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Go big on relief! – repairing the commingled miseries of COVID-19 and US housing and food insecurity

N. Krieger, PhD[1], C. Testa, BS[2], P. Waterman, MPH[3], J. T. Chen, ScD[4]

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Affiliations

1. Nancy Krieger, Professor of Social Epidemiology and American Cancer Society, Clinical Research Professor, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, 677 Huntington Avenue, Boston, MA 02115
   email: nkrieger@hsph.harvard.edu
2. Christian Testa, Statistical Data Analyst, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA
   email: ctesta@hsph.harvard.edu
3. Pamela D. Waterman, Project Director, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA
   email: mailto:pwaterma@hsph.harvard.edu
4. Jarvis T. Chen, Lecturer on Social and Behavioral Sciences, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA
   email: mailto:jarvis@hsph.harvard.edu

Corresponding Author

Nancy Krieger, PhD
Professor of Social Epidemiology
American Cancer Society Clinical Research Professor, Department of Social and Behavioral Sciences; Harvard T.H. Chan School of Public Health
677 Huntington Avenue, Boston, MA 02115
Email: nkrieger@hsph.harvard.edu
Phone: 617-432-1571

Author contributions: NK conceptualized and drafted the paper; CT obtained and analyzed the data, with input from JTC; PDW contributed to framing the findings; all authors contributed to interpreting the data, revising the draft for important intellectual content, approved the final version for submission, and agree to be accountable for all aspects of the work.

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Abstract

This paper presents novel data on the comingled miseries of COVID-19, food insecurity, and housing insecurity. It employs the real-time economic data from the US Household Pulse Survey (in contrast to most analyses that rely on economic data from prior years, which cannot capture the economic shock of the pandemic), in conjunction with novel data on how these types of economic insecurity jointly vary by racialized group, educational level, and place. The information presented supports why the US government should "go big" in order to, in the words of the US constitution, "promote the general welfare," so as to pull this country together.

TITLE: **Go big on relief! – repairing the commingled miseries of COVID-19 and US housing and food insecurity**

AUTHORS: Nancy Krieger, PhD, Professor of Social Epidemiology and American Cancer Society Clinical Research Professor, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, 677 Huntington Avenue, Boston, MA 02115;
email: nkrieger@hsph.harvard.edu ; phone: 617-432-1571 (corresponding author)

Christian Testa, BS, Statistical Data Analyst, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA
email: ctesta@hsph.harvard.edu

Pamela D. Waterman, MPH, Project Director, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA
email: pwaterma@hsph.harvard.edu

Jarvis T. Chen, ScD, Lecturer on Social and Behavioral Sciences, Department of Social and Behavioral Sciences, Harvard T.H. Chan School of Public Health, Boston, MA
email: jarvis@hsph.harvard.edu

Author contributions: NK conceptualized and drafted the paper; CT obtained and analyzed the data, with input from JTC; PDW contributed to framing the findings; all authors contributed to interpreting the data, revising the draft for important intellectual content, approved the final version for submission, and agree to be accountable for all aspects of the work.

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A strange double-vision is at play as the new Biden-Harris Administration and its Congressional supporters and opponents wrangle over proposals for economic relief and a stimulus bill for a US economy devastated by the COVID-19 pandemic. Politicians and economists are arguing over the amount of relief and who should be eligible.[1-5] Medical and public health professionals are scrambling for the fiscal, material, and technical resources and personnel urgently needed for COVID-19 treatment, testing, contact tracing, vaccines and vaccine distribution, and also to track cases, hospitalizations, deaths, and vaccinations.[6-9]

And meanwhile, for the people and communities afflicted, the miseries of COVID-19 and its economic determinants and impacts are concurrent, not split.[10-12] People and communities don't experience fears, suffering, and loss one day in relation to COVID-19, and on another day in relation to their economic circumstances. Instead, they are comingled and collectively take a toll on community well-being. Loss of lives and loss of livelihoods, combined with fears of such losses, are devastating for all directly affected and those in their networks of family, friends, and co-workers. Any relief bill that actually provides relief must address these jointly lived realities – especially in a context in which US billionaires have increased their net worth by more than $1 trillion during the pandemic.[13,14]

In just a year, COVID-19 has reached every corner of the US, and has infected nearly 28 million people in the US and killed over 480,000.[15] Yet a clear picture of the concurrent plagues of COVID-19 and economic insecurities in the US is hard to come by. One reason is that publicly reported health agency COVID-19 data rarely if ever include any socioeconomic information.[16] Another is that public health national, state, and local reports on COVID-19 rates in relation to community characteristics overwhelmingly rely on US Census data collected in years prior to the pandemic, and thus do not capture the pandemic economic shocks.[16,17]

To bring into focus the split vision that looks at COVID-19 with one eye and economic misery with another, we have looked jointly at the toll of COVID-19 deaths[18] (analyzed as cumulative death rates) and real-time representative data on food insecurity and housing insecurity, from the real-time US Census Household Pulse Survey.[19] The picture is stark.

For both US states and the 15 largest metropolitan statistical areas, the overlap of misery is clear. As shown in **Figure 1**, higher cumulative COVID-19 death rates in the third "wave" of the pandemic (from October 1, 2020 – January 10, 2021) co-exist with higher food insecurity among households with children under age 18 and higher rates of renters being unable to pay their last month's rent (for October 28, 2020 – January 18, 2021).

Moreover, the extent of these hardships varies by education, by racialized group, by place – and by all three together (**Table 1**). Consider the case of food insecurity, referring to the percent of household with children under age 18 who sometimes or often have not had enough food to eat in the past 7 days. In 2019, around 14% of US households with children experienced this misery.[20] Since October 2020, among persons with at least a bachelor's degree, averaging across US states, such food insecurity has affected fully 25 to 30% of black non-Hispanic and Hispanic persons, versus 16% of white non-Hispanic and Asian non-Hispanic persons. By contrast, among persons with at least a bachelor's degree, it has affected under 5% of white non-Hispanic and Asian non-Hispanic persons, and 8% of Hispanic and 12% of black non-Hispanic persons. Across the 15 largest metropolitan statistical areas, the highest occurrence of this food insecurity – upwards of 40% -- occurred among Black non-Hispanic and Hispanic persons with less than a college degree living in the Greater Boston Area, whereas the lowest prevalence – only 1% -- occurred among white non-Hispanic and Asian non-Hispanic persons in the Seattle area. Similar patterns occurred for housing insecurity, albeit with an even greater advantage for white non-Hispanic persons with at least a bachelor's degree, with this problem affecting only 2% of such persons in the Atlanta area, versus 40 to 45% of Hispanic and Black non-Hispanics persons with less than a college degree in, respectively, Greater Philadelphia and the Chicago area.

Government of, by, and for the people, especially "to promote the general welfare,"[21] is government that ensures the conditions for all people to thrive. Healing the dual miseries of COVID-19 and economic insecurity requires relief sufficient to ensure that all individuals, their families, and loved ones can live through – rather than die in – this pandemic. The need is great, and it varies by educational level, racialized group, and place. To pull this country together, the time to go big is now.

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TECHNICAL DOCUMENTATION: DATA SOURCES

The COVID-19 data (deaths and population denominators, for October 1, 2020-January 10, 2021) are from USA Facts: https://usafacts.org/visualizations/coronavirus-covid-19-spread-map/.

Housing and food insecurity data presented were retrieved from the Household Pulse Survey (HPS) Public Use Files (https://www.census.gov/programs-surveys/household-pulse-survey/datasets.html) which contain individual-level survey response data. We used the five most recent datasets available, Weeks 18 (beginning October 28th, 2020) through 22 (beginning January 4th, 2021), each of which represents a sample taken over a period of roughly two weeks. The data presented are the average percentages of people experiencing food insecurity in households with children and inability to pay rent across the five HPS datasets. Survey weights were included in the HPS data to account for nonresponse, adults per household, and survey coverage which we used to calculate the measures presented. Though the weights are intended to account for nonresponse to some degree, the weight of sampling units which did not respond are evenly allocated to the units that did respond within the same sampling period and sample area (See https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/Phase3_Source_and_Accuracy_Week_22.pdf, Estimation Procedure section). If nonresponse were more common among those who are suffering greater rates of food insecurity and inability to pay rent, the measures we have presented may be under-estimated.

The datasets used covered the following date ranges:

Week 18: October 28 – November 9, 2020
Week 19: November 11 – November 23, 2020
Week 20: November 25 – December 7, 2020
Week 21: December 9 – December 21, 2020
Week 22: January 6 – January 18, 2021

The 15 largest Metropolitan Statistical Areas included in the HPS are:

1. New York-Newark-Jersey City, NY-NJ-PA Metro Area
2. Los Angeles-Long Beach-Anaheim, CA Metro Area
3. Chicago-Naperville-Elgin, IL-IN-WI Metro Area
4. Dallas-Fort Worth-Arlington, TX Metro Area
5. Houston-The Woodlands-Sugar Land, TX Metro Area
6. Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area
7. Miami-Fort Lauderdale-Pompano Beach, FL Metro Area
8. Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area
9. Atlanta-Sandy Springs-Alpharetta, GA Metro Area
10. Phoenix-Mesa-Chandler, AZ Metro Area
11. Boston-Cambridge-Newton, MA-NH Metro Area
12. San Francisco-Oakland-Berkeley, CA Metro Area
13. Riverside-San Bernardino-Ontario, CA Metro Area
14. Detroit-Warren-Dearborn, MI Metro Area
15. Seattle-Tacoma-Bellevue, WA Metro Area

For more information about the HPS, see: US Census Bureau Household Pulse Survey Technical Documentation, last revised February 10, 2021. https://www.census.gov/programs-surveys/household-pulse-survey/technical-documentation.html

Figure 1. COVID-19 deaths per 1 million residents (from October 1, 2020 to January 10, 2021) in relation to food insecurity among households with children under age 18 (sometime or often not enough food to eat in the last 7 days) and being behind in rent (for October 28, 2020 to January 18, 2021): US states and 15 metropolitan statistical areas.

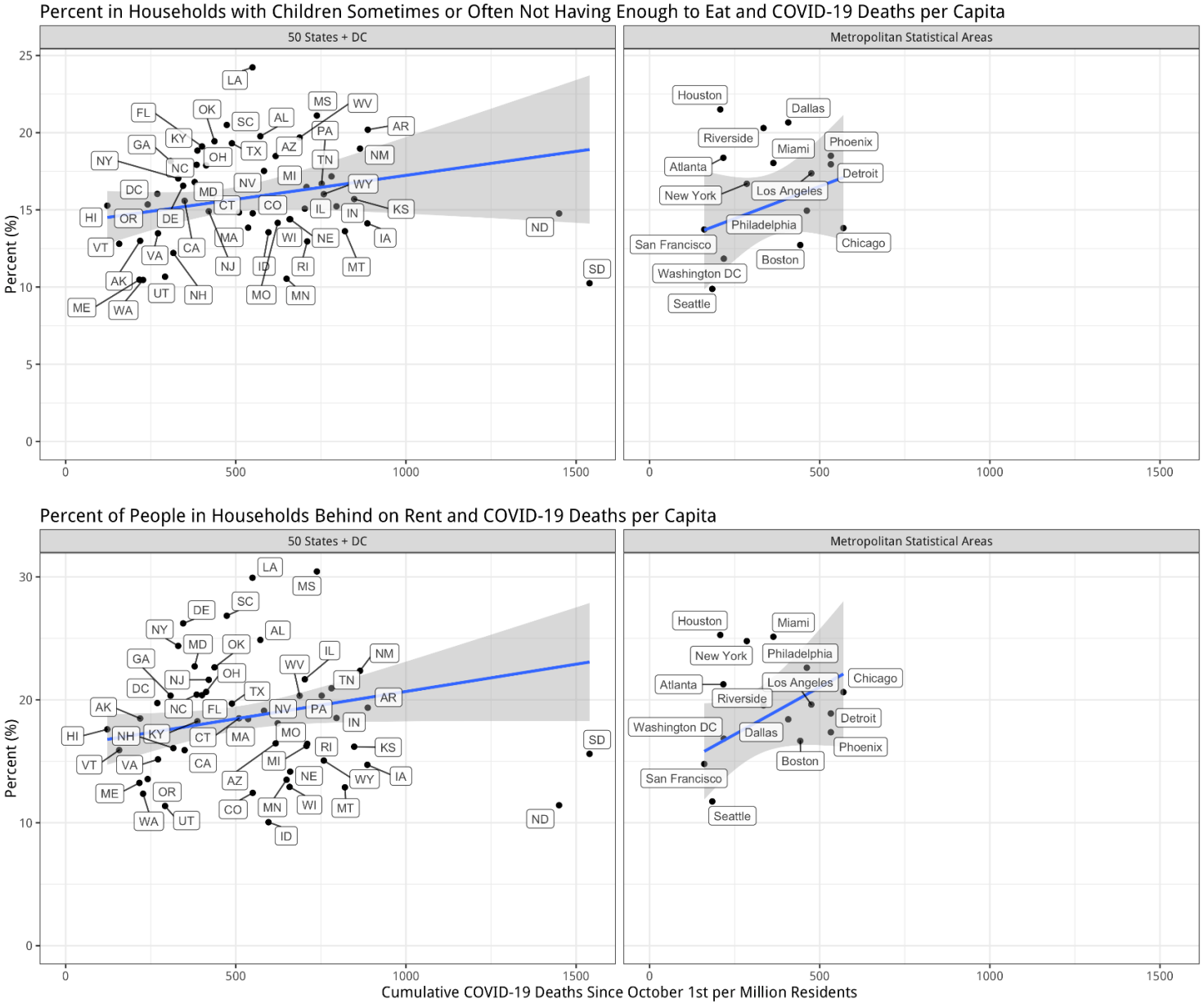

Table 1. Food insecurity and housing insecurity, by race/ethnicity and education, singly and together: US states, including District of Columbia, and the 15 largest metropolitan statistical areas, US Census Bureau Household Pulse Survey, Weeks 18-22, October 28, 2020 – January 18, 2021

Social group	Percent of Households with Children Sometimes or Often not Having Enough Food (October 28 2020 - January 18, 2021)					
	State data (N = 51, including DC)			Metro area data (N = 15)		
	Mean (SD)	Min (State)	Max (State)	Mean (SD)	Min (Metro Area)	Max (Metro Area)
By Race/Ethnicity						
Hispanic or Latino	24.3% (6.5)	4.8% (ME)	38.9% (ND)	23.8% (4.7)	16.4% (Atlanta-Sandy Springs-Alpharetta, GA)	30.1% (Dallas-Fort Worth-Arlington, TX)
White alone, not Hispanic	12% (3.2)	0.8% (DC)	18.7% (KY)	9.1% (2.9)	3.5% (Washington-Arlington-Alexandria, DC-VA-MD-WV)	15.1% (Detroit-Warren-Dearborn, MI)
Black alone, not Hispanic	25.1% (9.7)	0% (NH)	54.9% (OR)	24% (6)	16.9% (Phoenix-Mesa-Chandler, AZ)	34.1% (Boston-Cambridge-Newton, MA-NH)
Asian alone, not Hispanic	8.8% (8.2)	0% (IA, IN, ME, NC, SC, VT)	37.4% (WY)	6.7% (3.8)	1.7% (Detroit-Warren-Dearborn, MI)	13.1% (Chicago-Naperville-Elgin, IL-IN-WI)
Two or more races + Other races, not Hispanic	23.7% (7.8)	5% (CT)	42.1% (NJ)	21.8% (9.5)	9.9% (Riverside-San Bernardino-Ontario, CA)	43.2% (Miami-Fort Lauderdale-Pompano Beach, FL)
By Educational Attainment						
Less than high school	34.6% (17.7)	0% (GA)	68.4% (AZ)	39.9% (18.7)	0% (Atlanta-Sandy Springs-Alpharetta, GA)	77.4% (Phoenix-Mesa-Chandler, AZ)
Some high school	33.8% (11.4)	13% (NC)	58.8% (AR)	31.6% (6.6)	15.2% (Phoenix-Mesa-Chandler, AZ)	45.1% (Chicago-Naperville-Elgin, IL-IN-WI)
High school graduate or GED	22.4% (4.8)	10.4% (SD)	31% (OH)	22.4% (3.6)	16.1% (Seattle-Tacoma-Bellevue, WA)	29.1% (Atlanta-Sandy Springs-Alpharetta, GA)
Some college or associate's degree	15.9% (2.8)	9.1% (UT)	21.8% (LA)	16.2% (3.4)	10.4% (San Francisco-Oakland-Berkeley, CA)	21.6% (Houston-The Woodlands-Sugar Land, TX)
Bachelor's degree	5.1% (1.6)	1.6% (UT)	9% (AL)	6.1% (2.6)	1.7% (Seattle-Tacoma-Bellevue, WA)	11% (Miami-Fort Lauderdale-Pompano Beach, FL)
Graduate degree	3.8% (1.6)	0.7% (NH)	7.5% (GA)	3.6% (1.9)	1.4% (Boston-Cambridge-Newton, MA-NH)	7.9% (Atlanta-Sandy Springs-Alpharetta, GA)
By Race/Ethnicity Among Those with Less Than a Bachelor's Degree						
Hispanic or Latino	26.2% (8.4)	4% (ME)	43.3% (OH)	25.7% (7.4)	13.1% (Atlanta-Sandy Springs-Alpharetta, GA)	40.2% (Boston-Cambridge-Newton, MA-NH)
White alone, not Hispanic	15.7% (3)	9.8% (HI)	22.1% (KY)	12.8% (3.2)	7.5% (Washington-Arlington-Alexandria, DC-VA-MD-WV)	18.3% (Detroit-Warren-Dearborn, MI)
Black alone, not Hispanic	29.2% (10.1)	0% (NH)	68.6% (SD)	29.6% (6.9)	18.1% (San Francisco-Oakland-Berkeley, CA)	40.5% (Boston-Cambridge-Newton, MA-NH)
Asian alone, not Hispanic	15.8% (18.8)	0% (AL, CO, DE, IA, ID, IN, ME, MI, MT, NC, NE, NM)	100% (SD)	11.4% (8.2)	0% (Detroit-Warren-Dearborn, MI)	26.9% (Chicago-Naperville-Elgin, IL-IN-WI)
Two or more races + Other races, not Hispanic	26.7% (11.8)	6.8% (SD)	64.7% (DC)	28.7% (16)	4.9% (Boston-Cambridge-Newton, MA-NH)	59.4% (Dallas-Fort Worth-Arlington, TX)
By Race/Ethnicity Among Those with a Bachelor's Degree or Higher						
Hispanic or Latino	8.4% (4.6)	0% (LA, ME, SD)	19.5% (GA)	8.5% (4.3)	2.5% (Philadelphia-Camden-Wilmington, PA-NJ-DE-MD)	17.5% (Atlanta-Sandy Springs-Alpharetta, GA)
White alone, not Hispanic	3% (1.1)	0.1% (DC)	6.3% (OK)	2.8% (1.8)	0.9% (Seattle-Tacoma-Bellevue, WA)	7.7% (Riverside-San Bernardino-Ontario, CA)
Black alone, not Hispanic	11.5% (7.6)	0% (SD)	33.3% (ND)	10.8% (3.5)	4.7% (Phoenix-Mesa-Chandler, AZ)	16.2% (Miami-Fort Lauderdale-Pompano Beach, FL)

Asian alone, not Hispanic	4.4% (5)	0% (IA, IN, KS, LA, ME, NC, ND, NH, SC, SD, UT, VT)	19.2% (WY)	3.2% (2.7)	1.1% (Seattle-Tacoma-Bellevue, WA)	12.4% (Atlanta-Sandy Springs-Alpharetta, GA)
Two or more races + Other races, not Hispanic	9.3% (7.3)	0% (ID, NE, NH, RI, VT, WY)	25.6% (TN)	11.7% (7.9)	0.6% (Detroit-Warren-Dearborn, MI)	24.1% (New York-Newark-Jersey City, NY-NJ-PA)

	Percent of Households Behind on Rent (October 28 2020 - January 18, 2021)					
	State data (N = 51, including DC)			Metro area data (N = 15)		
	Mean (SD)	Min (State)	Max (State)	Mean (SD)	Min (Metro Area)	Max (Metro Area)
By Race/Ethnicity						
Hispanic or Latino	22.1% (7.7)	2.7% (ME)	42.5% (DE)	24.5% (6.4)	8.4% (Detroit-Warren-Dearborn, MI)	37.7% (Philadelphia-Camden-Wilmington, PA-NJ-DE-MD)
White alone, not Hispanic	13.3% (3.4)	4.9% (DC)	22.1% (LA)	10.1% (2.8)	4.2% (Washington-Arlington-Alexandria, DC-VA-MD-WV)	15.1% (Riverside-San Bernardino-Ontario, CA)
Black alone, not Hispanic	29.6% (7.6)	13.1% (WY)	44.4% (VT)	28.1% (8.5)	14.4% (Seattle-Tacoma-Bellevue, WA)	40.5% (Houston-The Woodlands-Sugar Land, TX)
Asian alone, not Hispanic	16.8% (10.5)	0% (IN, SC)	51.4% (MO)	20.1% (7.6)	5.1% (Detroit-Warren-Dearborn, MI)	31.6% (Riverside-San Bernardino-Ontario, CA)
Two or more races + Other races, not Hispanic	22.6% (9.6)	6.6% (IA)	51.8% (PA)	23.3% (12.5)	6.4% (Chicago-Naperville-Elgin, IL-IN-WI)	47.9% (Miami-Fort Lauderdale-Pompano Beach, FL)
By Educational Attainment						
Less than high school	33.1% (18.8)	2.3% (LA)	82% (IN)	32.9% (10.2)	14.4% (Houston-The Woodlands-Sugar Land, TX)	51.5% (Miami-Fort Lauderdale-Pompano Beach, FL)
Some high school	28.6% (10.2)	7.1% (UT)	54.6% (WY)	29.8% (13.5)	13.2% (Miami-Fort Lauderdale-Pompano Beach, FL)	54.8% (Houston-The Woodlands-Sugar Land, TX)
High school graduate or GED	22.7% (6.7)	11.6% (ID)	41.8% (DC)	24% (5)	15.9% (Los Angeles-Long Beach-Anaheim, CA)	31.6% (Houston-The Woodlands-Sugar Land, TX)
Some college or associate's degree	18.6% (5.3)	9.8% (ND)	33.1% (DE)	20.9% (5.5)	12.4% (San Francisco-Oakland-Berkeley, CA)	32.3% (Philadelphia-Camden-Wilmington, PA-NJ-DE-MD)
Bachelor's degree	8.6% (3.7)	2.8% (ND)	16.9% (MS)	9.8% (4.1)	3.2% (Phoenix-Mesa-Chandler, AZ)	17.4% (New York-Newark-Jersey City, NY-NJ-PA)
Graduate degree	8% (4.1)	2.2% (MN)	22.9% (MS)	9.4% (3.1)	4.6% (Boston-Cambridge-Newton, MA-NH)	16.2% (Miami-Fort Lauderdale-Pompano Beach, FL)
By Race/Ethnicity Among Those with Less Than a Bachelor's Degree						
Hispanic or Latino	23.8% (9.3)	3.4% (ME)	48.6% (DC)	26.2% (7.7)	9.5% (Detroit-Warren-Dearborn, MI)	39.6% (Philadelphia-Camden-Wilmington, PA-NJ-DE-MD)
White alone, not Hispanic	15.9% (3.6)	5.3% (DC)	23.5% (LA)	13.4% (3.4)	5.6% (Washington-Arlington-Alexandria, DC-VA-MD-WV)	19% (Boston-Cambridge-Newton, MA-NH)
Black alone, not Hispanic	31.6% (7.6)	17.2% (WA)	46.2% (OH)	30.2% (8.4)	13.1% (Seattle-Tacoma-Bellevue, WA)	46.8% (Chicago-Naperville-Elgin, IL-IN-WI)
Asian alone, not Hispanic	19.5% (12.4)	0% (WI, WY)	50% (SD)	25.2% (5.6)	16.8% (Los Angeles-Long Beach-Anaheim, CA)	33.4% (Houston-The Woodlands-Sugar Land, TX)
Two or more races + Other races, not Hispanic	24.4% (10.8)	2% (WV)	48.6% (MO)	28.5% (16.3)	11.5% (San Francisco-Oakland-Berkeley, CA)	62.9% (Philadelphia-Camden-Wilmington, PA-NJ-DE-MD)

By Race/Ethnicity Among Those with a Bachelor's Degree or Higher						
Hispanic or Latino	13.9% (8.3)	0% (MT, NH, SC)	31.4% (PA)	14.4% (6.6)	5.4% (Riverside-San Bernardino-Ontario, CA)	26.1% (Chicago-Naperville-Elgin, IL-IN-WI)
White alone, not Hispanic	5.1% (2.1)	0.9% (MN)	10.7% (MS)	5.2% (2.8)	1.9% (Atlanta-Sandy Springs-Alpharetta, GA)	13.5% (Riverside-San Bernardino-Ontario, CA)
Black alone, not Hispanic	18.2% (9.1)	0% (ND)	47.8% (NV)	17.1% (6)	9.8% (Riverside-San Bernardino-Ontario, CA)	29.3% (New York-Newark-Jersey City, NY-NJ-PA)
Asian alone, not Hispanic	15.2% (10.5)	0% (IN, SC)	47.3% (MO)	14.7% (6.8)	5.7% (Detroit-Warren-Dearborn, MI)	28.8% (Riverside-San Bernardino-Ontario, CA)
Two or more races + Other races, not Hispanic	9.8% (7.1)	0% (KY, MT, NE, NJ)	30.4% (MD)	11.4% (5.6)	2.3% (Seattle-Tacoma-Bellevue, WA)	20% (Atlanta-Sandy Springs-Alpharetta, GA)