

The Impact of the Pandemic and Socioeconomic Status on MCAS Scores

Emilia, Anaïs, Jacob

Introduction:

What topic did we choose and why?

Education and the COVID-19 pandemic have been a topic of conversation for a long time. We looked at an article with the headline *"Math Scores Fell in Nearly Every State, and Reading Dipped on National Exam"*. As students, we feel the impact that the pandemic has done to our education, and this headline stood out. We chose to look at MCAS standardized test scores to see if the pandemic has impacted test scores, and make connections to our own experiences in a "post-pandemic" learning environment.

Not the Whole Story:

After looking at the article, we wanted to see if the national data lined up with local data, so we chose to focus on Massachusetts test scores to see if our state follows the same pattern. We also saw that one aspect of the data was missing: the pandemic hasn't impacted everyone equally. We then chose to look at how test scores have changed specifically around income levels.

Data Used:

- We took all-new data from a public government website that publishes MCAS score reports every year
- We used this data to expand upon what the article we looked at concluded

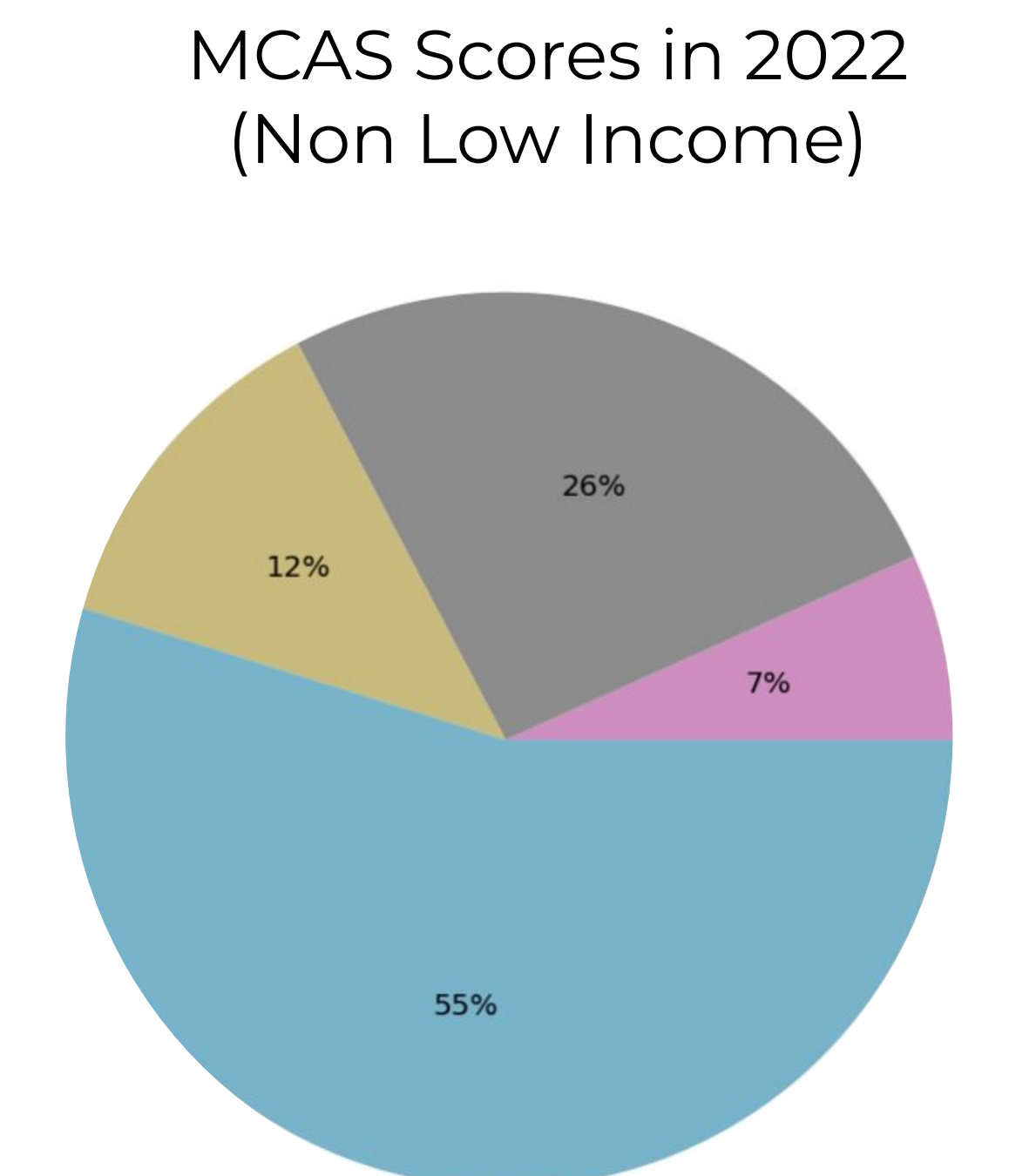
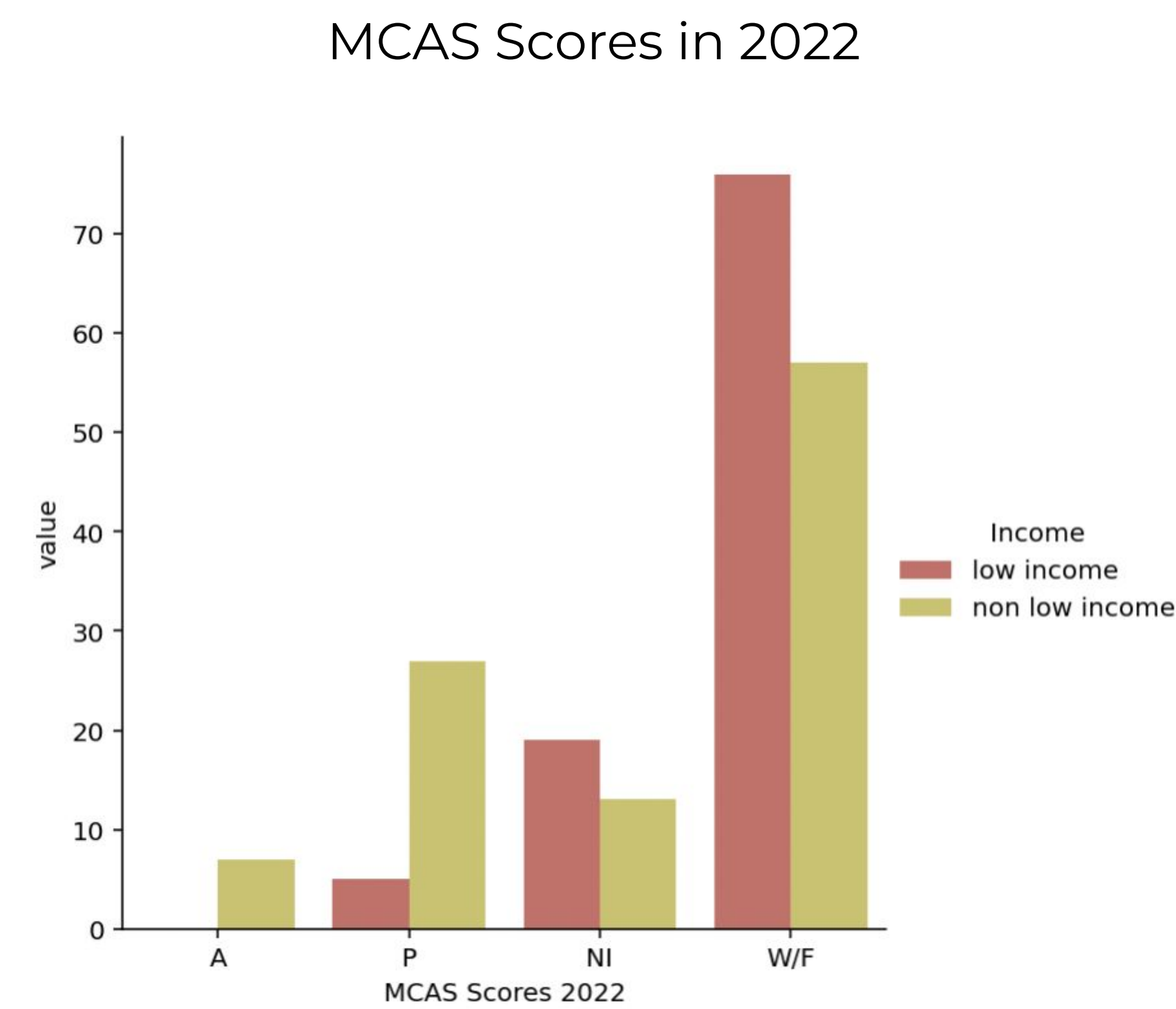
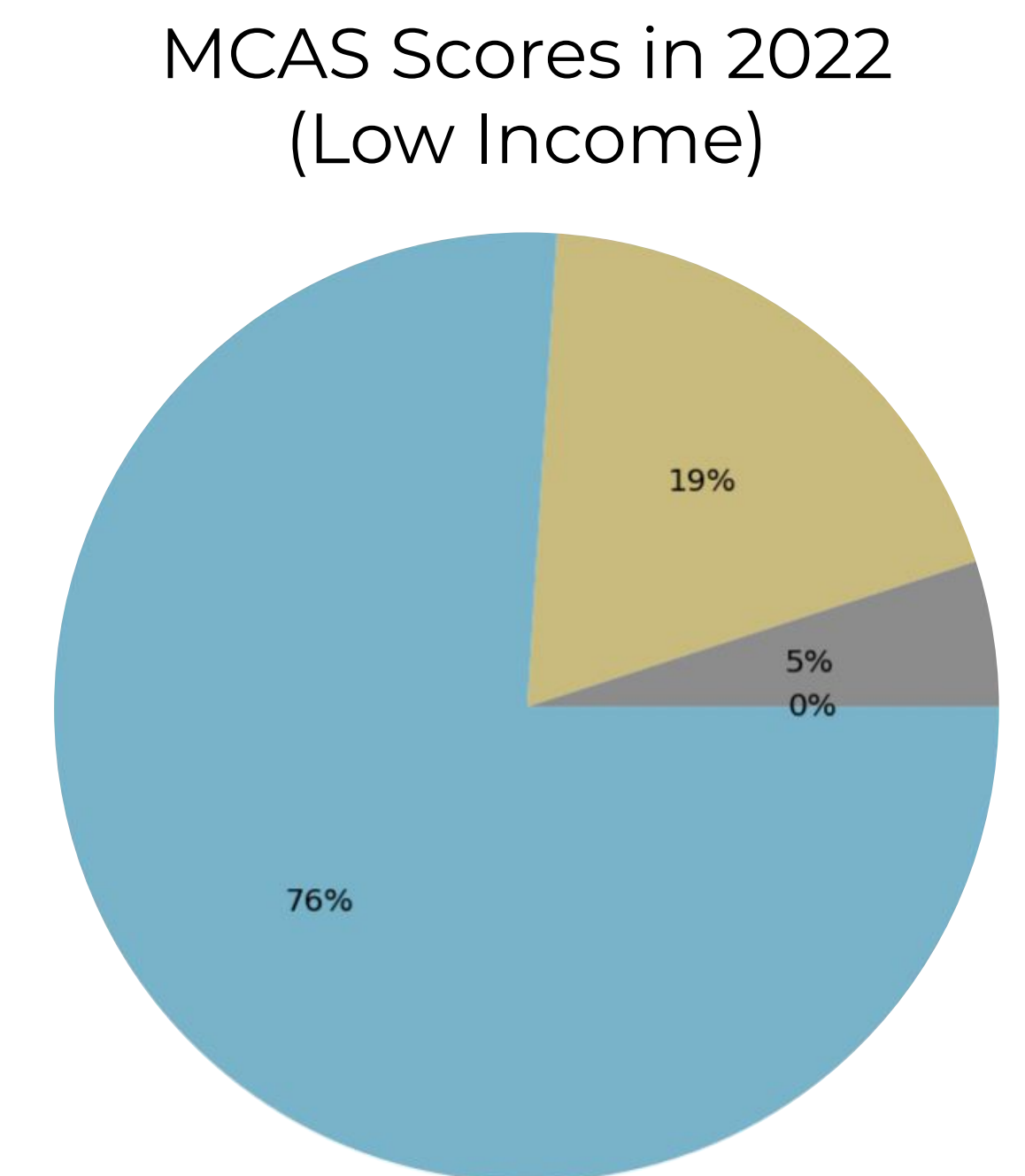
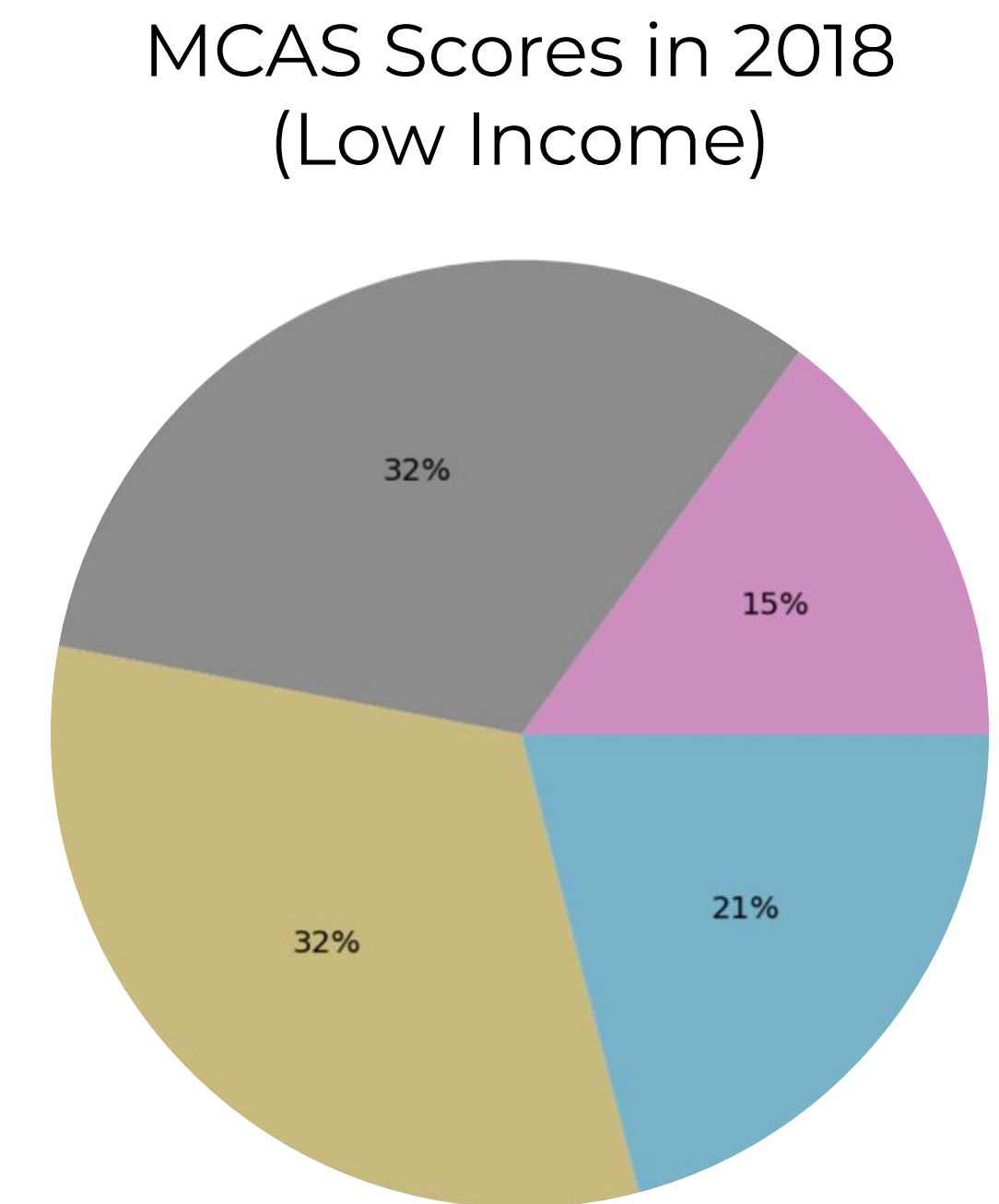
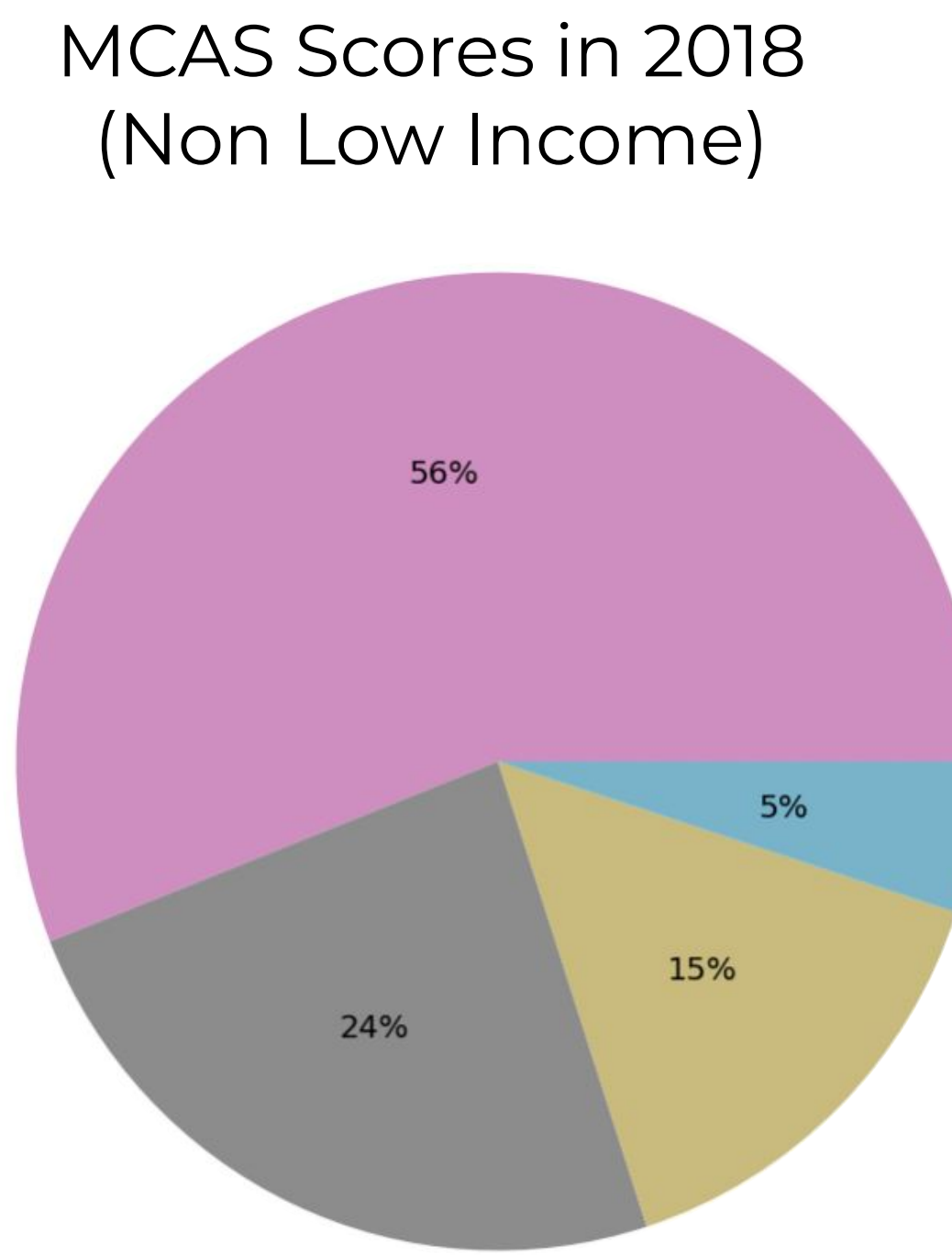
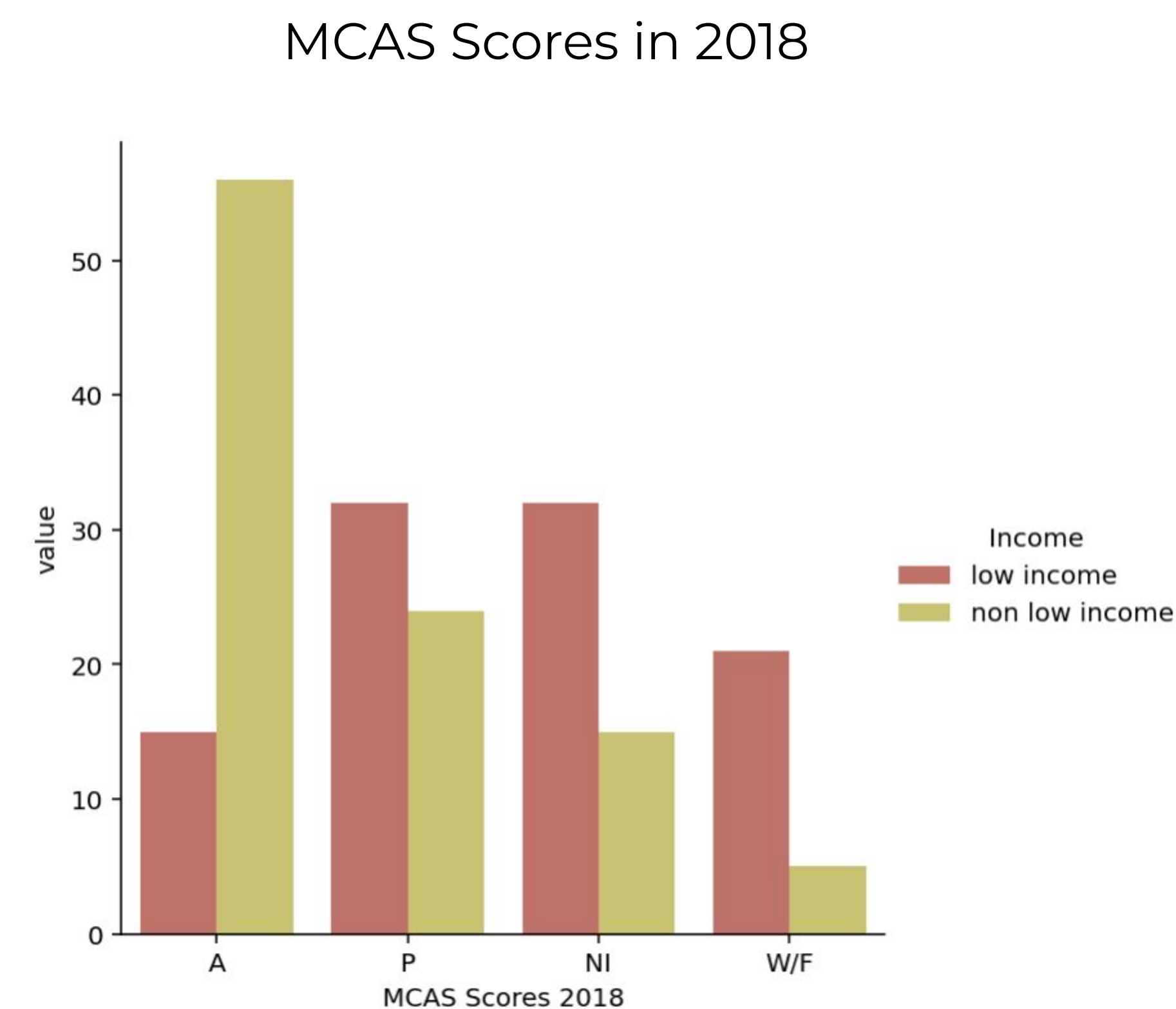
Tools & Techniques:

- Python programming
- Seaborn library for data visualization
- Pandas library for data manipulation
- Google sheets for data collection
- Data interpretation

The Rest of the Story:

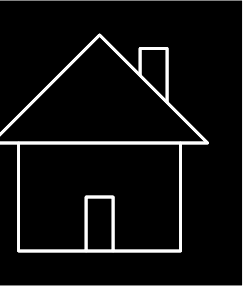
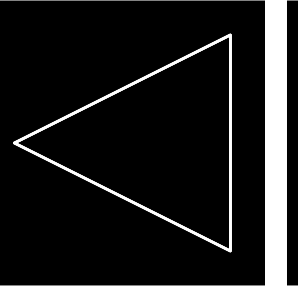
The first visualization is a **bar chart** compares the MCAS scores by category and income, with one for each year. The bar charts were used to get a side by side comparison, making them **comparison graphs**. This was useful to look at the distribution of scores *and* income.

The second visualization we used was a **pie chart** to look more closely at the **proportions** of each scoring category without distinguishing for income in a chart. We decided to use this second chart to have a better visual breakdown of the scores.

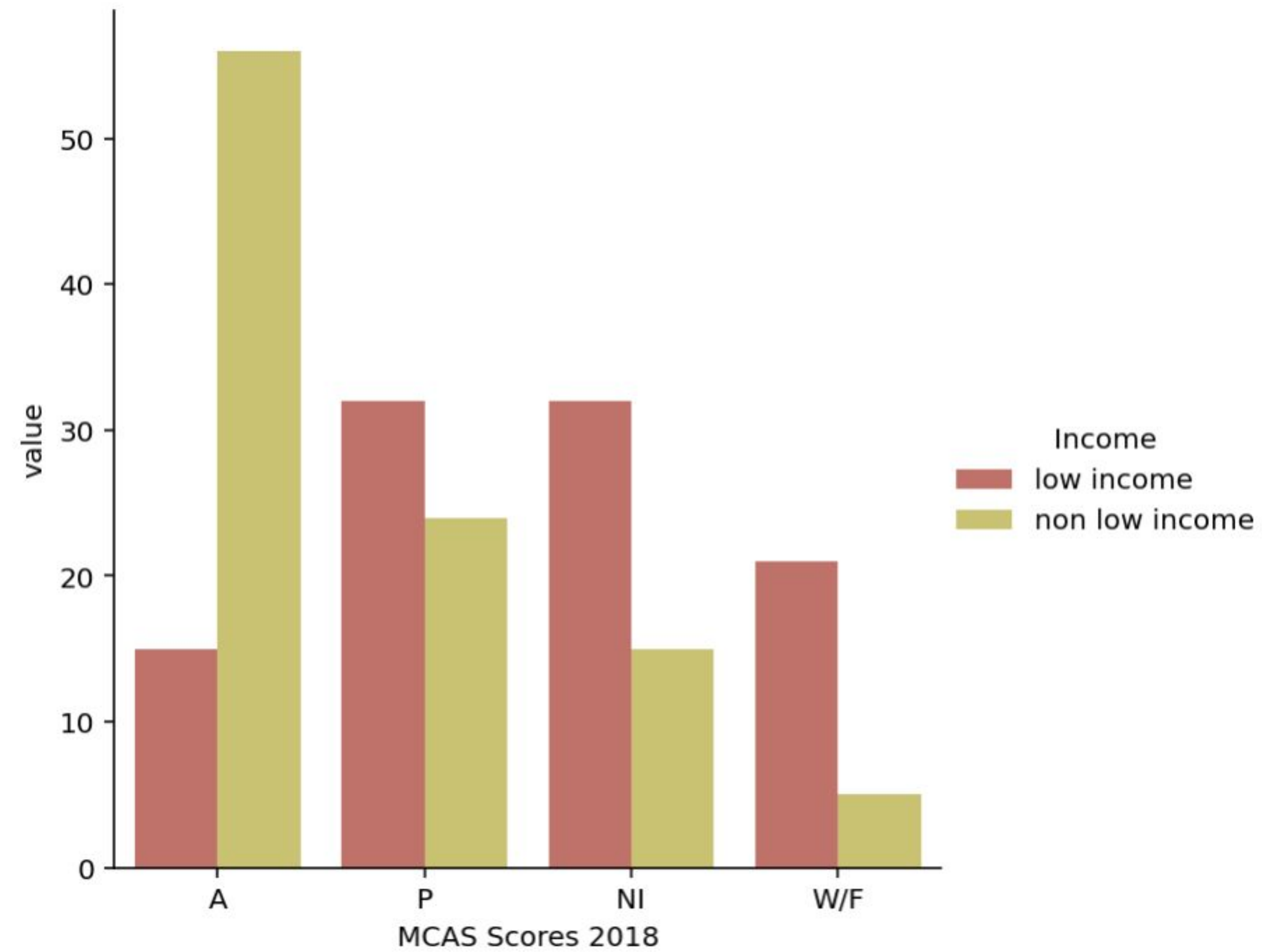


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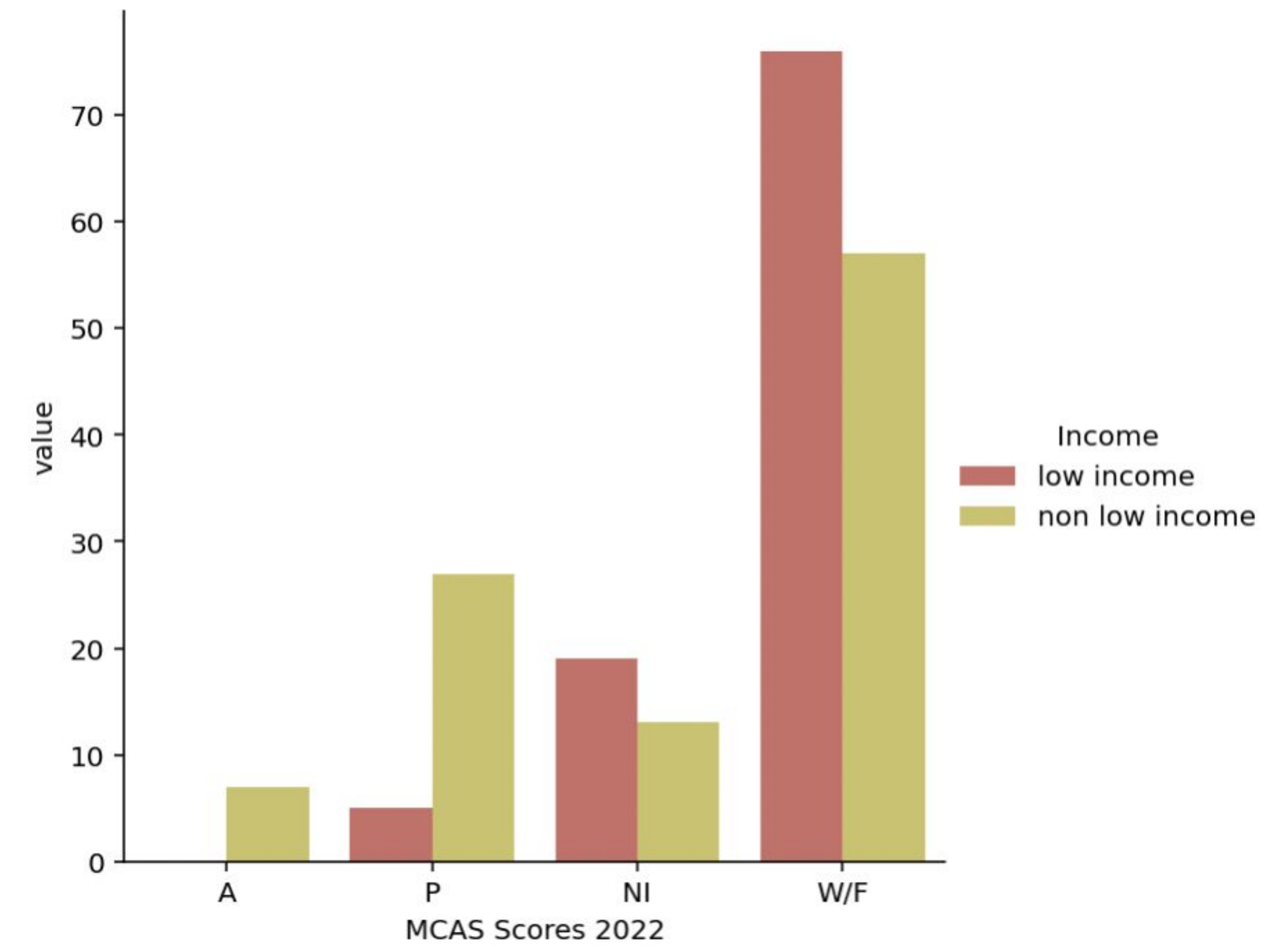
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MCAS Scores in 2018

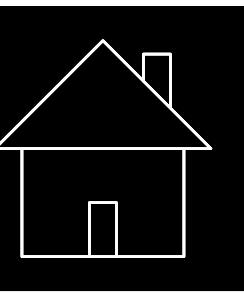
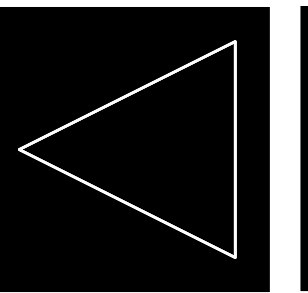


MCAS Scores in 2022



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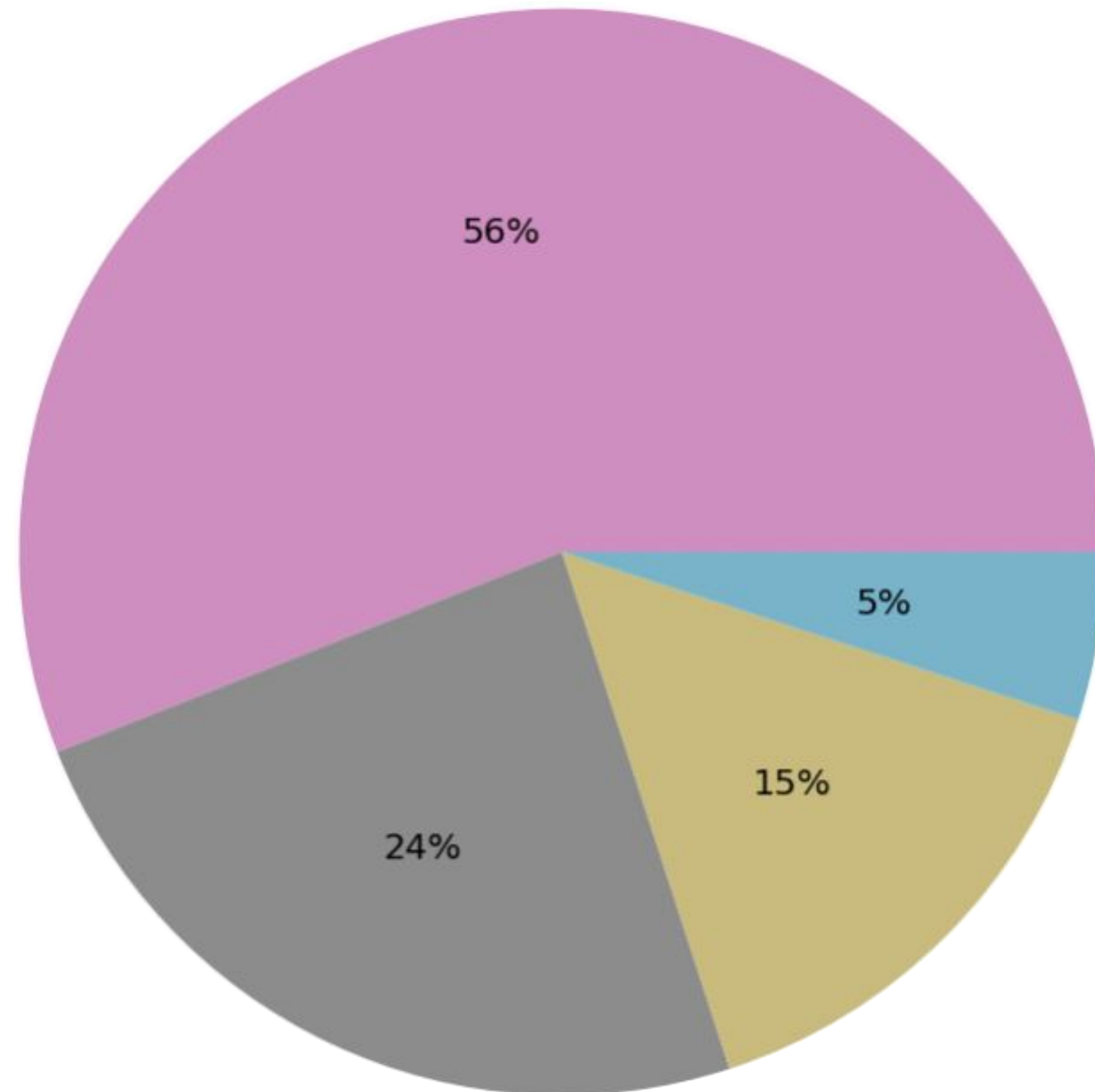
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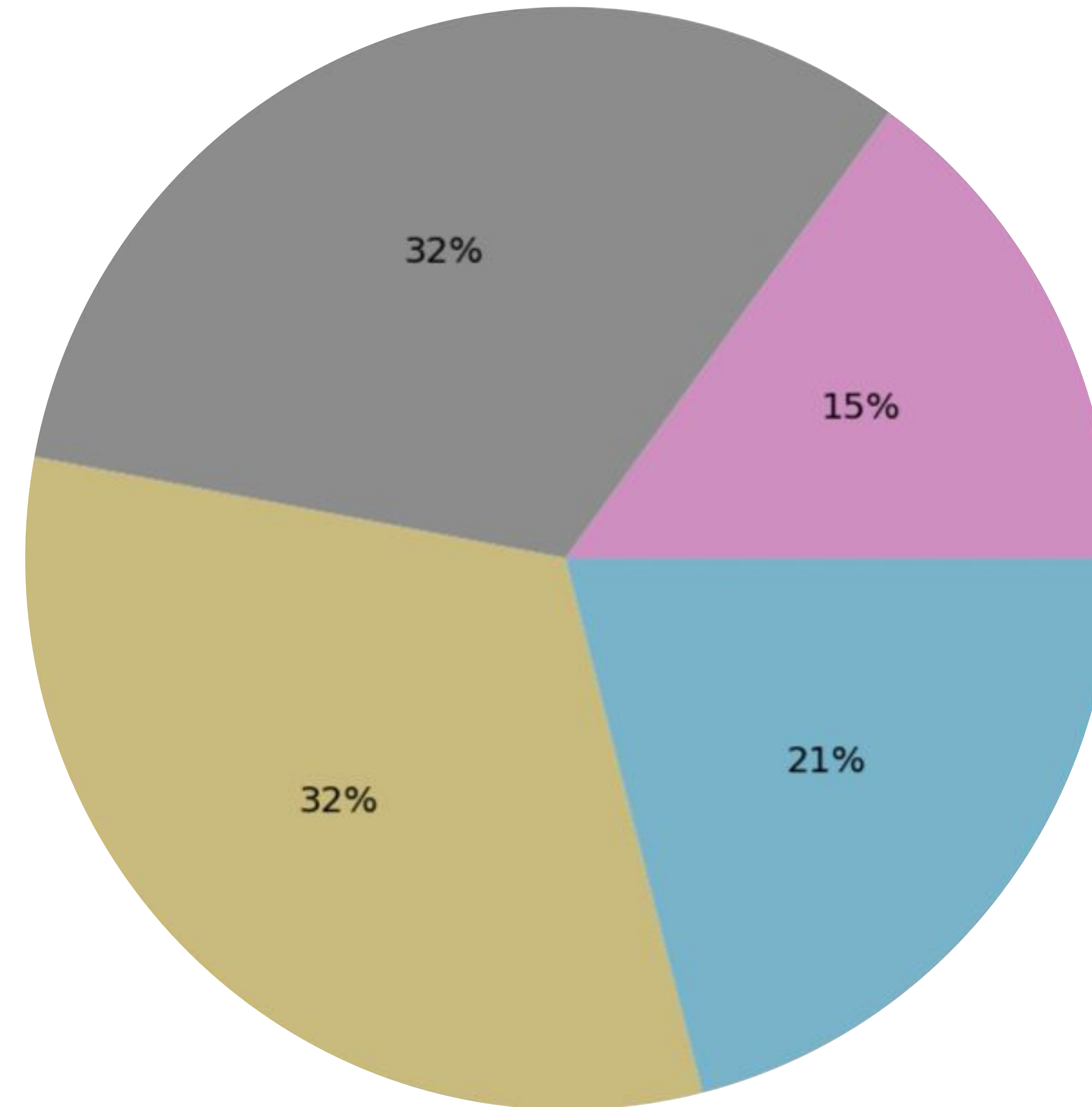
Score Level

- Advanced
- Proficient
- Needs Improvement
- Warning/Failing

MCAS Scores in 2018
(Non Low Income)

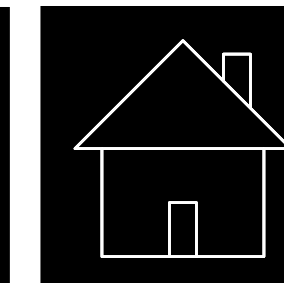
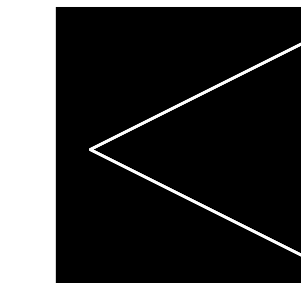


MCAS Scores in 2018
(Low Income)



The Impact of the Pandemic and Socioeconomic Status on MCAS Scores

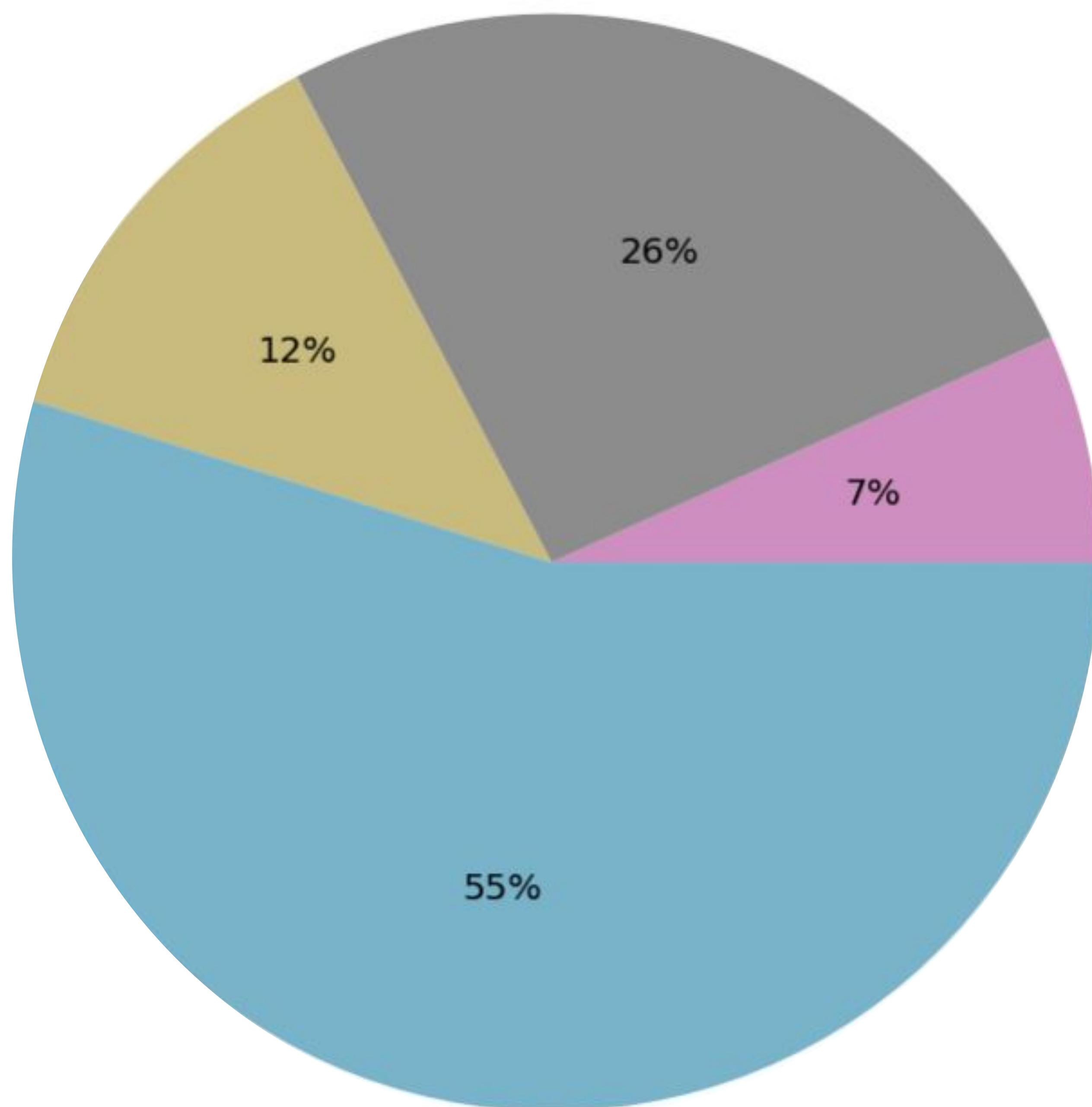
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Score Level

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- Needs Improvement
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MCAS Scores in 2022
(Non Low Income)



MCAS Scores in 2022
(Low Income)

