



Comparing 2022 American Community Survey 1-Year Estimates with Recent Years

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Abstract

Even though it is transitioning to a “new normal,” South Carolina is still feeling the effects of the COVID-19 pandemic, which peaked in early 2022. In this research brief, we will explore changes in key facets of the state’s minority demographics – ranging from population to education attainment – by comparing the 2021 and 2022 American Community Survey (ACS). One-Year Estimates provide researchers with annual data on the major areas of socio-economic status, from which agencies like the South Carolina Commission for Minority Affairs (CMA) can detect interesting trends. This data is useful for refining research questions and generating conversations about the changing landscapes of minority socio-economic development.

Overview

Among the 142 race specific variables currently tracked by CMA, 31% of them are significantly different from previous year estimates. This ratio is consistent with the last year-on-year change, from 2018 to 2019 (2020 ACS 1-Year Estimates was not published). However, a closer examination of the number of statistically significant changes¹ within each topic reveal that these changes are occurring across distinct variables (see Figures 1 and 2). For example, from 2018 to 2019 most of the significant changes happened in income-related variables. From 2021 to 2022, however, most changes happened in labor- and education-related variables. This may be linked to a shift from mostly in-person working and learning to a mix of remote and in-person environment following the pandemic, a topic for future researchers to address.

“In 2022, we see 50% of the variables related to labor and unemployment are statistically different from the previous year. For variables related to education, the percentage is 40%. Both percentages are significantly higher when compared to pre-COVID year-on-year change.”

¹ Significance calculated according to the instructions from Census Bureau. Calculations can be found in Instructions for Applying Statistical Testing to American Community Survey Data.



Figure 1. Changes from 2021 to 2022 by Variable Topic

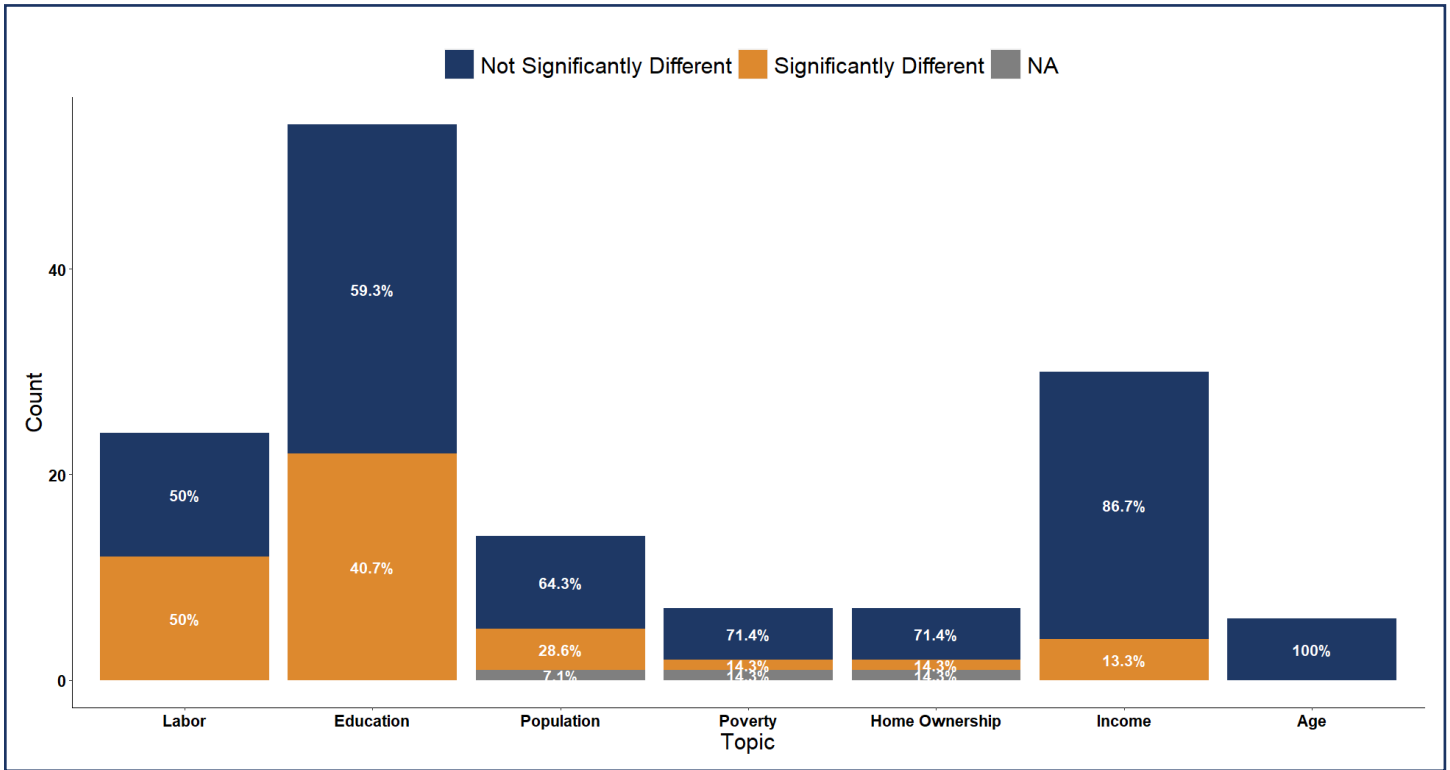
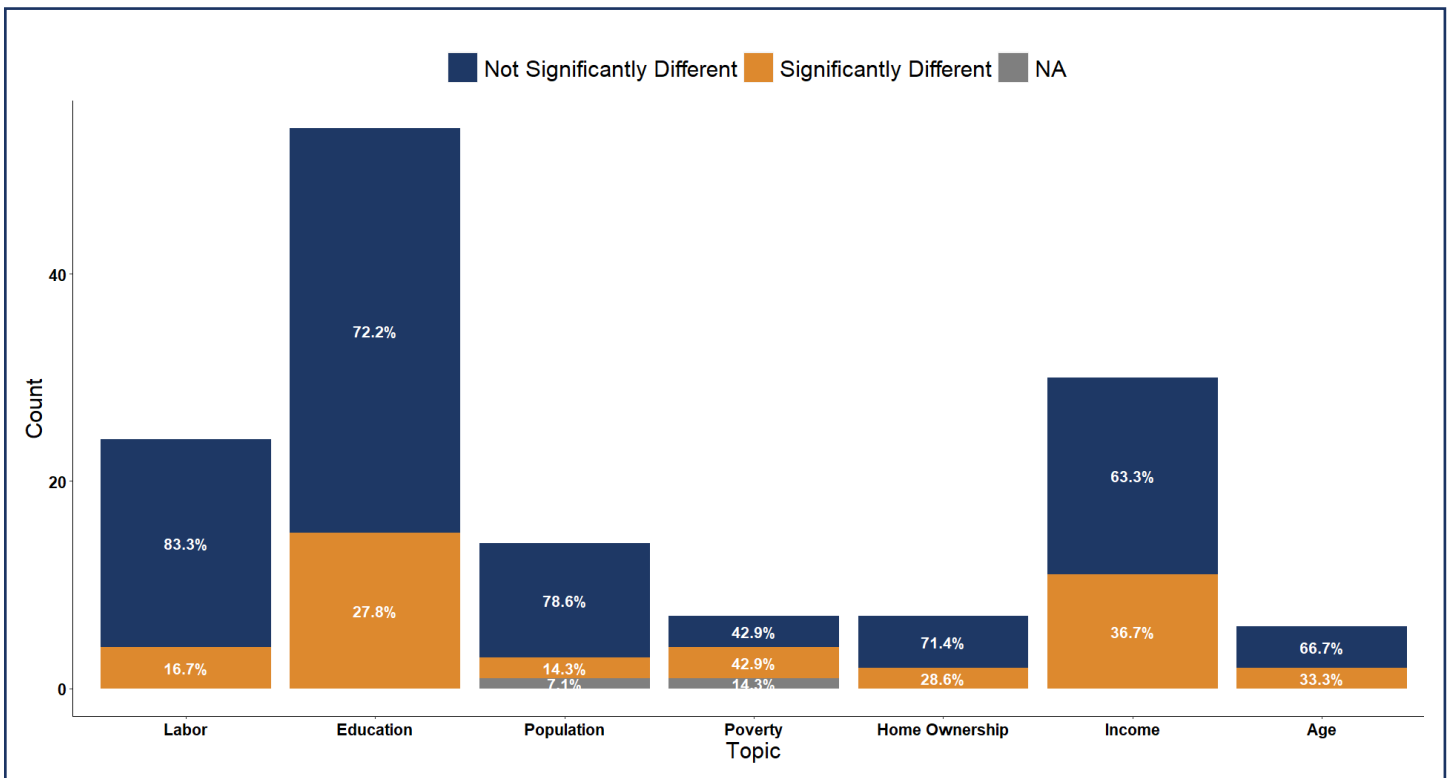


Figure 2. Changes from 2018 to 2019 by Variable Topic

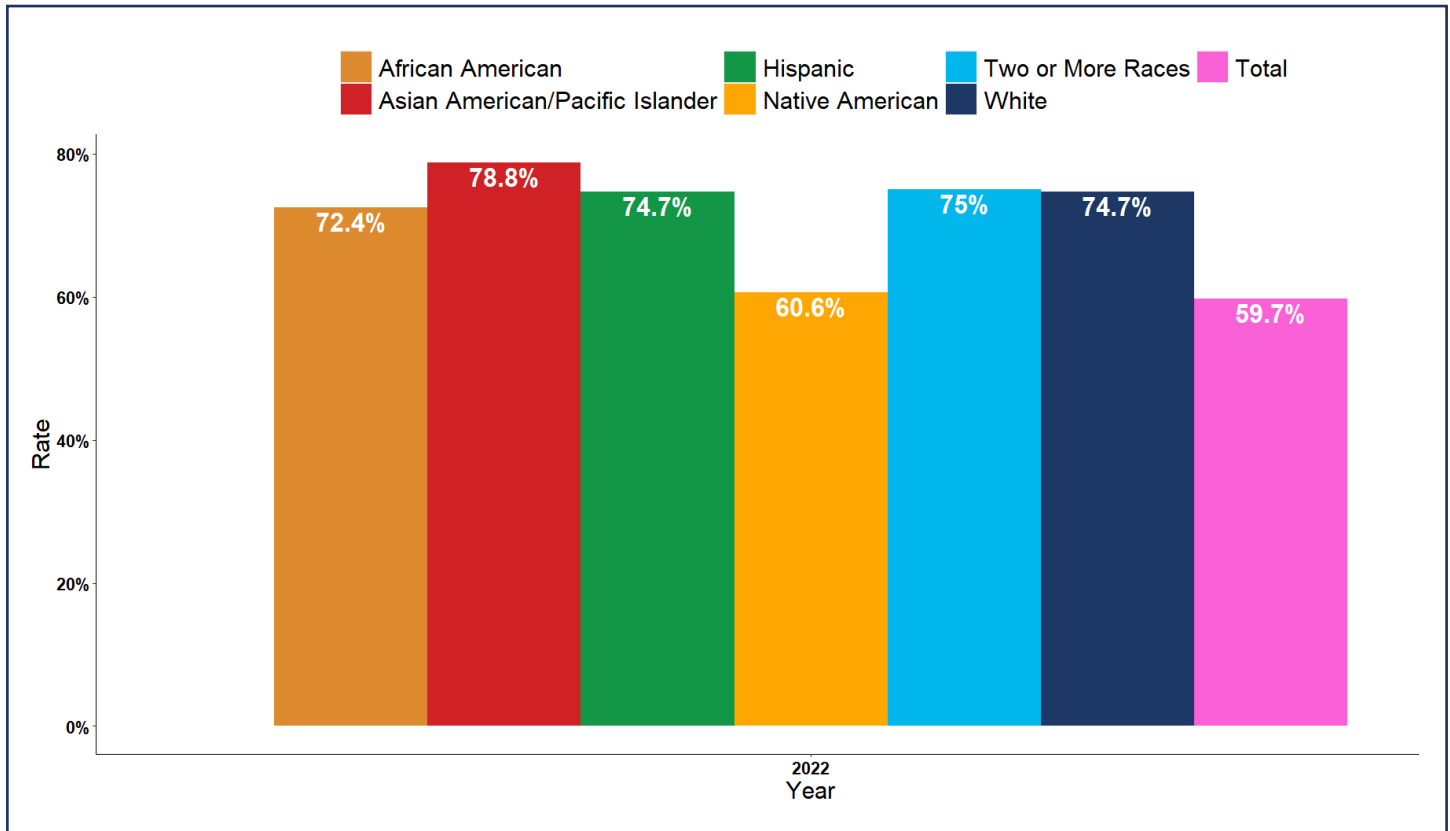




Labor and Unemployment

Labor force participation rates for all minority groups improved significantly from 2021 to 2022, except for Native Americans. Although we see a 17.7% drop among Native Americans (see Figure 4), the change does not obtain statistical significance at 95% confidence level. The sample size from which ACS derived its estimates for Native Americans is too small, resulting in a large margin of error. Therefore, we cannot confidently conclude about change in labor force participation rate for Native Americans.

Figure 3. Labor Participation Rate by Race (2022)

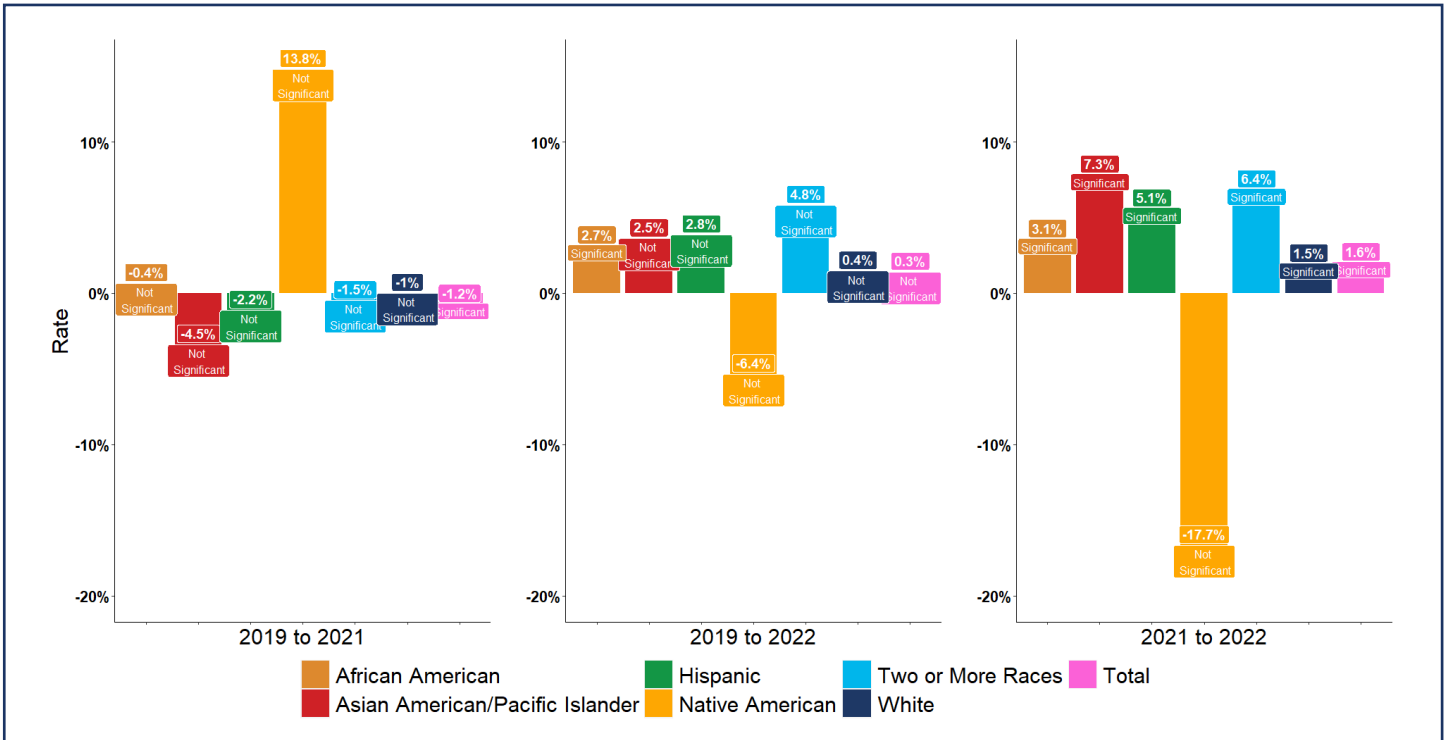


“Total labor participation rate is below 60% despite the rate being high for each racial/ethnic group. This could be due to the dominating white population size. It is also important to keep in mind that ACS 1-Year Estimates only uses geographies with more than 65,000 population for samples.”

When comparing 2019 with 2022, we find a reversion back to pre-COVID-19 levels of labor force participation, yet the changes themselves were small and therefore largely insignificant. One observation worth noting is that the changes for Native Americans’ labor force participation rate have been the opposite of all other groups in all three comparisons. But, as mentioned, without better quality data we cannot expand our analysis on this phenomenon.



Figure 4. Labor Participation Rate Percent Change



“In 2022, African Americans and Native Americans are the two groups with the highest unemployment rates, at 7.6% and 8.6% respectively.”

Unemployment appeared to decrease. However, only the rates for Two or More Races and White population obtained statistical significance at 95% level. Unemployment for African Americans and Native Americans are about twice as much as other groups. As observed in labor participation rate, the 109.5% increase in the unemployment rate for Native American is unreliable because we do not have enough statistical evidence to conclude that a change occurred.

Figure 5. Unemployment rate by race in 2022

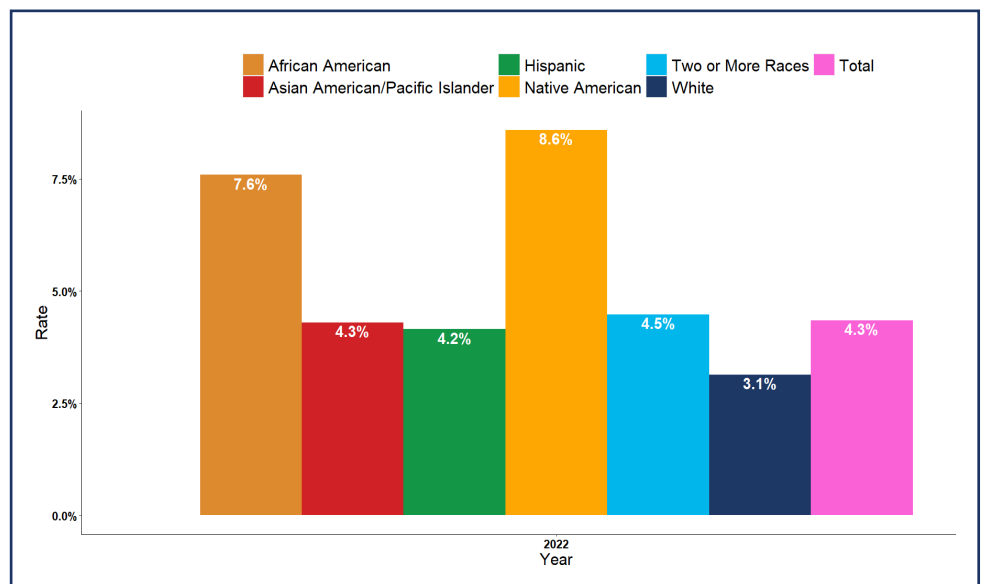
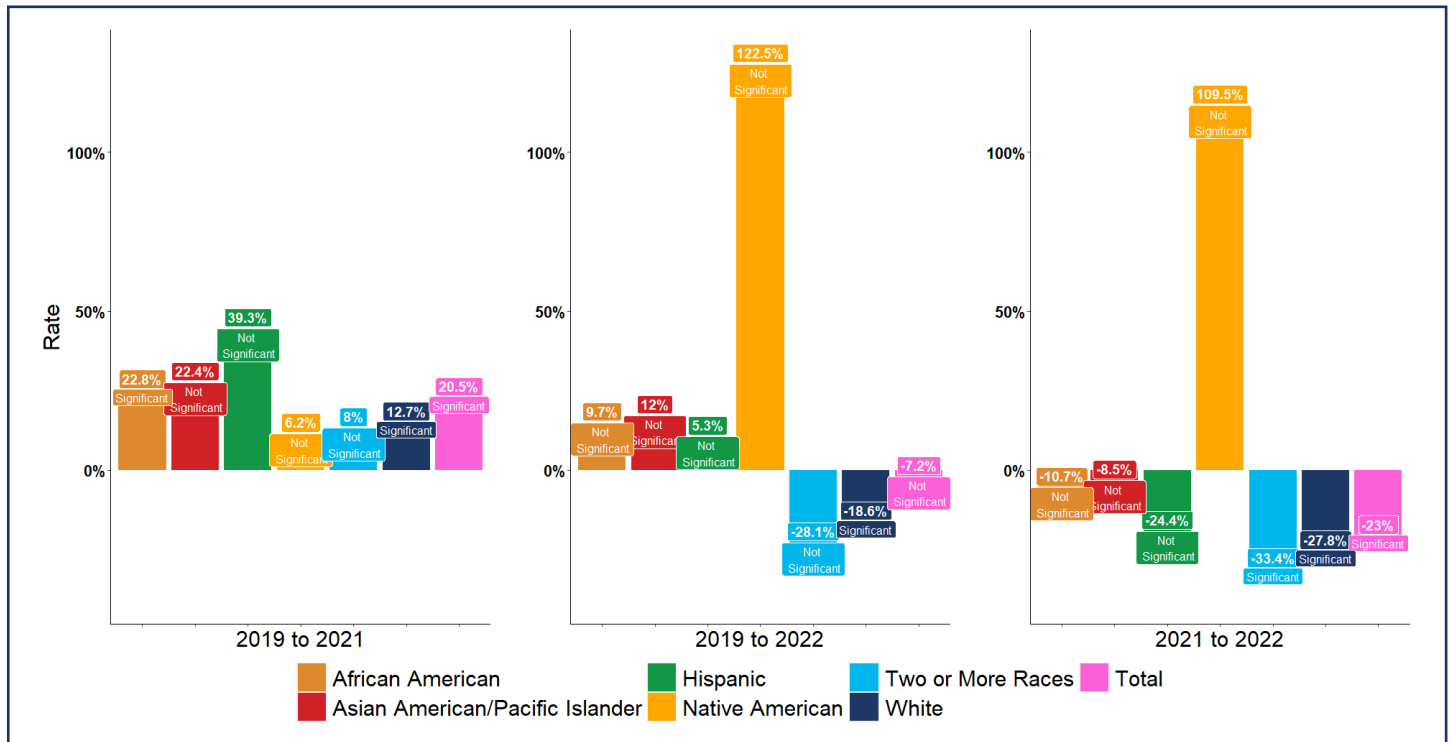




Figure 6. Unemployment rate percent change by race



In fact, during the test for significance, we are least confident that there was an actual change in unemployment for Native Americans.

Since ACS 2020 1-Year Estimates was not published, we can only make comparisons between 2019, 2021, and 2022. A similar pattern of recovery can be observed in unemployment when we cross compare the years 2019, 2021, and 2022. The unemployment rate gained a staggering 20% statistically significant increase in total population from 2019 to 2021. In 2022, the unemployment rate recovered to, or even declined below, the 2019 level. As we gradually put the COVID-19 pandemic in our rear-view mirror, positions started opening up and the introduction to remote and hybrid work environment also opened doors to more employment opportunities. After we obtain the Public Use Microdata Sample (released in late October), from which the Census Bureau derives its ACS estimates, we can investigate the relationship between the distribution of industries that people choose to work in and the pattern of labor force participation and unemployment.

Education

In terms of education attainment levels, we see a general improvement across the board. The shares of population earning a bachelor's degree and above have either increased or stayed the same, with only African Americans experiencing a small, but significant, decrease by approximately 2%. In a similar fashion, the shares of population having less than high school have decreased, with African Americans remaining the same. We see a shift towards the higher end of education level for all racial ethnic groups except African Americans, whose education level composition remained generally unchanged.



Figure 7. Education Attainment Levels by Race (2022)

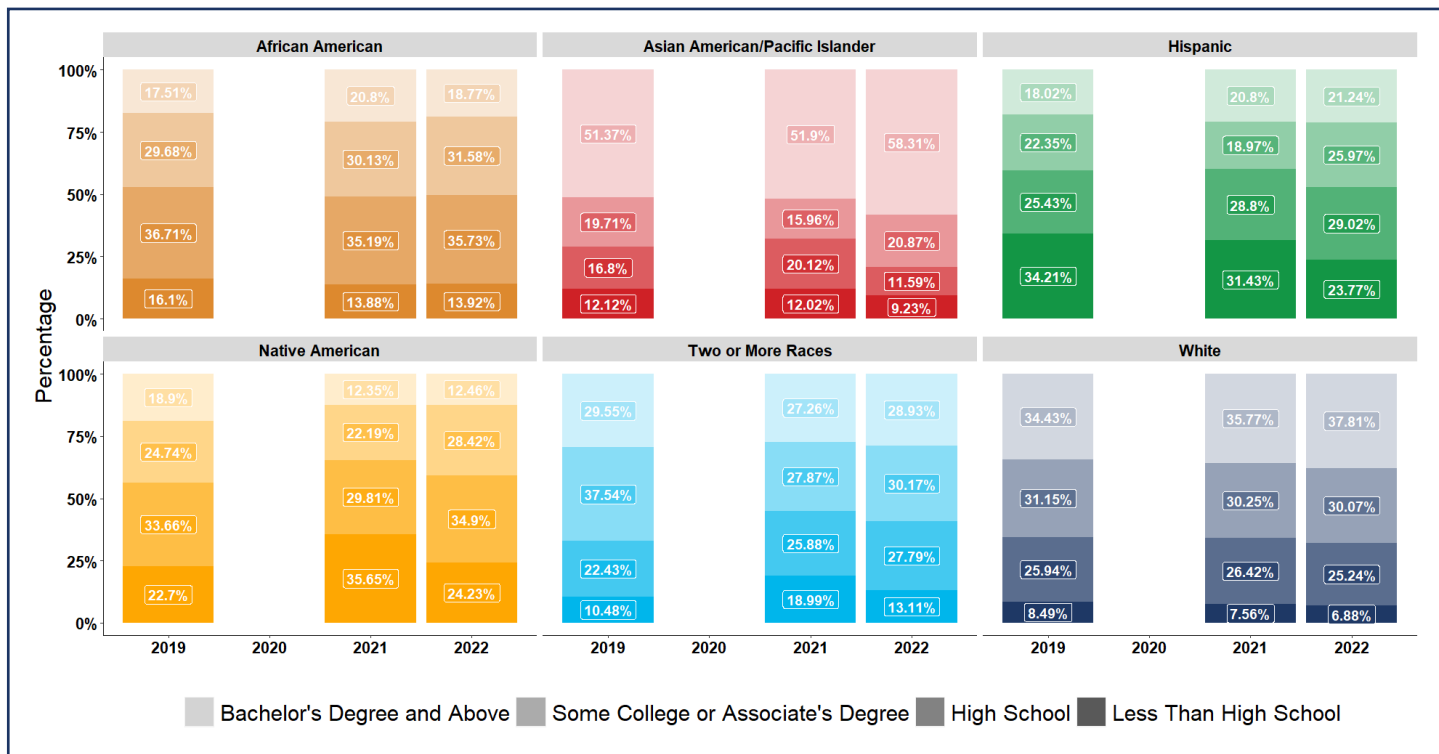
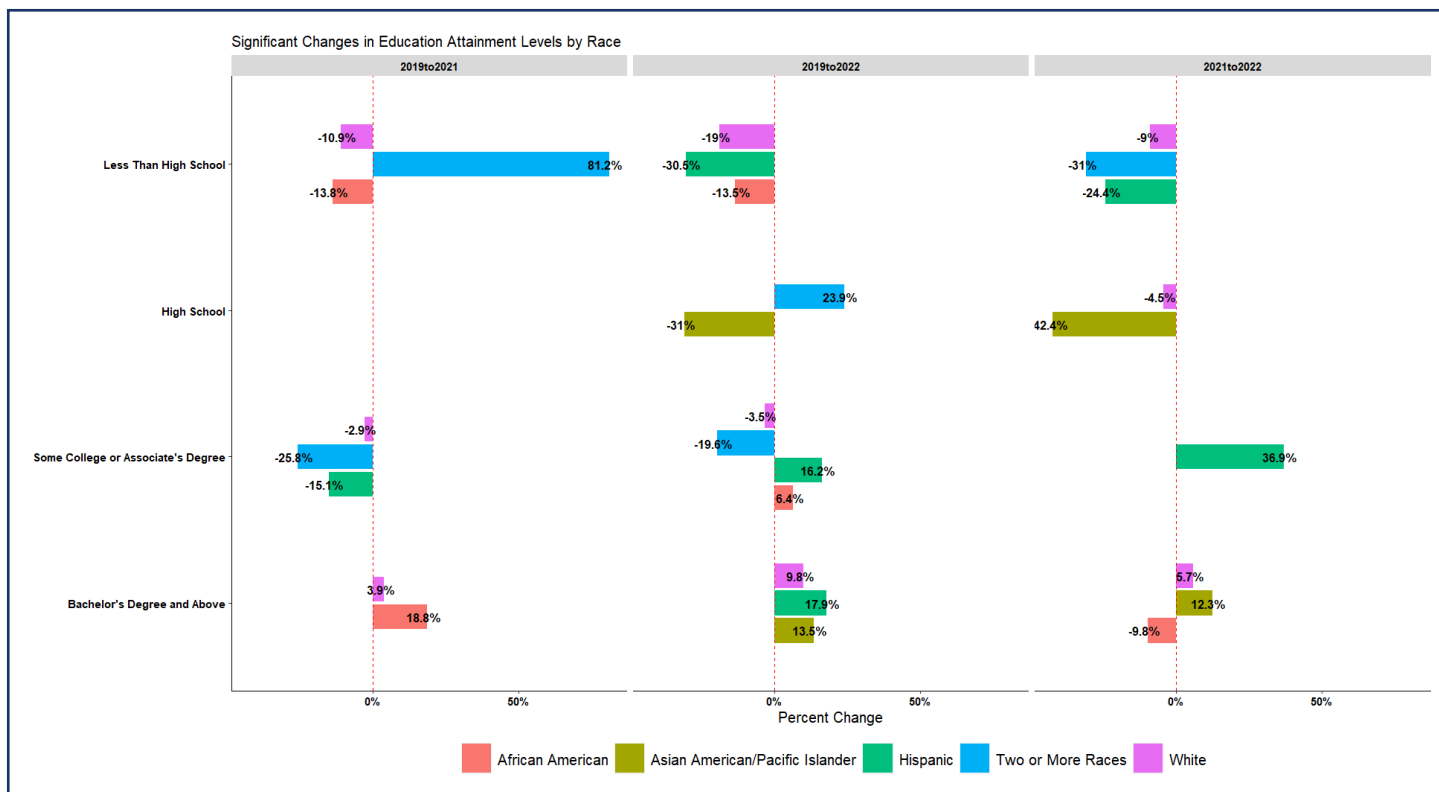


Figure 8. Significant Changes in Education Attainment Levels by Race (Share)





As we examine the significant changes for share of education attainment level in the last four years (see Figure 8), we first notice the disappearance of Native Americans. None of the statistics for Native Americans obtain statistical significance. This again calls for better data quality for understanding the socio-economic status for Native Americans as education is closely tied to employment and income.

Additionally, we observe that African Americans had a substantial increase in the share of population with a bachelor's degree and above from 2019 to 2021 but suffered a decrease of a smaller magnitude from 2021 to 2022. No other groups had a statistically significant decrease in the share of people earning a bachelor's degree and above in three comparisons.

If we examine estimated headcounts instead of shares, we find that between 2019 and 2021, the African American population size went down, but the number of African Americans earning a bachelor's degree and above increased. In 2022, the figures returned to a ratio that resembles 2019 level. When we compare 2021 with 2022, we see that both figures changed at different rates, with the population increasing by about 1.7% and bachelors and above decreasing by about 8.5%.

Table 1. African American Higher Education and Population

Year	Bachelor's Degree and Above (African American)	Population (African American)	Share
2019	157,571	1,354,547	11.6%
2021	178,040	1,291,548	13.8%
2022	162,899	1,313,290	12.4%

One hypothesis explaining this decline is that it is related to the retention of South Carolinians who received higher education in-state. This is different from the Great Migration in the 20th Century, during which African Americans migrated out of the South to escape racial hostility and look for opportunities in the North². Indeed, in recent decades we see a reversal of said migration and the migrants back to the South have been disproportionately well-educated. However, it is possible African Americans in South Carolina have since looked to other parts of the country for opportunities. With the release of the microdata, we gain a better understanding of where well-educated people are moving. It is also crucial to examine the employment opportunities in South Carolina in comparison with other Southern states.

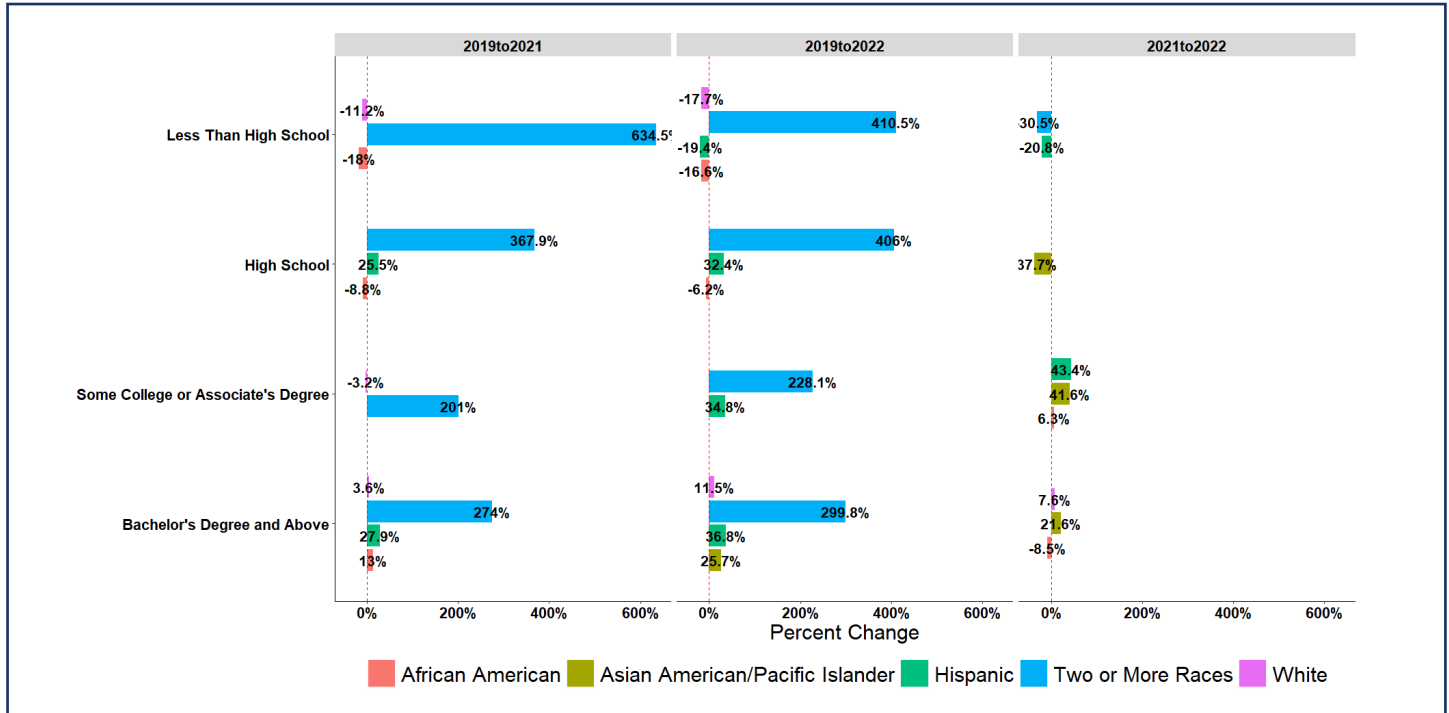
It is also worth noting that the changes for Two or More Races from 2019 to 2021 may stem from changes to how the U.S. Census Bureau asks questions concerning racial identity³. This is apparent when we examine the changes in the number of people for Two or More Races in these variables related to education.

² Source: Frey, William H. 2022. *A 'New Great Migration' is bringing Black Americans back to the South*. The Brookings Institution.

³ Source: Jones et al. 2021. *2020 Census Illuminates Racial and Ethnic Composition of the Country*. U.S. Census Bureau.



Figure 9. Significant Changes in Education Attainment Levels by Race (Count)



Concluding Remarks

American Community Survey 1-Year Estimates offer researchers the most current data on geographical areas with large populations (65,000+ people). However, the one percent target sample size can generate unwieldy error bars that mostly, but not exclusively, affect estimates for smaller subsets of the population. Examining this survey provides us with insights on the direction several important variables may be headed and invites us to research unforeseen data points. Labor participation and unemployment showed an overall recovery to pre-COVID-19 levels. Education attainment level has improved in a similar pattern across almost all racial groups, with an uptake in the share of population earning bachelor’s degree and above and a decline in the share of less than high school education population. African Americans did not follow this pattern, as their education attainment level structure remained about the same, with a small increase in the share of some college and high school population.

With further investigation, we hope to explore the impact of changing working environments on the labor force. As we look for sources that offer more detailed data, we also would like to study the decrease in the share of African Americans earning a bachelor’s degree and above.

Note: All data was sourced from the U.S. Census Bureau’s 2022 American Community Survey 1-Year Data and analyzed in R Studio. Data scripts to reproduce the analysis are available upon request. For that or any additional information related to this research, please contact Statistical and Research Analyst, Zhengyang Lin (ZLin@cma.sc.gov) for assistance.