

World Happiness

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Question & Hypothesis

Question

-The research question we will be investigating is, 'How Do a Range of Factors Affect Worldwide Happiness?'.
-The research question we will be investigating is, 'How Do a Range of Factors Affect Worldwide Happiness?'.

- We selected this question as mental health is a prominent issue in society and analysis of the data in this way could give some indicators of ways to improve the overall happiness of a country.

- We hypothesise that in countries with higher GDP and freedom rating , the happiness score will be higher than countries with a lower GDP and freedom rating.

-We hypothesise that in countries where Government Corruption is higher, the happiness score will be lower than in countries with less government corruption.

Dataset Information

-To try and answer this question we picked 2 data sets.

-They were "World happiness Report" from 2015, and "Countries of The World."

-World Happiness Report contains data from a survey about overall happiness in 158 countries

```
## Rows: 158
## Columns: 12
## $ Country      <chr> "Switzerland", "Iceland", "Denmark", "...
## $ Region       <chr> "Western Europe", "Western Europe", "W...
## $ `Happiness Rank` <dbl> 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,...
## $ `Happiness Score` <dbl> 7.587, 7.561, 7.527, 7.522, 7.427, 7.4...
## $ `Standard Error` <dbl> 0.03411, 0.04884, 0.03328, 0.03880, 0...
## $ `Economy (GDP per Capita)` <dbl> 1.39651, 1.30232, 1.32548, 1.45900, 1...
## $ Family       <dbl> 1.34951, 1.40223, 1.36058, 1.33095, 1...
## $ `Health (Life Expectancy)` <dbl> 0.94143, 0.94784, 0.87464, 0.88521, 0...
## $ Freedom      <dbl> 0.66557, 0.62877, 0.64938, 0.66973, 0...
## $ `Trust (Government Corruption)` <dbl> 0.41978, 0.14145, 0.48357, 0.36503, 0...
## $ Generosity   <dbl> 0.29678, 0.43630, 0.34139, 0.34699, 0...
## $ `Dystopia Residual` <dbl> 2.51738, 2.70201, 2.49204, 2.46531, 2...
```

- Countries of The World has general statistics about all countires.
- GDP, literacy%, population density etc.
- We combined the two data sets as we thought that this would help answer the question.
- Combined sets has opinions and facts to compare.

Countries

```
## Rows: 227
## Columns: 20
## $ Country
## $ Region
## $ Population
## $ `Area (sq. mi.)`
## $ `Pop. Density (per sq. mi.)`
## $ `Coastline (coast/area ratio)`
## $ `Net migration`
## $ `Infant mortality (per 1000 births)`
## $ `GDP ($ per capita)`
## $ `Literacy (%)`
## $ `Phones (per 1000)`
## $ `Arable (%)`
## $ `Crops (%)`
## $ `Other (%)`
## $ Climate
## $ Birthrate
## $ Deathrate
## $ Agriculture
## $ Industry
## $ Service
```

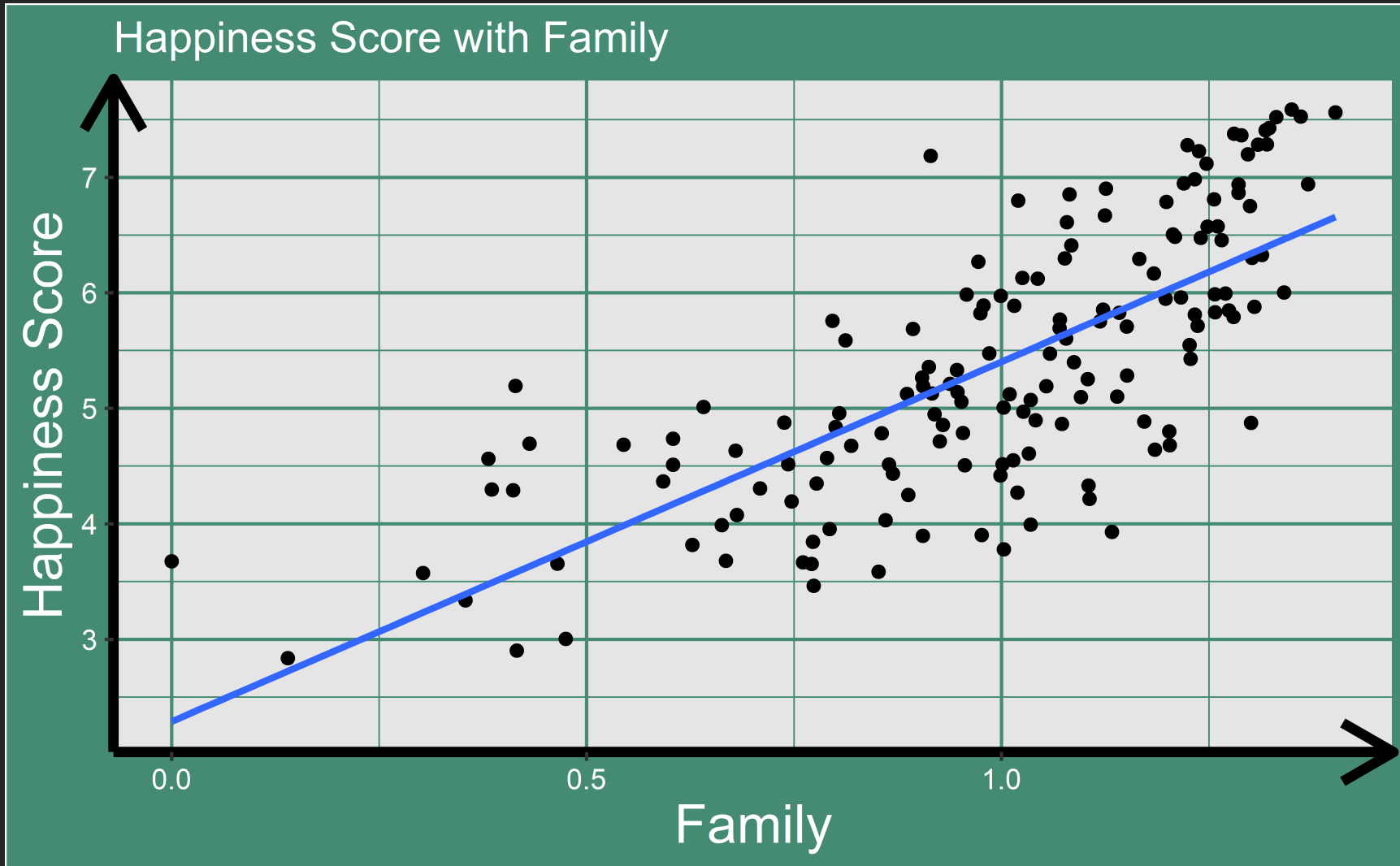
<chr>	"Afghanistan", "Albania", "Algeri...
<chr>	"ASIA (EX. NEAR EAST)", "EASTERN ...
<dbl>	31056997, 3581655, 32930091, 5779...
<dbl>	647500, 28748, 2381740, 199, 468,...
<chr>	"48,0", "124,6", "13,8", "290,4",...
<chr>	"0,00", "1,26", "0,04", "58,29", ...
<chr>	"23,06", "-4,93", "-0,39", "-20,7...
<dbl>	16307, 2152, 31, 927, 405, 19119,...
<dbl>	700, 4500, 6000, 8000, 19000, 190...
<dbl>	360, 865, 700, 970, 1000, 420, 95...
<chr>	"3,2", "71,2", "78,1", "259,5", "...
<chr>	"12,13", "21,09", "3,22", "10", "...
<chr>	"0,22", "4,42", "0,25", "15", "0"...
<dbl>	8765, 7449, 9653, 75, 9778, 9735,...
<dbl>	1, 3, 1, 2, 3, NA, 2, 2, 3, 4, 2,...
<dbl>	466, 1511, 1714, 2246, 871, 4511,...
<dbl>	2034, 522, 461, 327, 625, 242, 53...
<chr>	"0,38", "0,232", "0,101", NA, NA,...
<chr>	"0,24", "0,188", "0,6", NA, NA, "...
<chr>	"0,38", "0,579", "0,298", NA, NA,...

Summary Statistics

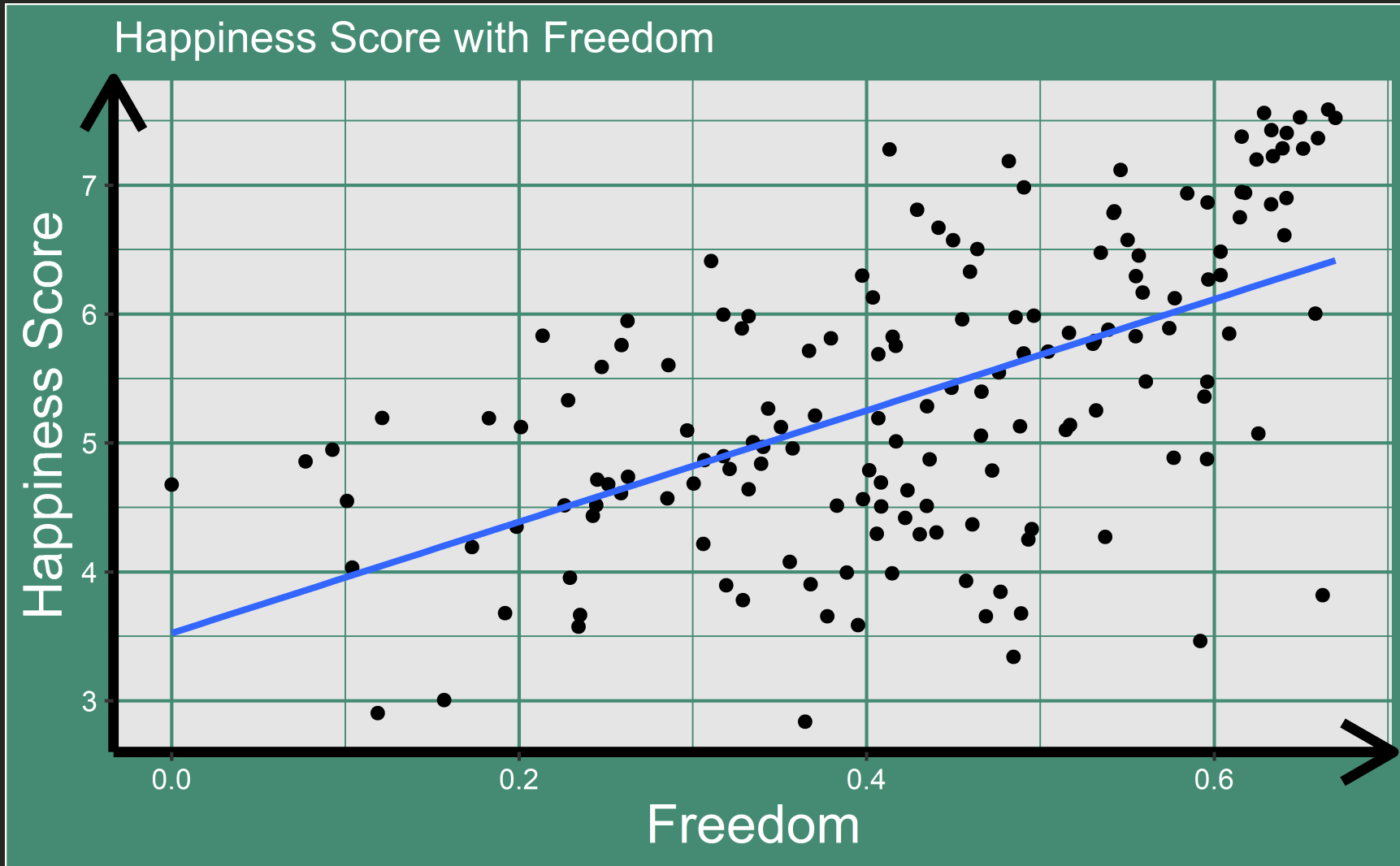
Variable	Mean	Max Value	Min Value	Standard Deviation
Happiness Score	5.38	7.59	2.84	1.145
Health	0.63	1.03	0	0.247
Economy	0.85	1.69	0	0.403
Trust	0.143	0.552	0	0.120
Family	0.991	1.4	0	0.272
Freedom	0.429	0.668	0	0.151

Plots

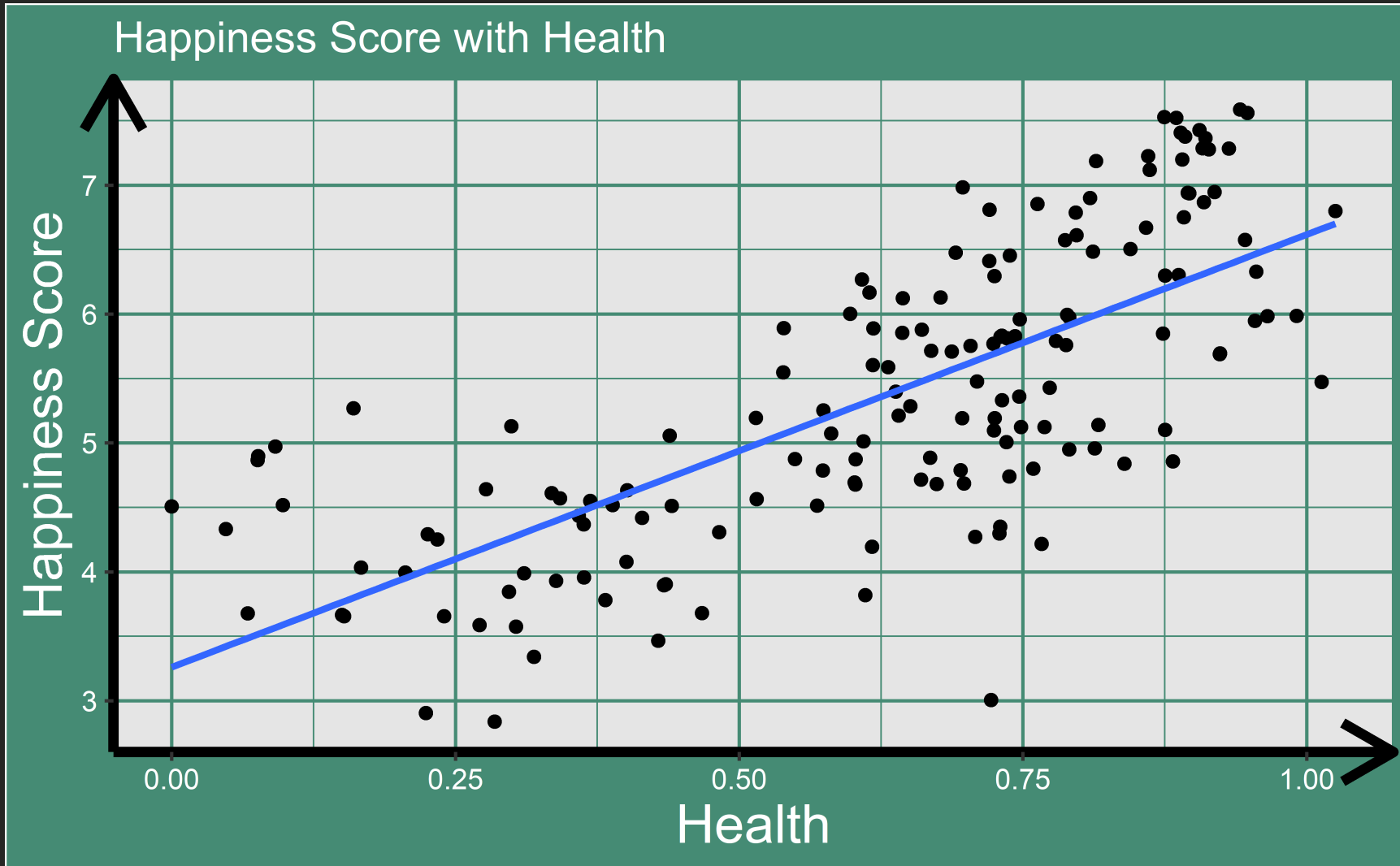
-As Family Score increases Happiness Score also Increases



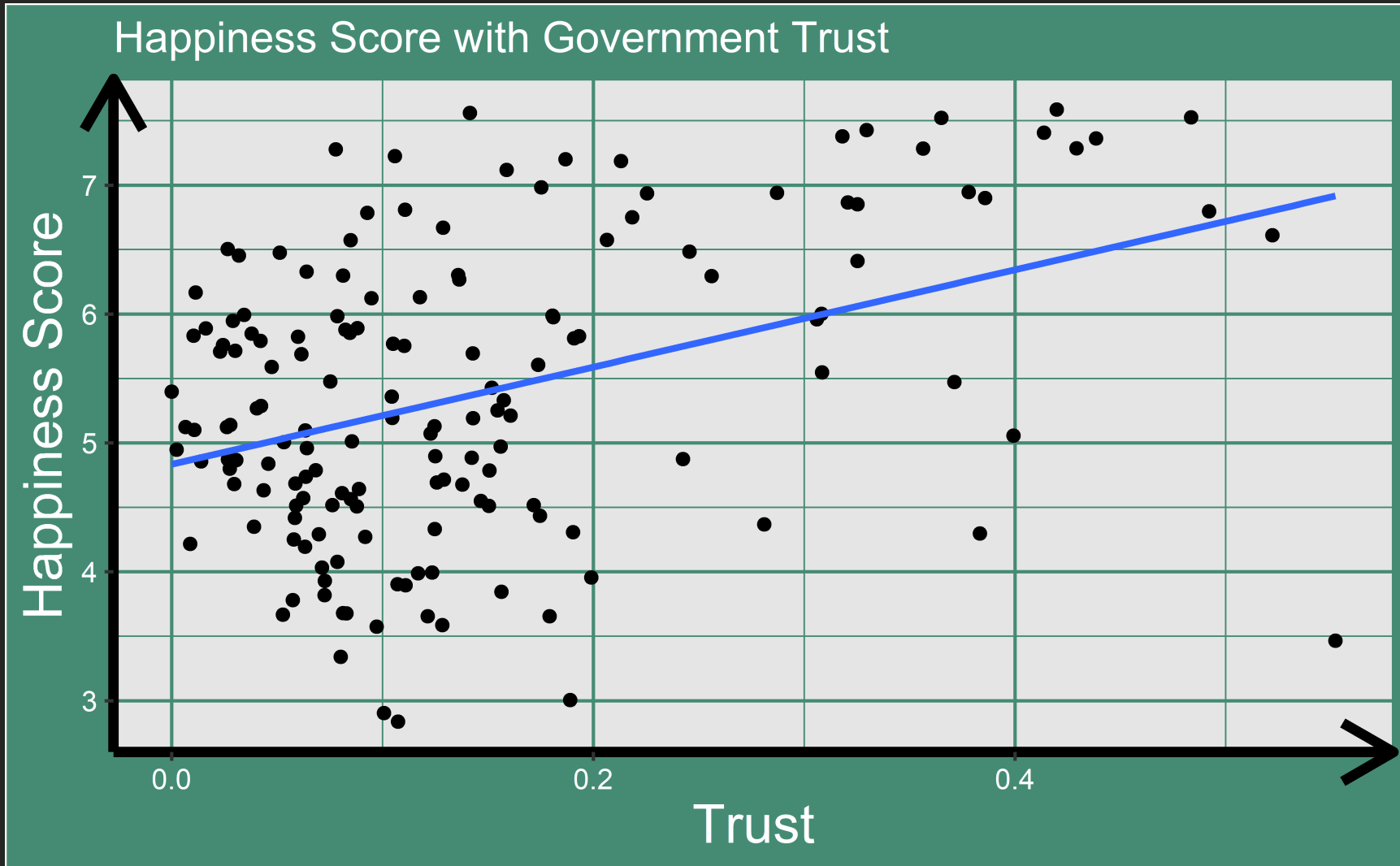
-As Freedom Score increases Happiness Score also Increases



-As Health Score increases Happiness Score also Increases



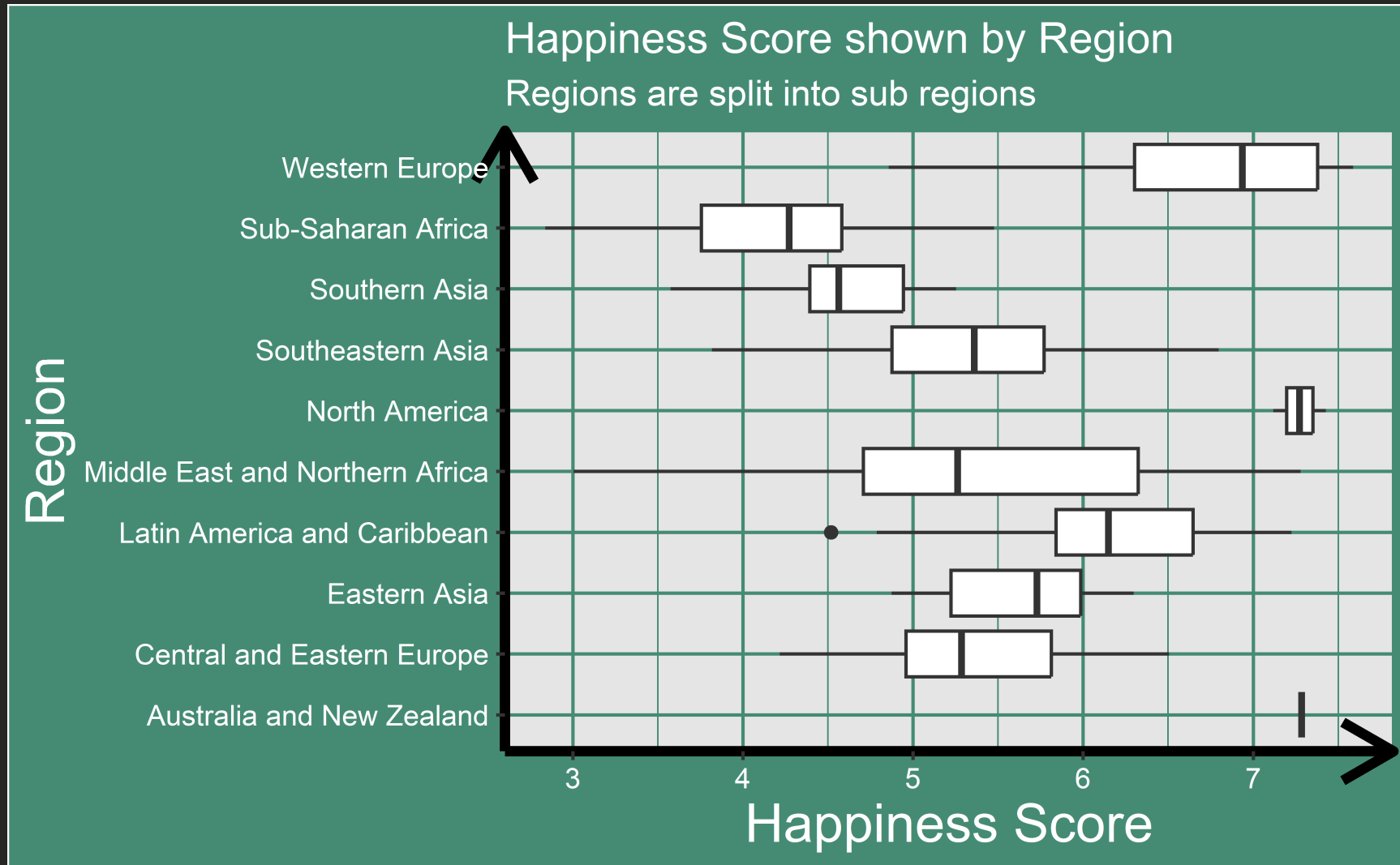
-As Trust Score increases Happiness Score also Increases



-As Economy Score increases Happiness Score also Increases



-Some regions are happier on average than others

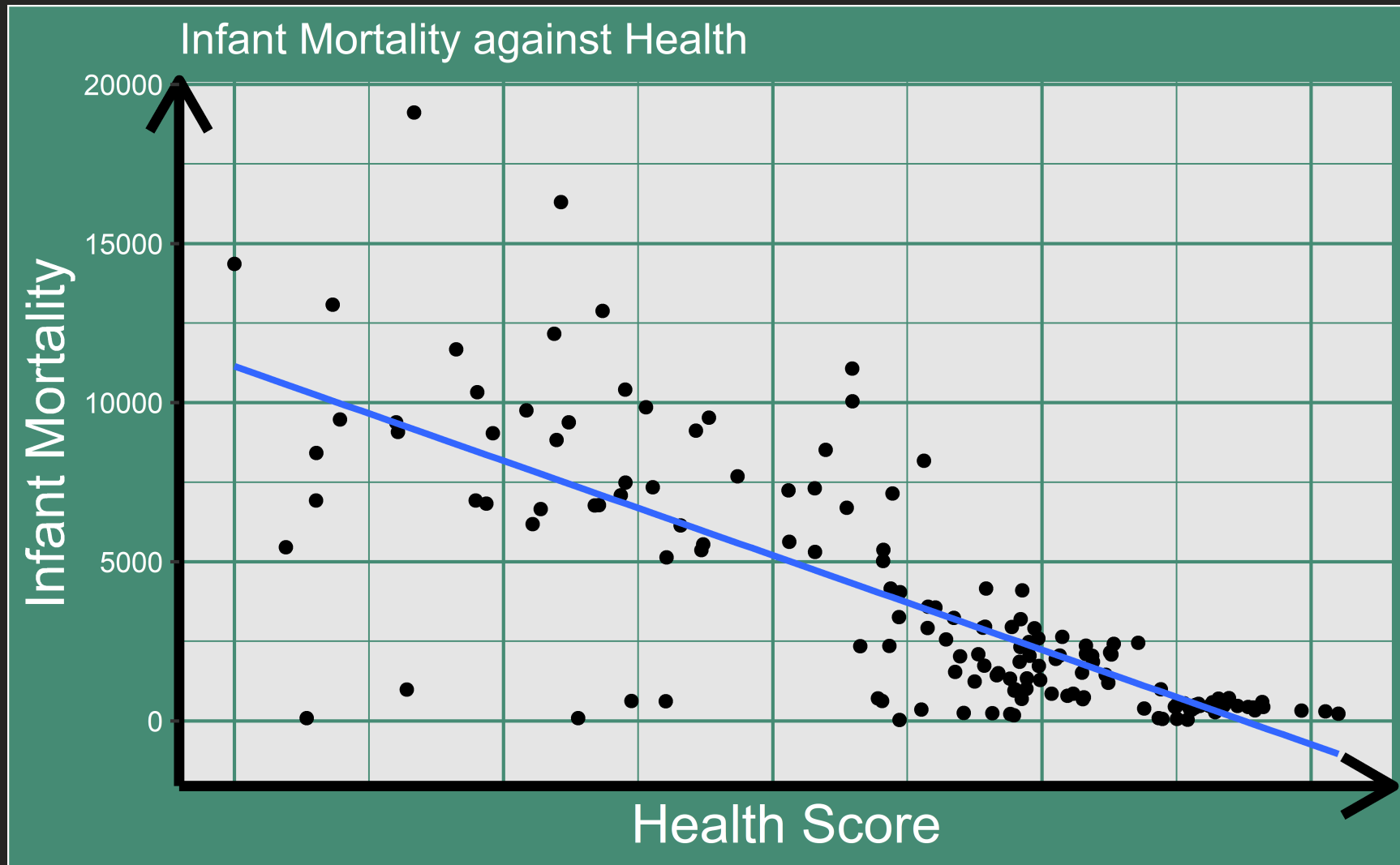


Models

-We are 95% confident that for each additional 0.1 of a point of economy score, we would expect gdp to increase by \$1734.00 to \$2390.46, on average



-we are 95% confident that for each additional 0.1 of a point of health score, we would expect infant mortality to decrease by 963.71 to 1418.07, on average.



-No correlation.



Conclusion & Limitations

Limitations

- People surveyed.
- Issues in the country may affect results of survey.
- Outdated

Conclusions

- "We hypothesise that in countries with higher GDP and freedom rating , the happiness score will be higher than countries with a lower GDP and freedom rating."
- "We hypothesise that in countries where Government Corruption is higher, the happiness score will be lower than in countries with less government corruption."
- Most graphs showed expected trends.
- Certain factors could be seen to affect overall happiness.
- Some factors not in the dataset will affect happiness

