

Case Study 2: Global Health Data

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Our data:

The data that we collected come from two sources: The World Happiness Report (2016) and the OECD database. The World Happiness Report is a survey which aims to assess the happiness of 156 countries by how happy their citizens perceive themselves to be. Some examples of questions asked in this survey are:

- “If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?”
- “Are you satisfied or dissatisfied with your freedom to choose what you do with your life?”
- “Is corruption widespread throughout the government or not?”

The OECD database is compiled by the Organization for Economic Cooperation and Development. Data is only available for countries that are members of the OECD, so this set was smaller. However, we found that it was a good source for more objective factors such as government expenditures and average number of natural disasters per year. There were also more subjective factors such as confidence in local police and satisfaction with the healthcare system that we found interesting.

Our goal:

The aim of our case study was to explore what factors may influence a country's happiness score and gain insight into global trends of happiness.

Our results:

The most substantial trend that we observed was the positive correlation between wealth and happiness. This can be observed both in the Shiny app and the Tableau dashboard. With any of the monetary-based factors (GDP, government expenditures, government revenues, etc.) there is a clear positive relationship between wealth and happiness scores. We did observe one significant outlier -- the country of Somalia, which has a GDP of \$499/person yet boasts a happiness score of 5.440 when it was only predicted to have a score of 3.31 by the trendline.

Another interesting result we found while examining the relationship between a country's happiness score and the citizens' confidence in local police. South Africa, Russia, and all Latin American countries in the OECD set have much higher happiness scores than predicted. It's possible that police corruption is a norm in these countries and doesn't affect the perception of the citizens' own happiness because it is something they have become accustomed to.

When looking at the world map, we saw how happiness scores are distributed globally. Generally speaking: countries in North America, South America, Western Europe, and Australia have the highest scores (above 6); countries in Western Europe, Eastern Asia, and Southeastern Asia have scores between 5 and 6; approximately half of the countries in Southern Asia, Middle East, and Africa have scores between 4 and 5 while the other half have scores below 4. This likely has to do with the monetary factors discussed earlier.

Overall, looking at this data showed us how strongly correlated a country's wealth is with its citizen's happiness and showed us some unique outliers that we wouldn't have predicted which could be explained by differences in a country's culture.