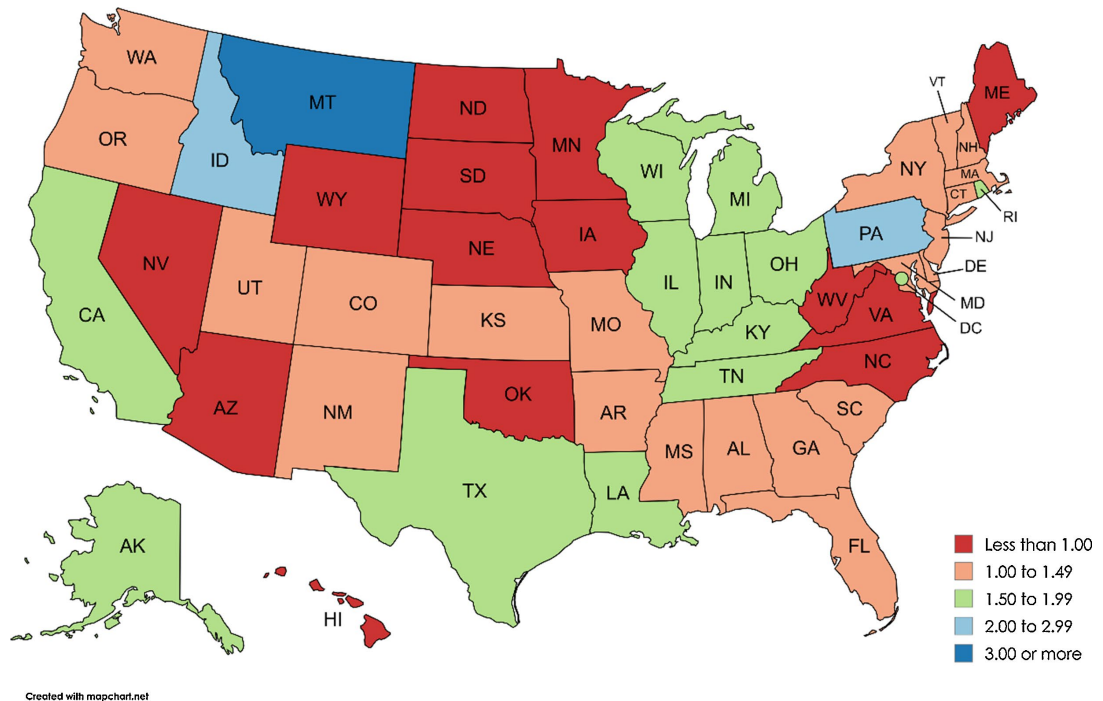


Figure 2. Ratio of the percentage of Black police officers to the percentage of Blacks in the state population, 2020.

In 2000, all but five states had ratios less than 1.50; 24 states had ratios below 1.00. Twenty years later, fewer states (35) had ratios below 1.50 and only 14 states had ratios below 1.00. While there has been progress in representation of Black police officers relative to the populations they serve in 2020, underrepresentation worsened in 14 states: Arizona, Connecticut, Iowa, Massachusetts, Michigan, Minnesota, Nebraska, South Dakota, Utah, Vermont, Virginia, Washington, West Virginia, and Wyoming. Severe underrepresentation (i.e., a ratio less than 1.0) remained the same between 2000 and 2020 in nine states: Arizona, Iowa, Maine, Nevada, North Carolina, North Dakota, Oklahoma, Virginia, and West Virginia.

3. Methodology

What is the relationship between the percentage of police officers who are Black (*percentage_Black_police*) and the percentage of the state's population that is Black (*percentage_Black_population*) in the 48 contiguous states? The estimated regression equation that summarizes this relationship is given by:

$$\text{percentage_Black_police} = b_0 + b_1 \text{percentage_Black_population} \quad (1)$$

One would expect the constant term b_0 to be close to zero and the slope coefficient b_1 to be positive and close to 1.0. That is, for every one percentage point increase in the state's Black population, one would expect that (absent underrepresentation) the percentage of the state's Black police force would also increase by about one percentage point. Still, in other words, states with a larger than average percentage of Blacks would be expected to have a larger than average percentage of Black officers in their police agencies.

Table 3. Predicted and actual Black representation in police departments in 2020, by state.

State	Predicted Percentage of Black Police Officers (1)	Actual Percentage of Black Police Officers (2)	Column (1) minus Column (2)
Alabama	39.65	42.48	-2.83
Arizona	7.59	4.86	2.73
Arkansas	22.71	24.86	-2.15
California	8.31	10.38	-2.07
Colorado	6.83	7.63	-0.80
Connecticut	14.42	11.13	3.28
Delaware	29.39	25.18	4.21
Florida	22.72	20.60	2.13
Georgia	43.95	48.93	-4.98
Idaho	1.23	2.90	-1.67
Illinois	21.50	30.82	-9.32
Indiana	14.04	16.33	-2.29
Iowa	6.76	3.49	3.28
Kansas	7.63	8.14	-0.51
Kentucky	10.70	13.91	-3.22
Louisiana	44.09	51.93	-7.84
Maine	2.44	1.10	1.35
Maryland	42.59	40.59	2.00
Massachusetts	9.36	8.59	0.77
Michigan	20.92	28.85	-7.92
Minnesota	9.35	6.10	3.25
Mississippi	50.50	49.30	1.20
Missouri	15.11	15.16	-0.05
Montana	0.58	2.24	-1.67
Nebraska	7.60	3.28	4.32
Nevada	14.31	10.53	3.78
New Hampshire	1.91	2.11	-0.20
New Jersey	20.16	20.41	-0.25
New Mexico	2.95	3.41	-0.46
New York	22.43	20.88	1.55
North Carolina	31.25	19.23	12.01
North Dakota	5.11	1.87	3.24

Continued

Ohio	16.68	19.88	-3.20
Oklahoma	9.76	6.43	3.34
Oregon	2.92	3.26	-0.33
Pennsylvania	14.98	26.27	-11.29
Rhode Island	7.62	11.11	-3.49
South Carolina	36.03	27.17	8.86
South Dakota	2.90	1.45	1.45
Tennessee	26.31	30.58	-4.27
Texas	16.19	20.75	-4.56
Utah	1.51	1.25	0.26
Vermont	1.78	1.52	0.26
Virginia	28.71	17.65	11.06
Washington	6.70	6.05	0.65
West Virginia	4.92	2.25	2.68
Wisconsin	8.44	11.29	-2.85
Wyoming	1.12	0.56	0.56

Source: United States Department of Justice. Office of Justice Programs. Bureau of Justice Statistics (2023). Law Enforcement Management and Administrative Statistics (LEMAS), 2020. Consortium for Political and Social Research [distributor], 2023-03-07 at <https://doi.org/10.3886/ICPSR38651.v1>.

state. The last column of **Table 3** reports the difference between the *predicted* percentage of Black police officers and the state's *actual* percentage of Black police officers. When this difference (*viz.*, *predicted* minus *actual*) is positive, one could conclude that Black police officers are *underrepresented* in that state, as is the case for 24 states. Underrepresentation was highest in North Carolina, Virginia, and South Carolina. All three states are in close proximity and share a state border and apparently struggle to achieve Black diversity in their police agencies. In Pennsylvania, Illinois, and Michigan, the percentage of Black officers in police agencies compares favorably to Blacks' overall share of the state's population.

When Alaska, Hawaii, and the District of Columbia are included in the regression, the constant term is still not discernible from zero ($p = 0.411$); the slope coefficient is positive and discernible from zero ($p < 0.001$), but also discernibly greater than 1 ($p < 0.001$). Yet, when Alaska, Hawaii, and the District of Columbia are included in our regression, a state can fall below the fitted cross-state relationship and still have Black officer representation at or above its population share.

When the regression model in Equation (2) was modified to include 2020 poverty rates by state, the poverty rate variable was not statistically significant ($p = 0.584$). That is, levels of underrepresentation of Black police officers in states with poverty rates above the national average are about the same as those in the poorest states.

5. Concluding Remarks

In 2000, police agencies in most states struggled to achieve diversity leading to disparities in their racial makeup compared to the populations they serve. Black police officers remain underrepresented in fewer states in 2020 compared to the overall population. Black police officers are most notably underrepresented in three states—North Carolina, Virginia and South Carolina—located in the Southeast and Mid-Atlantic regions of the United States.

One limitation is that the state-level aggregation in this study can hide large city, suburban, and rural differences. Additionally, small Black populations in some states might make measurements seem unstable and can heavily skew the data thereby making time trends look volatile.

Future research might expand the racial makeup of police agencies to include both Black and Latino individuals. That is, states with large Latino populations might not be underrepresented insofar as Black police officers are concerned, but they are underrepresented insofar as their Latino police officers are concerned. Would an increase in the recruitment of Black police officers lead to a decrease in the proportions of Latino police officers? These studies could shed light on how disparities in race among Blacks and Latinos in statewide police forces have changed since 2020.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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