

Kansas Crime 2021

This was a study of some of the commonly suggested contributing factors to crime. Being originally from Kansas, I chose to focus on the state I know well. I looked at the factors I've heard about a lot, and I looked at how they actually affect crime.

Some of the common factors often named as contributing to high crime are age, income, unemployment, education, and population density. With that in mind, I went about obtaining data to study.

I scraped data from census-charts.com/ACS/Kansas.html. This included the ages of the residents of each county in Kansas. This provided multiple tables, which I then cleaned up and merged into a single table. I removed unnecessary rows, promoted column names, dropped unneeded columns, etc.

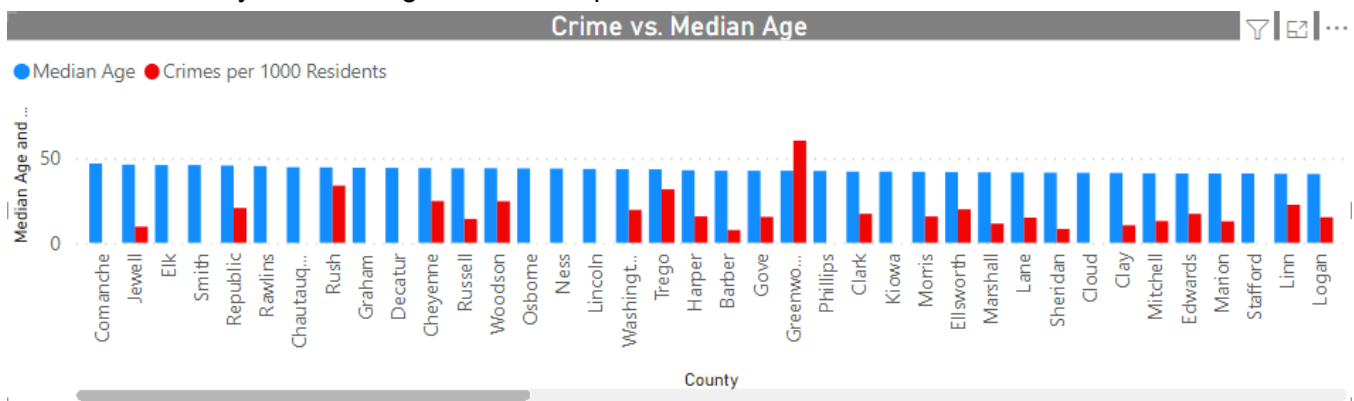
I found the unemployment data from the Kansas state government site and downloaded it as a .csv, which I then pulled into Power BI as a table. I added a column with the county and state name to aid in mapping in reports.

I then found data for county by county education level in a PDF format at ipsr.ku.edu/ksdata/ksah/education/6ed15.pdf. This resulted in 3 tables, which I then merged into a single table and cleaned up.

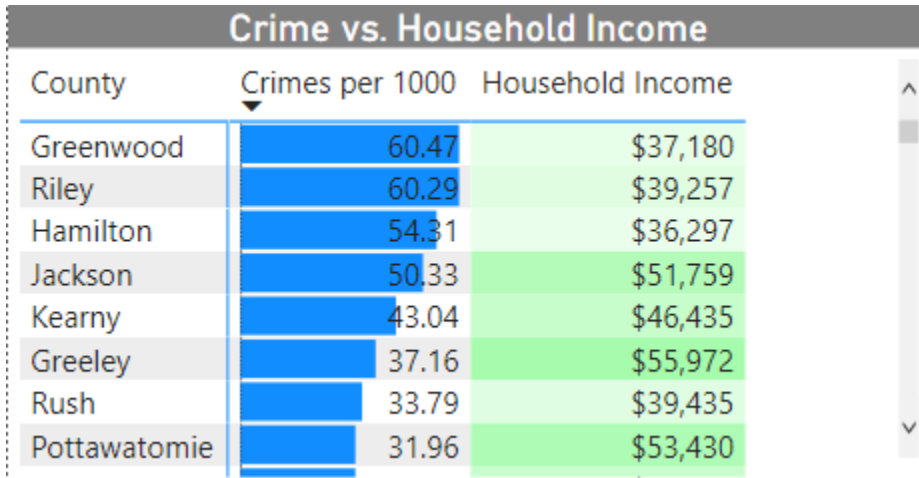
I obtained crime data from crime-data-explorer.fr.cloud.gov/pages/downloads. I had to clean this data up a lot. I removed columns, irrelevant rows, and replaced some values.

I scraped the Kansas income data from wikipedia.org/wiki/List_of_Kansas_locations_by_per_capita_income. This gave me the average income of each county in the state.

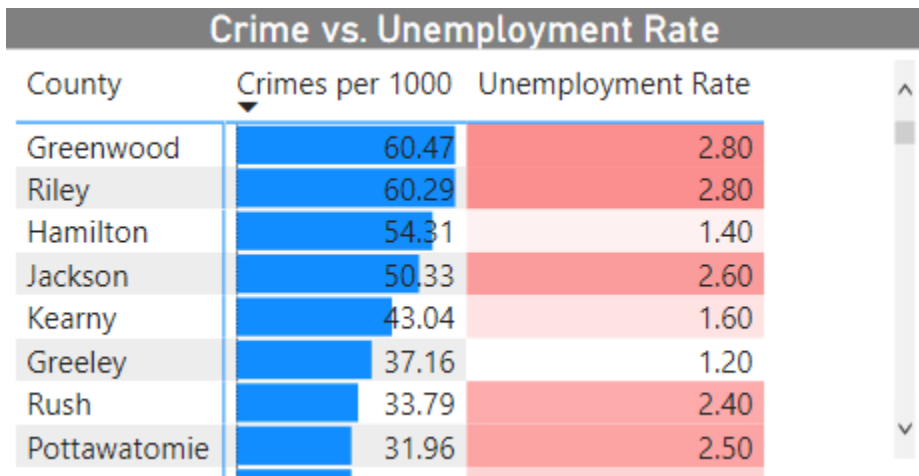
I wanted to show whether age was a determining factor in crime, so I created a column chart that shows each county's median age and crimes per 1000 residents.



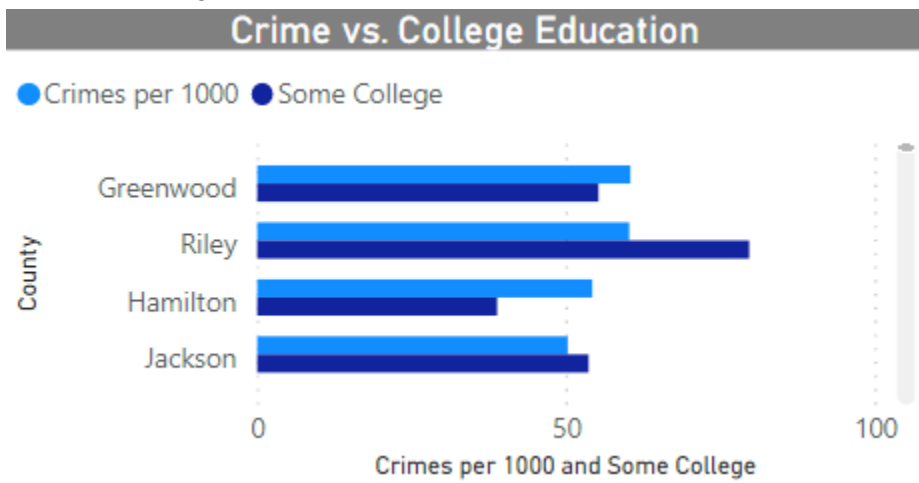
Crime vs. household income



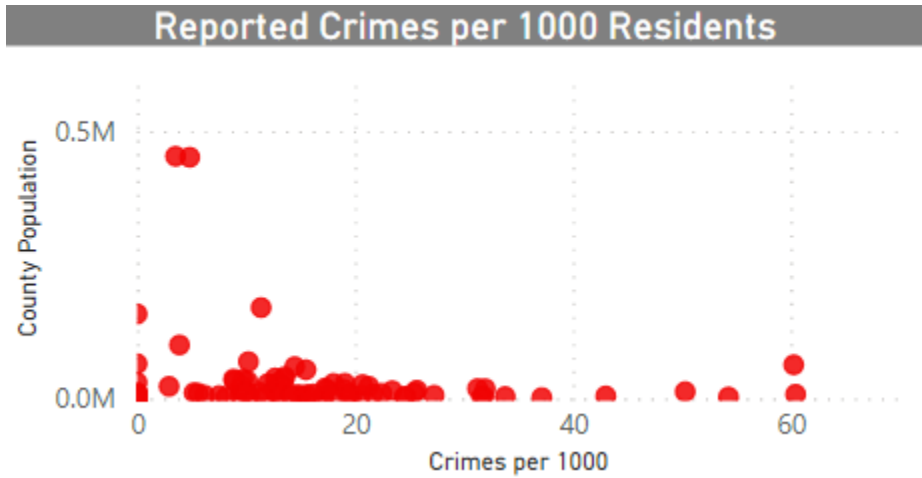
Crime vs. unemployment rate



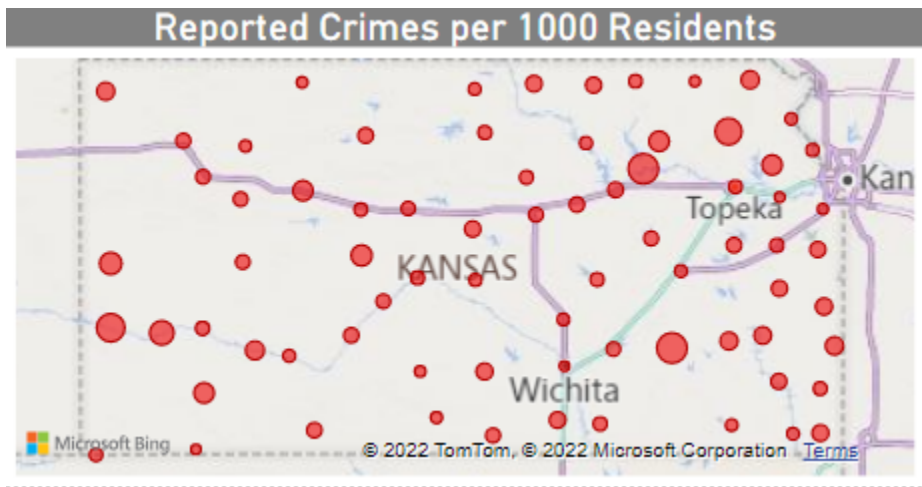
Crime vs. college education



Scatter chart showing the crimes per 1000 residents in each county



A bubble map showing crimes per 1000 residents in each county



And a matrix showing crime vs. county population

County	Crimes per 1000	Population
Sedgwick	3.53	452,869
Johnson	4.83	451,086
Shawnee	11.39	169,871
Wyandotte	0.00	157,882
Douglas	3.89	99,962
Leavenworth	10.22	68,691
Reno	0.00	64,790
Riley	60.29	62,843

More information is necessary to draw any firm conclusions, but these are the results based only on the limited data of this single year:

- There is no correlation or minimal correlation between crime rate and median age.
- There is minimal correlation between average income in the county and crime rate.
- There is no correlation between unemployment rate and crime rate.
- There is no correlation between college education rate and crime rate.
- There is a trend for a higher crime rate in counties with higher population. This seems to be the single biggest factor.

The best way to view these results is by seeing the full set of results and data in the Power BI dashboard I created for this project.