
HEALTH AND INCOME

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DDA3 Capstone



DATA QUESTIONS?

- Is there a relationship between physical health and income, using obesity as one way measure of health?
 - Is there any correlation with states that have higher rates of obesity and median income?
 - Is the rate of obesity higher in states with high levels of poverty?
 - What is the average cost of health insurance with an obese BMI verses a normal BMI?
 - Why is this data and this project relevant?
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OVERVIEW

- Key Considerations /Definitions
 - Obesity Rate, Poverty Level, Median Income by state compared to National average
 - Relationship between income, poverty, obesity
 - Cost of Obesity
 - Conclusion
 - Q&A
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KEY CONSIDERATIONS

- Metrics for analysis:
 - Annual median income \$53,102- \$65,618
 - National Poverty Level \$23,550- \$25,750
 - Obesity BMI ≥ 30.0
 - Data Timeline 2013, 2016, 2019
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DEFINITIONS

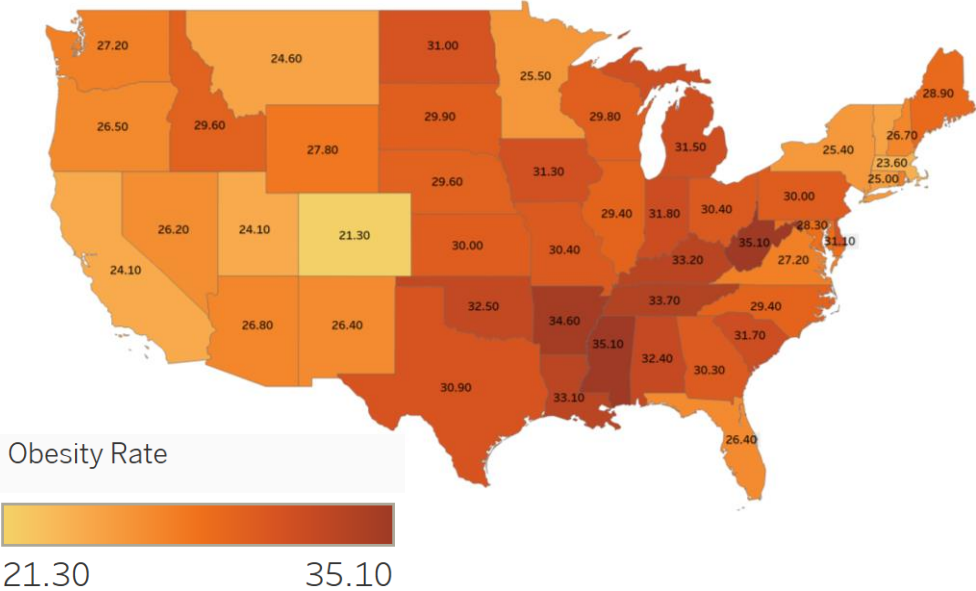
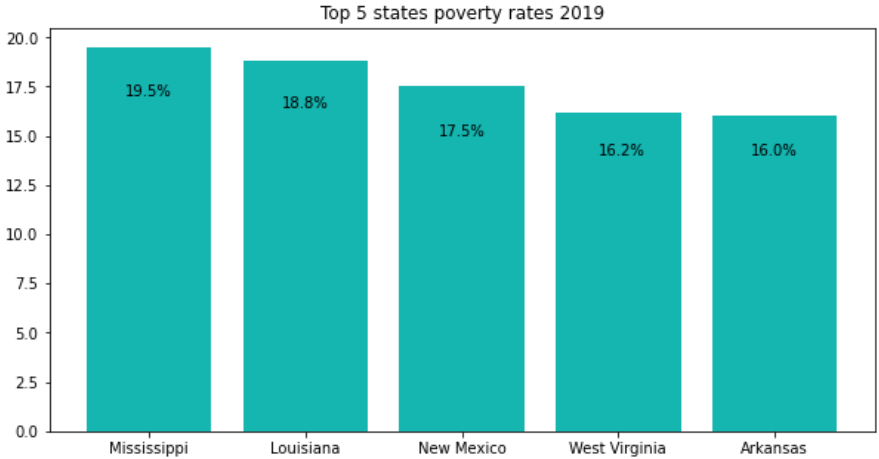
- BMI - Body Mass Index— a measurement index used to evaluate health (calculated using weight in kg/height in meters squared)
 - Annual Poverty Level
 - Median Income
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OBESITY RATES, INCOME, POVERTY 2013..

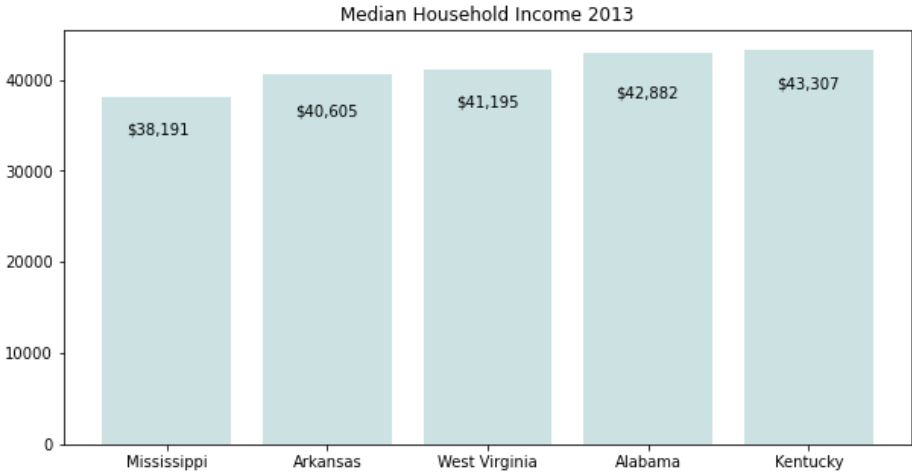
Average Median
Income
\$52,250

National Poverty
Rate
14.0%

Obesity Rate
29.4%



State	Obesity Rate
West Virginia	35.100000
Mississippi	35.100000
Arkansas	34.600000
Tennessee	33.700000
Kentucky	33.200000



SUMMARY 2013

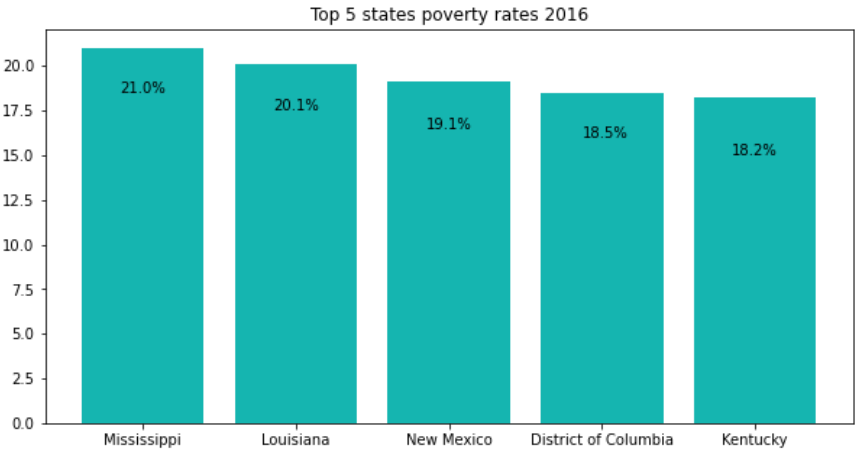
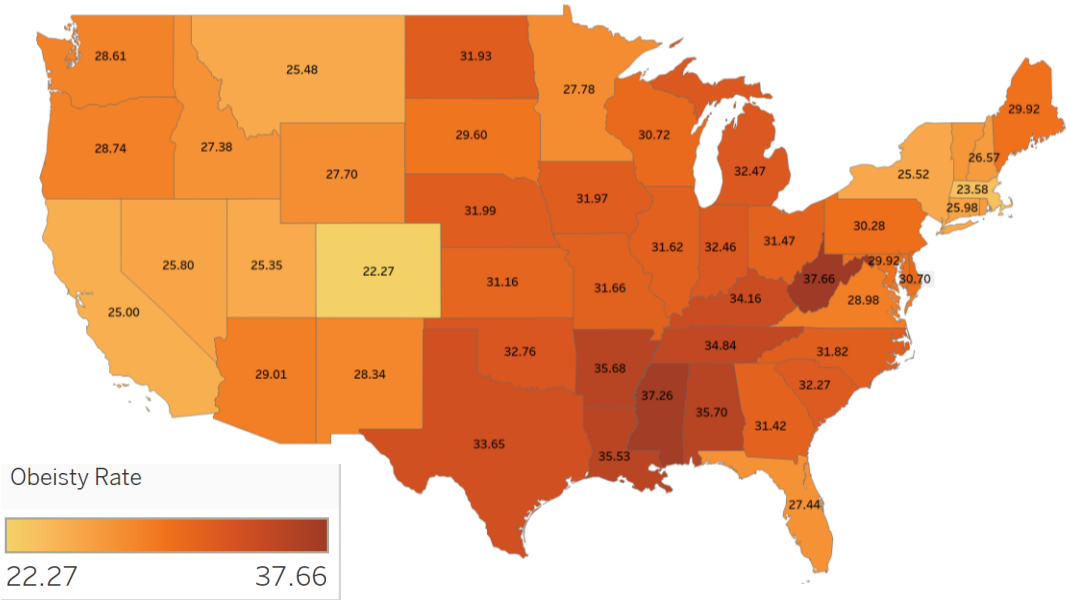
- In 2013..
- Over 44 million people in the US were classified as impoverished
- Over 92 million people we classified at obese
- Of the five states with the highest rates of obesity four of them rank top five for lowest median income

OBESITY RATES, INCOME, POVERTY 2016..

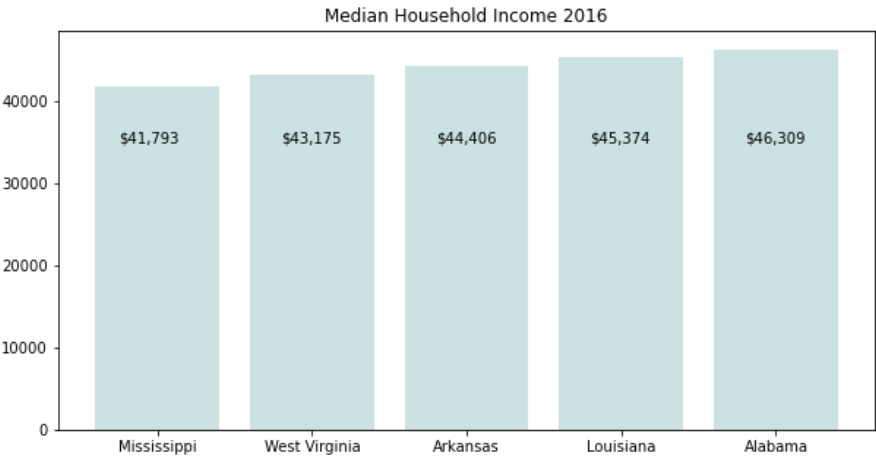
Average Median Income
\$57,617

National Poverty Rate
15.8%

Obesity Rate
29.9%



State	Obesity Rate
West Virginia	37.700000
Mississippi	37.300000
Alabama	35.700000
Arkansas	35.700000
Louisiana	35.500000



SUMMARY 2016

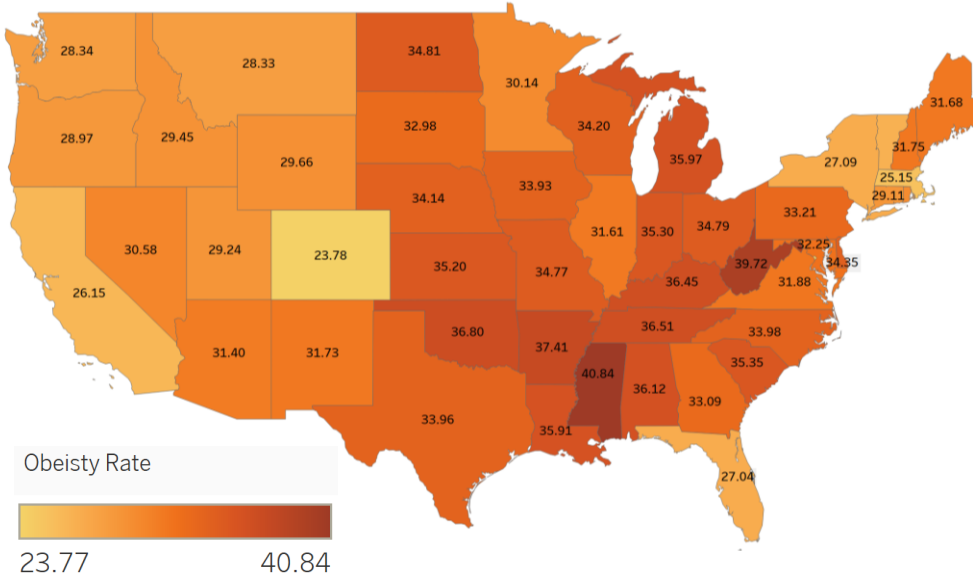
- Over 51 million people in the US were classified as impoverished
- Over 96 million people we classified at obese

OBESITY RATES, INCOME, POVERTY 2019..

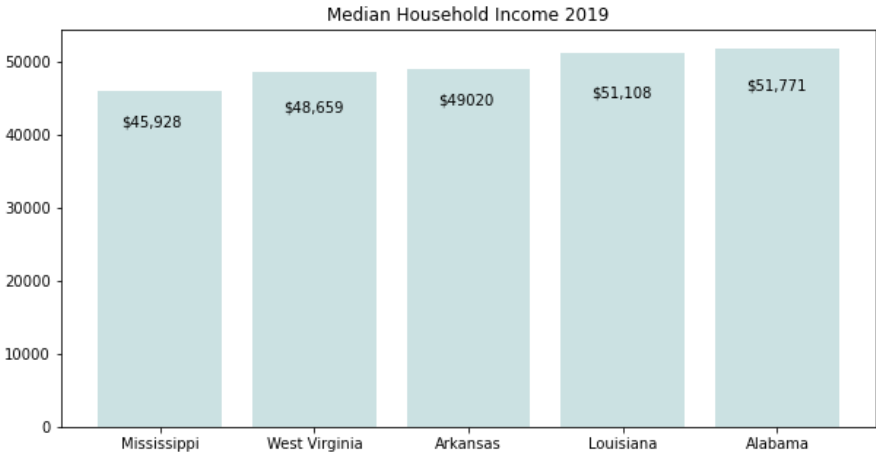
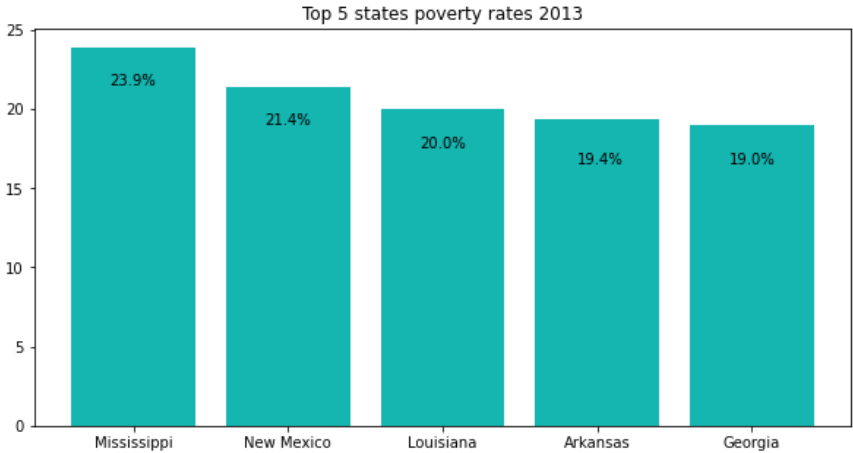
Average Median
Income
\$65,712

National Poverty
Rate
12.3%

Obesity Rate
32.1%



State	Obesity Rate
Mississippi	40.840000
West Virginia	39.720000
Arkansas	37.410000
Oklahoma	36.800000
Tennessee	36.510000



SUMMARY 2019

- Over 40 million people in the US were classified as impoverished
- Over 105 million people we classified as obese

ANALYSIS SUMMARY

- Over the course of this analysis Obesity rates increase by 9%
- Which evaluates to over 12 million more Americans that are classified as obese

COST OF OBESITY

- Personal Cost - Health insurance for obese people costs 25 to 50 percent more than coverage for people with a BMI below 30.
 - Zhou Yang, a professor at Emory University who studies the impact of obesity on the medical system, found that obese older males spent \$190,657 more on lifetime health-care expenses than their normal-weight peers, while older obese women spent \$223,629 more.
 - National cost of obesity - A 2016 meta-analysis by University of Washington researchers found that annual medical spending attributed to obesity nationally was nearly \$150 billion
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INCREASED HEALTH RISKS

High blood pressure
(Hypertension)

Type 2 diabetes

Coronary heart
disease

Stroke

Sleep apnea and
breathing problems

Low quality of life

Mental illness such as
clinical depression,
anxiety, and other
mental disorders

Body pain and
difficulty with physical
functioning

WHAT DOES THIS ALL MEAN?

- Obesity Rates are at a constant rate of increase with no end in sight
 - The cost associated with Obesity will continue to rise at well
 - This percent of states with lower median income and high rates of poverty are more likely to have higher rates of obesity
 - Why this data is so important, it creates a model to further analyze future data to and see the effects of major events such as the ongoing Coronavirus Pandemic
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The background of the slide is a dense field of three-dimensional, light gray question marks. These question marks are scattered across the entire surface, creating a textured, repetitive pattern. They vary slightly in orientation and depth, giving a sense of movement and volume. The lighting appears to come from the upper left, casting soft shadows that emphasize the 3D nature of the characters.

Any Questions?

DATA SOURCES

Census data from 2010- 2019 :

[State Population Totals: 2010-2019 \(census.gov\)](#)

Poverty rates, median income 2013-2019:

[SAIPE State and County Estimates for 2019 \(census.gov\)](#)

[SAIPE State and County Estimates for 2016 \(census.gov\)](#)

[SAIPE State and County Estimates for 2013 \(census.gov\)](#)

Obesity data by state :

[BRFSS: Table of Overweight and Obesity \(BMI\) | Chronic Disease and Health Promotion Data & Indicators \(cdc.gov\)](#)

DATA SOURCES CONTINUED...

- [The Health Effects of Overweight and Obesity | Healthy Weight, Nutrition, and Physical Activity | CDC](#)
 - [The enormous economic costs of America's obesity epidemic \(theweek.com\)](#)
 - [How Does Health Insurance for Obese People Work? | Freeway Insurance](#)
 - [The enormous economic costs of America's obesity epidemic \(theweek.com\)](#)
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