Examination of Mental Health Risk Factors Before and During COVID-19 Pandemic

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Research Question

What is the relationship between socioeconomic status, mental health, and the availability of medical care?

Motivation

If we can better understand what socioeconomic attributes are correlated with elevated risk for mental health issues, and which of those correlations are amplified during a time of crisis (i.e. a pandemic), then we can start to understand which systems (food systems, healthcare systems, social networks, etc.) are less robust.

Data Sets

National Survey on Drug Use and Health (NSDUH):
https://www.datafiles.samhsa.gov/dataset/national-survey-drug-use-and-health-2019-nsduh-2019-ds0001

National Mental Health Services Survey (N-MHSS):
https://www.datafiles.samhsa.gov/dataset/national-mental-health-services-survey-2019-n-mhss-2019-ds0001

Household Pulse Survey (HPS CDC)
Anxiety and Depression (A&D)
https://data.cdc.gov/d/8pt5-q6wp
Reduced Access to Care (RAC)
https://data.cdc.gov/d/xb3p-q62w

Food Environment Atlas (FEA):
https://www.ers.usda.gov/data-products/food-environment-atlas/data-access-and-documentation-downloads/
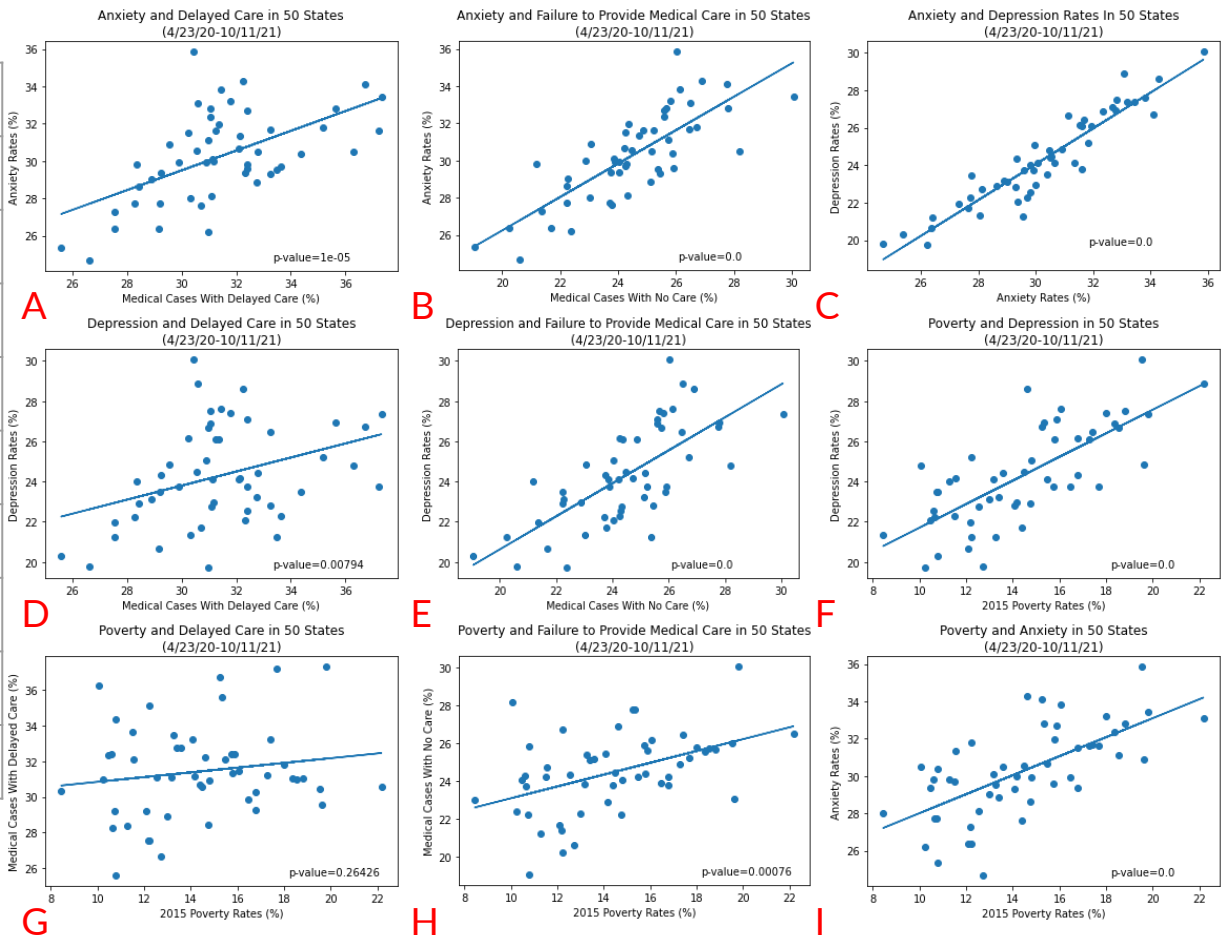
How we approached this project

- Gather an abundance of data (and realize you might have too much).
- Clean and organize the data.
- Focus analysis on specific time frames and variables (this limited the utility of the data in the Food Environment Atlas as the most recent data is from 2018 and only for a fraction of the variables measured).
- Visualize and describe the relationships.
- Report findings and conclusions.

Results

Figure	Variables	R^2*
A	Anxiety v. Delayed care	0.5686
B	Anxiety v. No care	0.7915
C	Anxiety v. Depression	0.9357
D	Depression v. Delayed care	0.3677
E	Depression v. No care	0.4563
F	Poverty v. Depression	0.7387
G	Poverty v. Delayed care	0.1593
H	Poverty v. No care	0.4563
I	Poverty v. Anxiety	0.6537

* Pearson correlation coefficient

Conclusion

- Denying medical care has a strong positive relationship with people reporting mental health issues
- Poverty has a strong positive relationship with people reporting mental health issues
- Poverty has little to no correlation with patients being denied healthcare