

# Well-Being Index

For United States of America

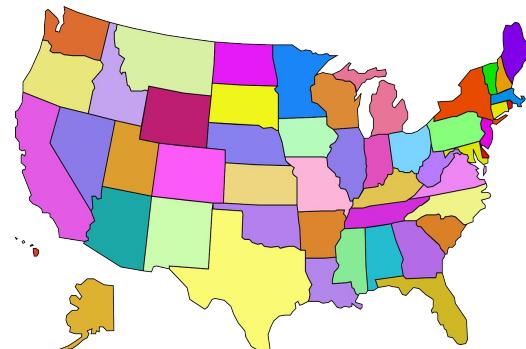


Group Members

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Group Members

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# **Exploratory Data Analysis Project**

- Selected Dataset
- Performed data prep and cleaning
- Exploratory analysis and visualization
- Ask and answered specific questions about the data
- Summarize and conclude

## **Presentation!**

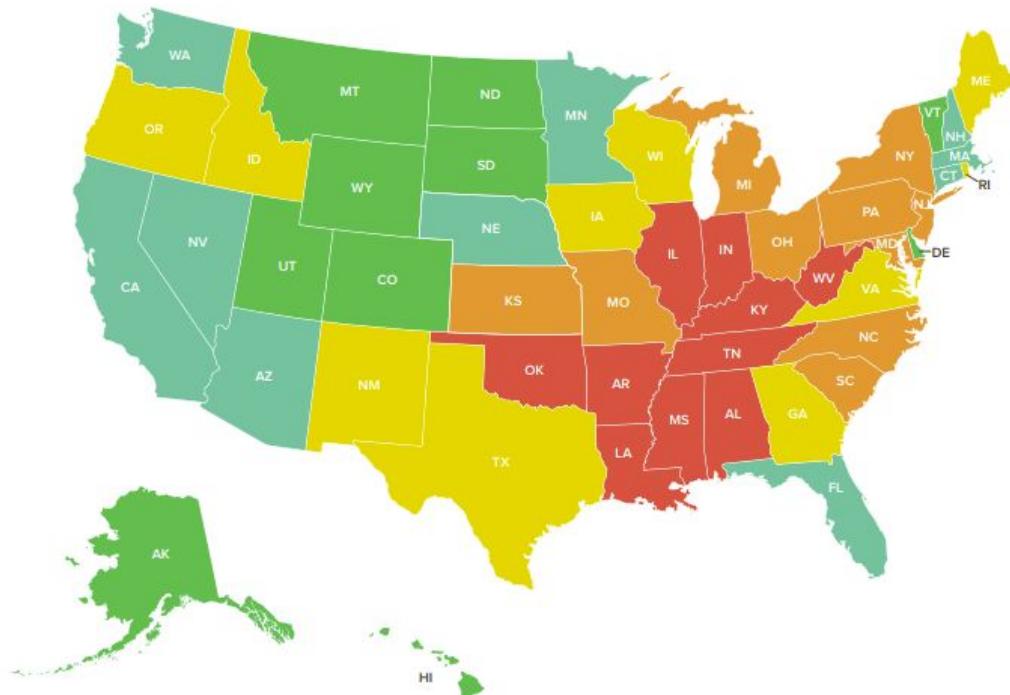
# Gallup Poll Well-Being of Americans By State

## Top 10 States

State	2018 sample size	Well-Being Index	Well-Being Index Rank	Career	Social	Financial	Community	Physical
Hawaii	502	64.6	1	1	1	1	4	4
Wyoming	219	64.2	2	3	18	6	1	3
Alaska	212	63.9	3	5	8	2	23	1
Montana	488	63.5	4	4	19	17	2	7
Utah	1214	63.4	5	2	4	13	9	14
Colorado	2316	63.4	6	11	6	10	11	2
Vermont	283	63.3	7	14	3	9	5	6
Delaware	386	62.9	8	26	2	4	22	10
South Dakota	402	62.7	9	6	21	12	6	27
North Dakota	340	62.7	10	7	31	3	7	33

## 2018 State Well-Being Rankings

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Top Quintile

2<sup>nd</sup> Quintile

3<sup>rd</sup> Quintile

4<sup>th</sup> Quintile

5<sup>th</sup> Quintile

# Group #4 is on a mission to find out....

## What makes people happy?



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94 <div class="content">
95   <div>The New York Times</div>
96   <div>Times Square, Manhattan, New York City</div>
97   <div>Times Square</div>
98   <div>Times Square</div>
99   <div>Times Square</div>
100  </div>
101  <a href="#" class="left" data-current-control="left">Previous</a>
102  <a href="#" class="right" data-current-control="right">Next></a>
103  <a href="#" class="left" data-current-control="left">Previous</a>
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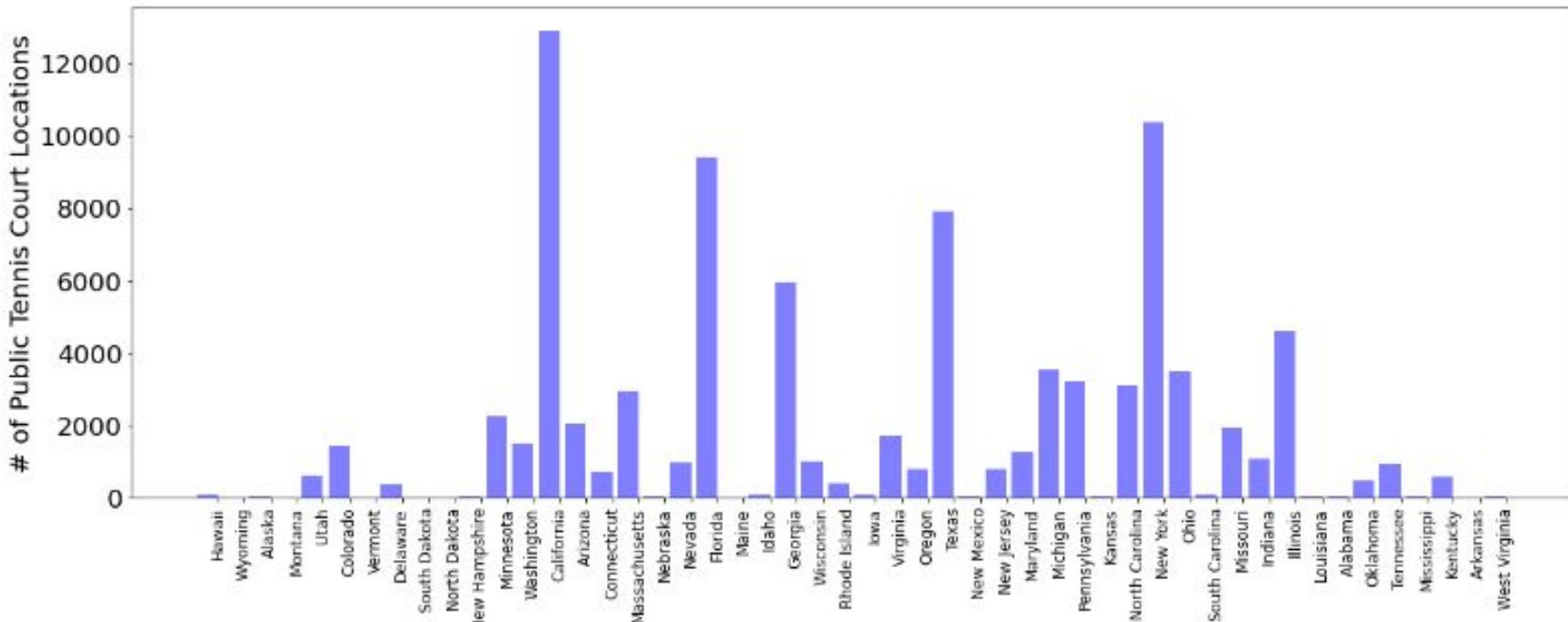


**“Tennithhhh Anyone?!?!?”**



# A Look at the Raw #s

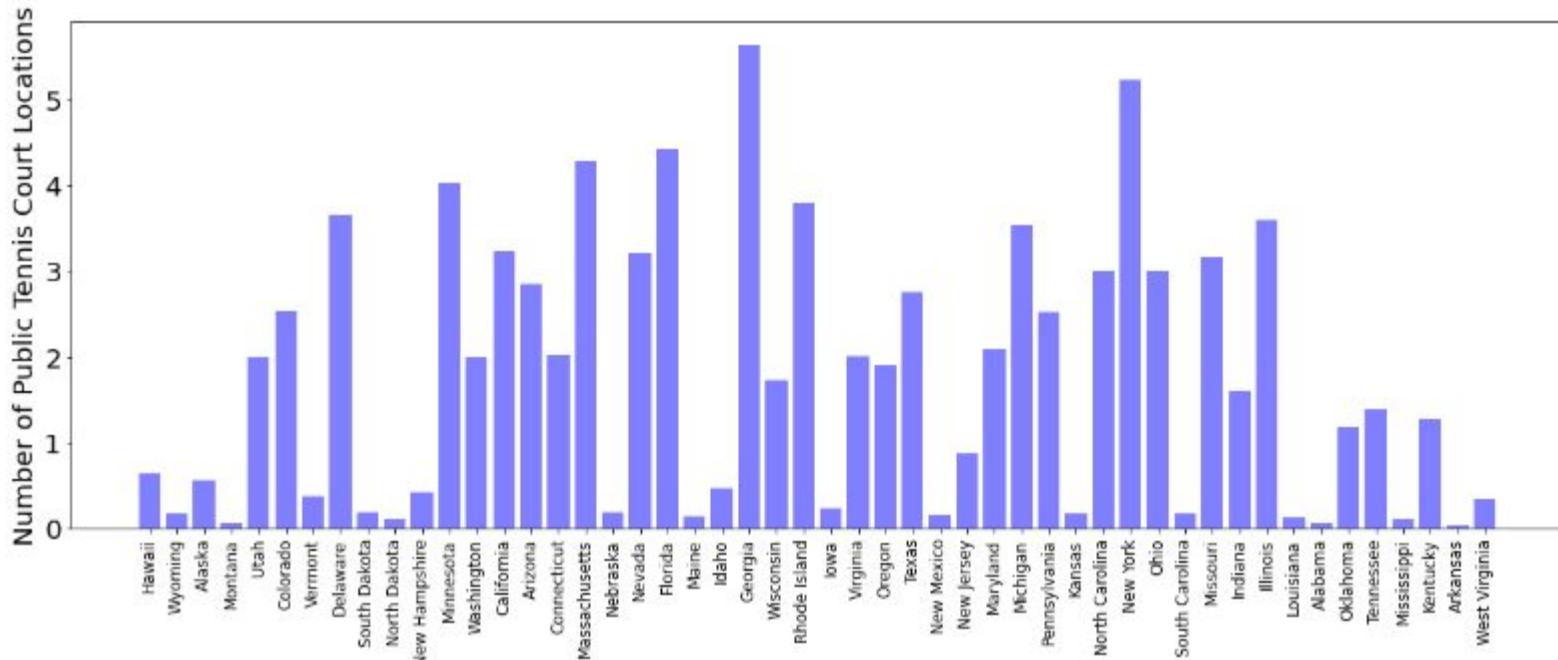
Number of Public Tennis Court Locations by State  
(raw #s)



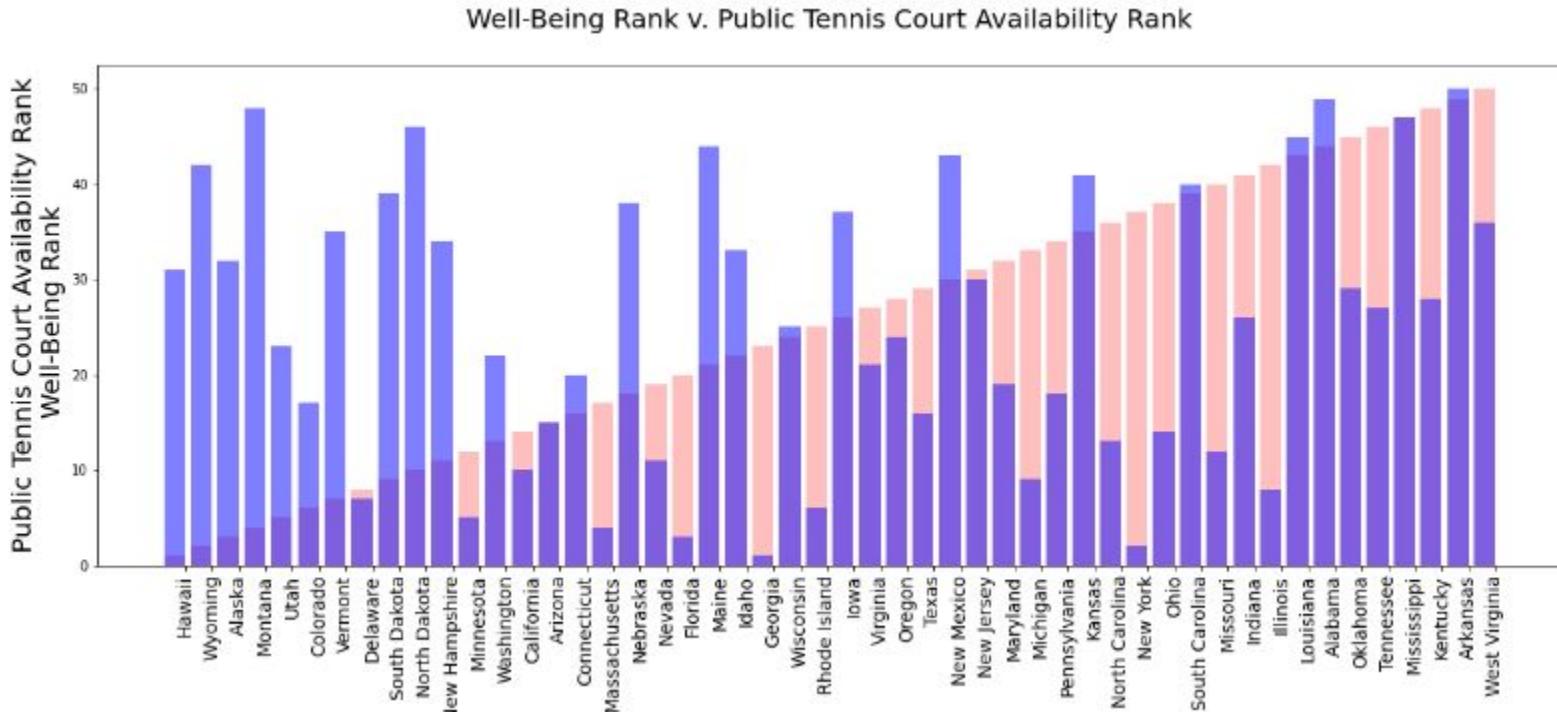
# A Look at the Raw #s

## (Indexed according top state population)

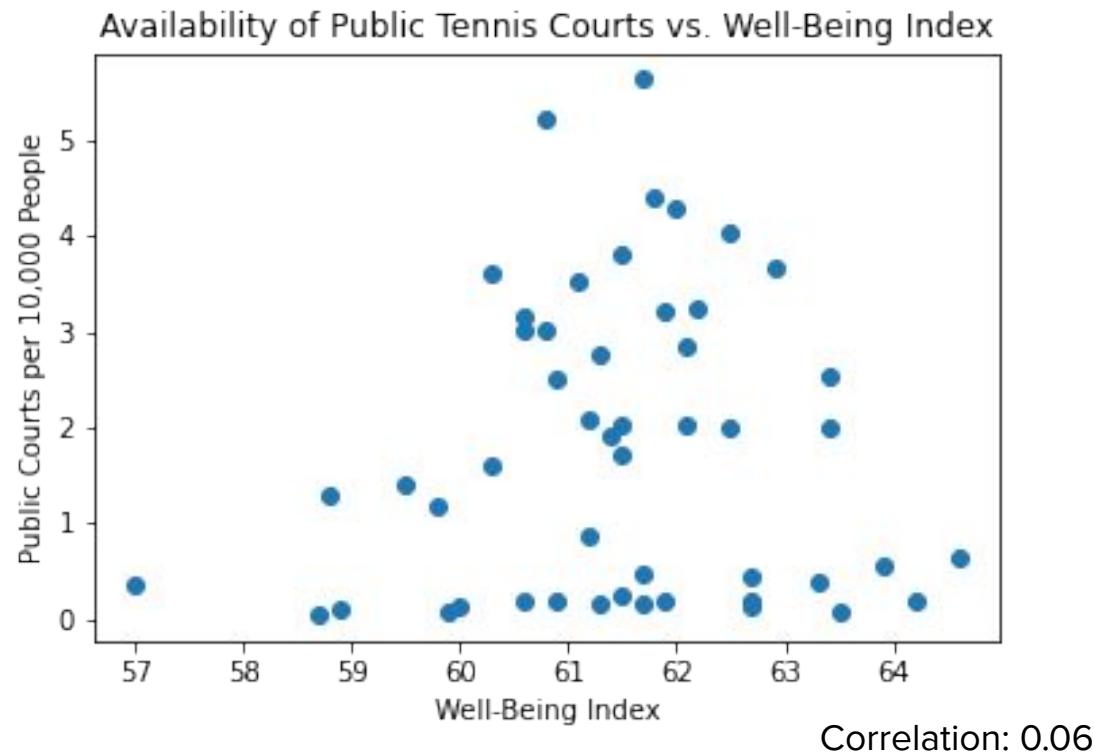
Public Tennis Court Index  
(# courts per 10,000 people)



# How do the rankings for court availability stack up with well-being ?



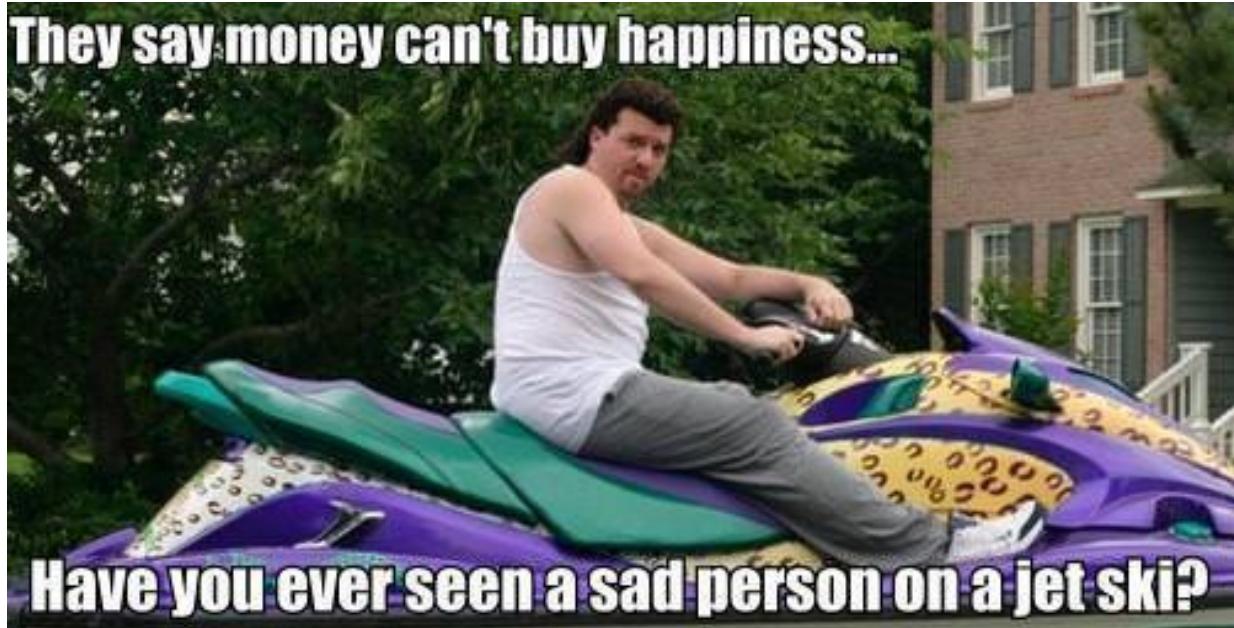
# Tennis Anyone???



# **Finance\$\$\$**

Can money  
buy you  
happiness???

**They say money can't buy happiness...**



# Finance\$\$\$

Compared the 2018 US Well-Being Index\* versus:

Average Personal Income

Poverty Rate

State + Local Tax Rate

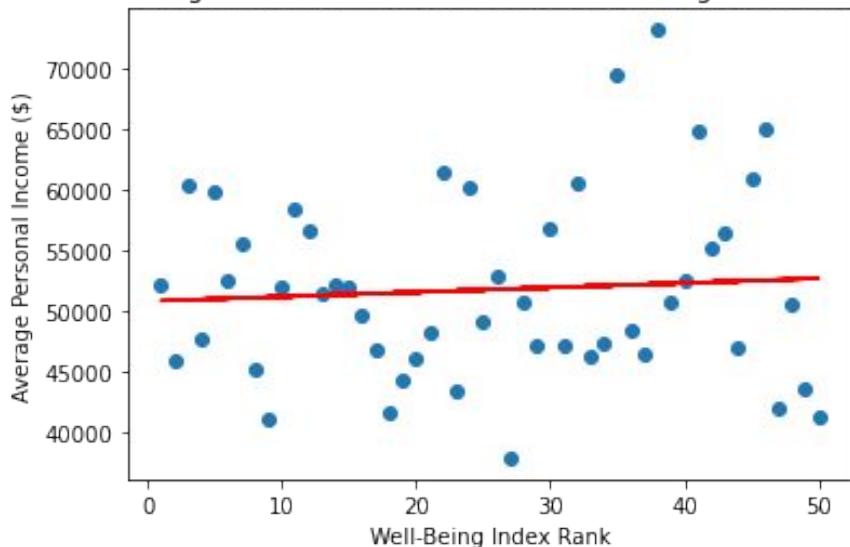
Unemployment Rate



\*Source: 2018 Gallup Poll Well-Being Index

# Finance\$\$\$

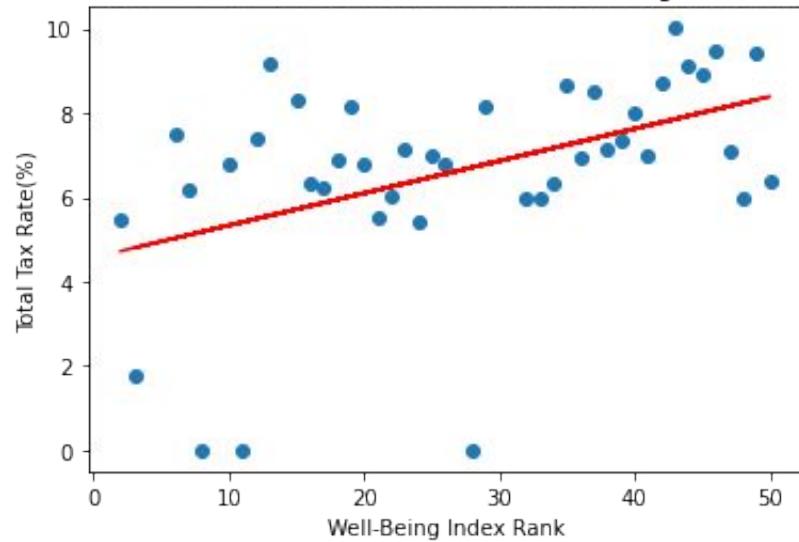
Average Personal Income (2018) v. Well-Being Index Rank



Correlation: 0.07  
R-squared: 0.005

Source: Bureau of Economic Analysis

State + Local Tax Rate (%) (2018) v. Well-Being Index Rank

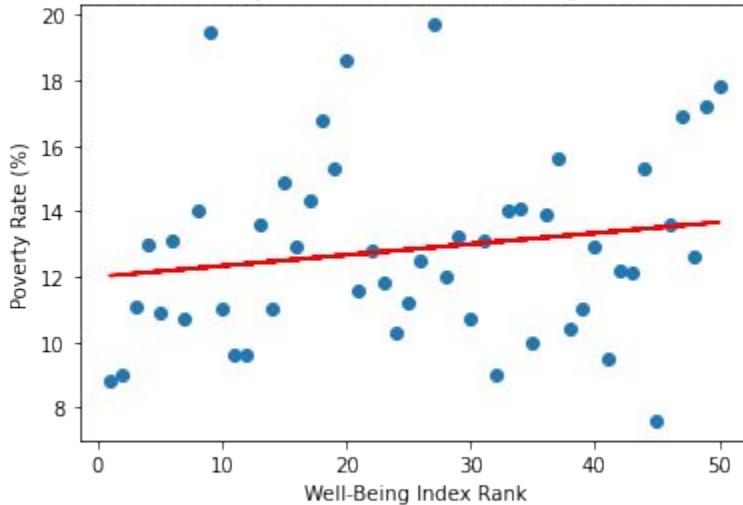


Correlation: 0.46  
R-squared: 0.209

Source: U.S. Census Bureau

# Finance\$\$\$

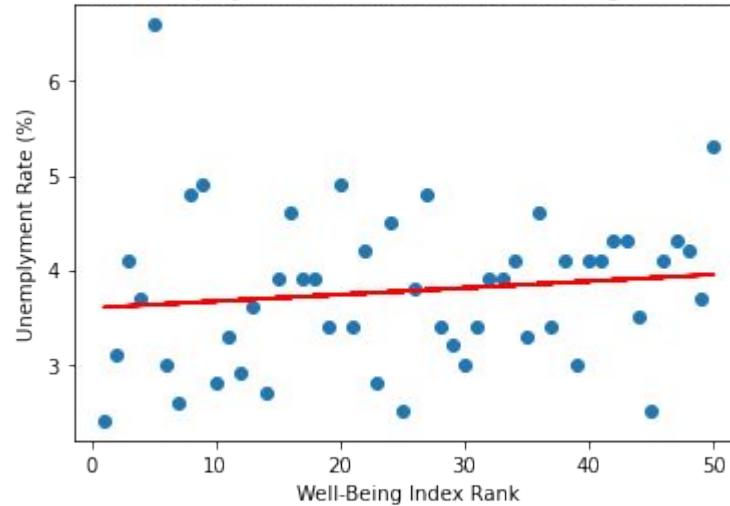
State Poverty Rate (2018) v. Well-Being Index Rank



Correlation: 0.17  
R-squared: 0.03

Source: U.S. Census Bureau, Current Population Survey, 2018 and 2019 Annual Social and Economic Supplements (CPS ASEC)

State Unemployment Rate (2018) v. Well-Being Index Rank



Correlation: 0.13  
R-squared: 0.016

Source: U.S. Bureau of Labor Statistics

# **Finance\$\$\$**

## **Conclusion:**

Based on my data comparisons, a high income, economic status, or employment status does not make one happy.

Keeping the money you earn/have has the highest correlation to personal happiness





**Does housing  
cost impact  
happiness?**

# Housing: about the data

Listing Price

Highest: Hawaii

Lowest: West Virginia



Monthly Housing Cost

Highest: Hawaii

Lowest: West Virginia



Gross Rent

Highest: Hawaii

Lowest: Arkansas



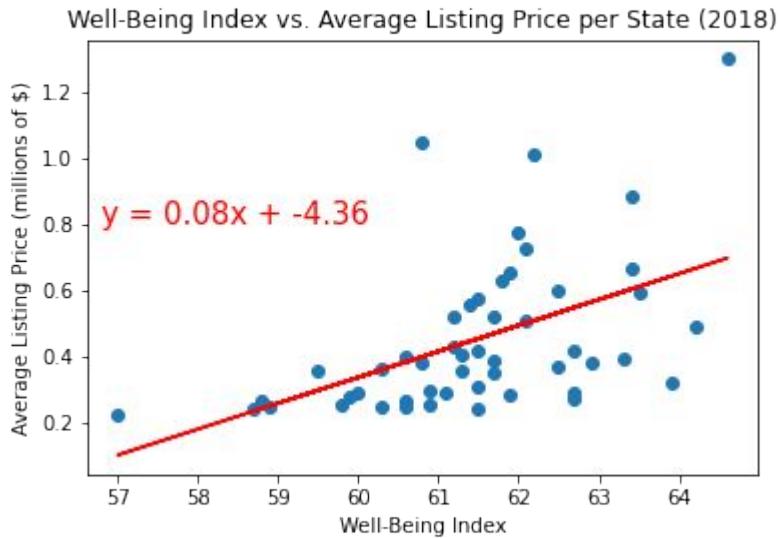
Listing Price per Square Foot

Highest: Hawaii

Lowest: Kansas



# Housing (continued)



Correlation: 0.5  
 $R^2$ : 0.25

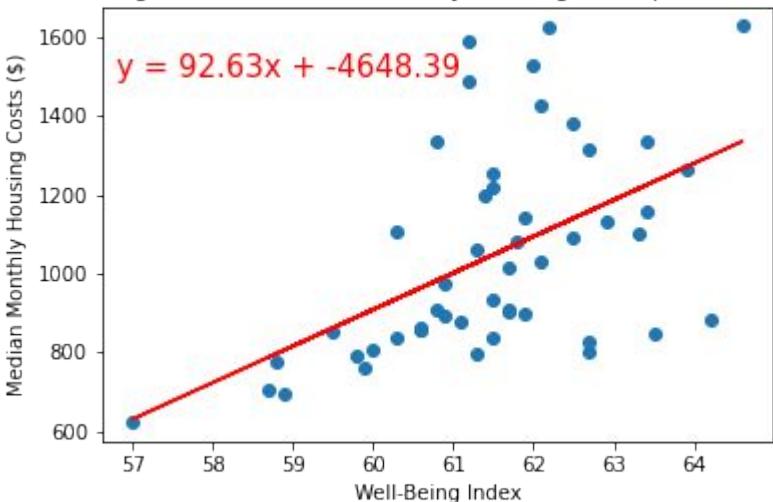


Correlation: 0.57  
 $R^2$ : 0.32

# Housing (continued)



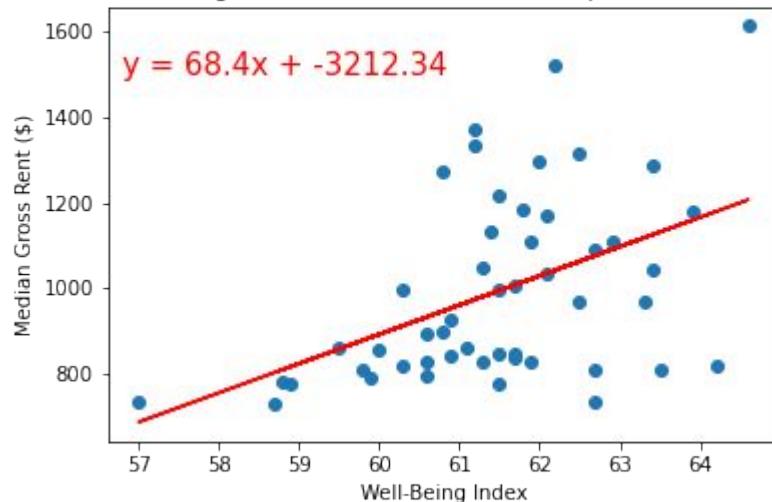
Well-Being Index vs. Median Monthly Housing Costs per State (2018)



Correlation: 0.52

R<sup>2</sup>: 0.28

Well-Being Index vs. Median Gross Rent per State (2018)



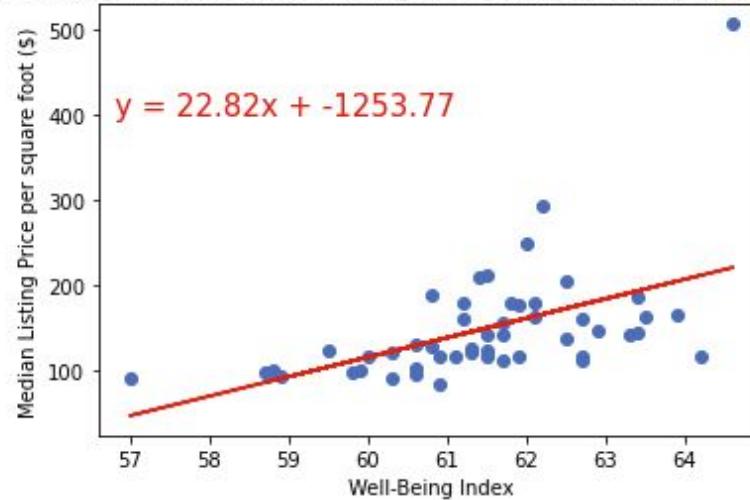
Correlation: 0.47

R<sup>2</sup>: 0.22

# Housing (continued)



Well-Being Index vs. Median Listing Price per square foot per State (2018)



Correlation: 0.51

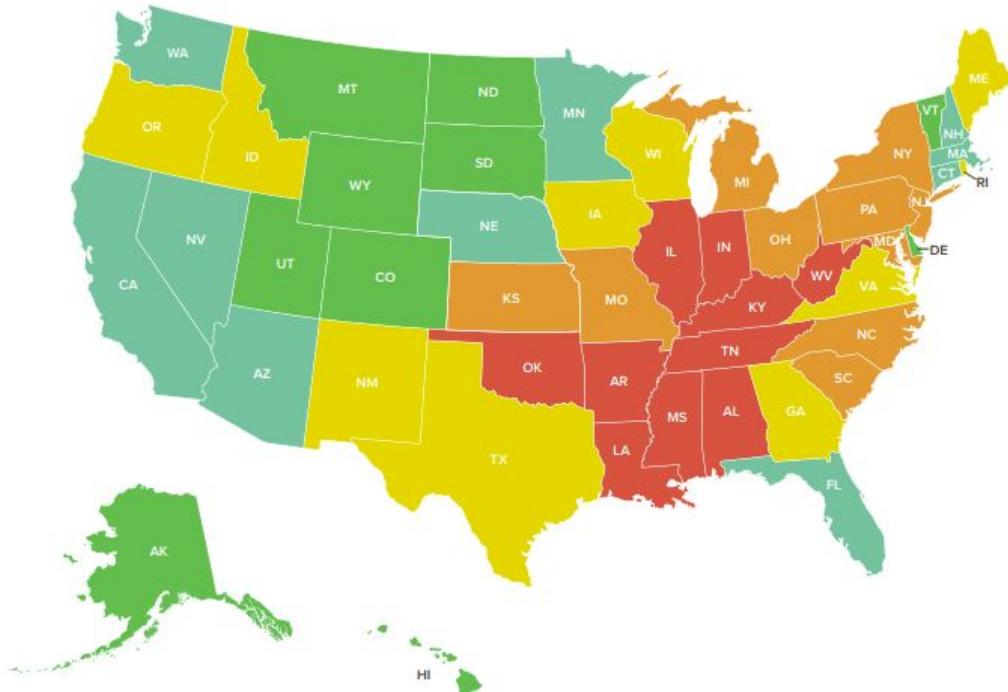
R^2: 0.26

# Housing: conclusion



# What about weather?

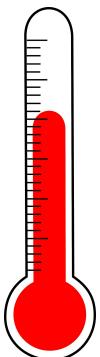
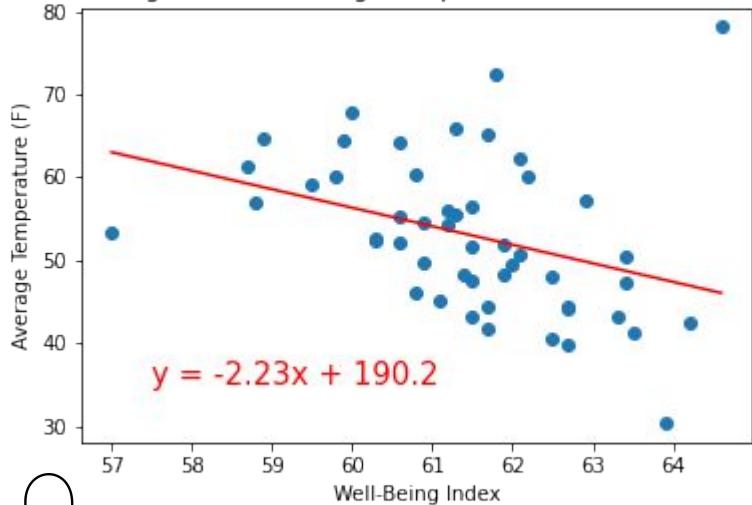




Happiness seems to be correlated regionally

# Weather (continued)

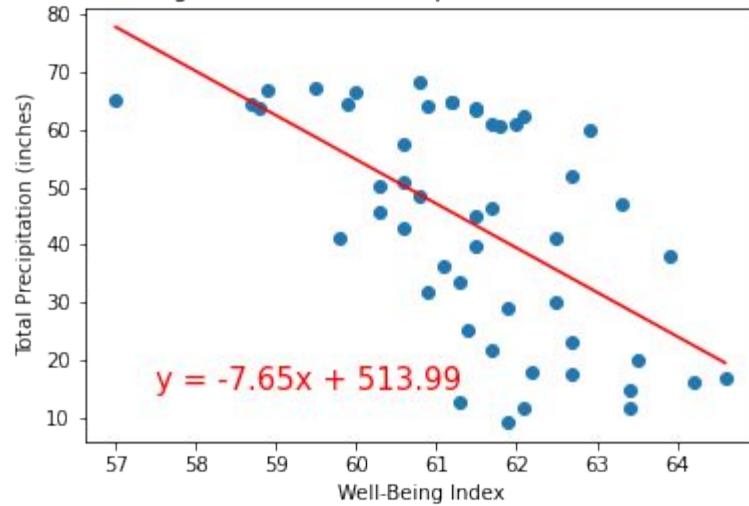
Well-Being Index vs. Average Temperature in each State (2018)



Correlation: -0.36

R<sup>2</sup>: 0.13

Well-Being Index vs. Total Precipitation in each State (2018)

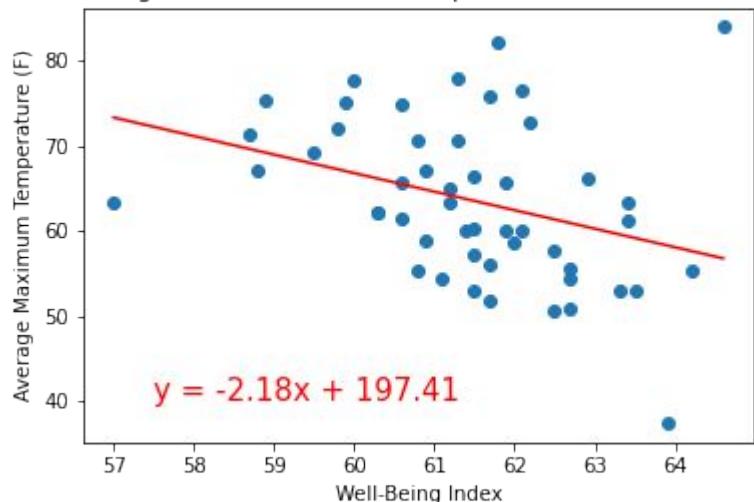


Correlation: -0.59

R<sup>2</sup>: 0.35

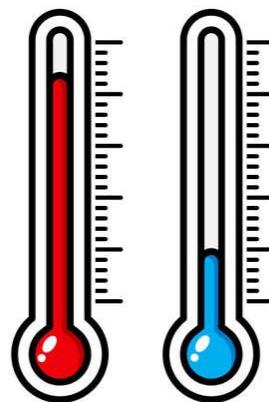
# Weather (continued)

Well-Being Index vs. Maximum Temperature in each State (2018)

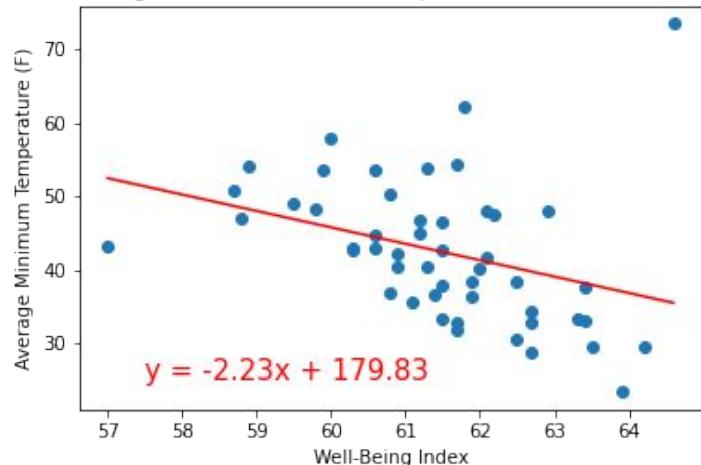


Correlation: -0.34

R<sup>2</sup>: 0.12



Well-Being Index vs. Minimum Temperature in each State (2018)



Correlation: -0.35

R<sup>2</sup>: 0.12

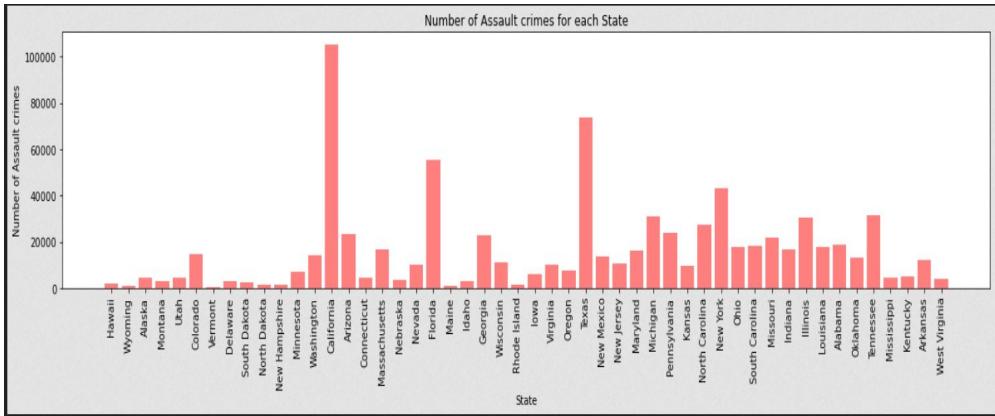
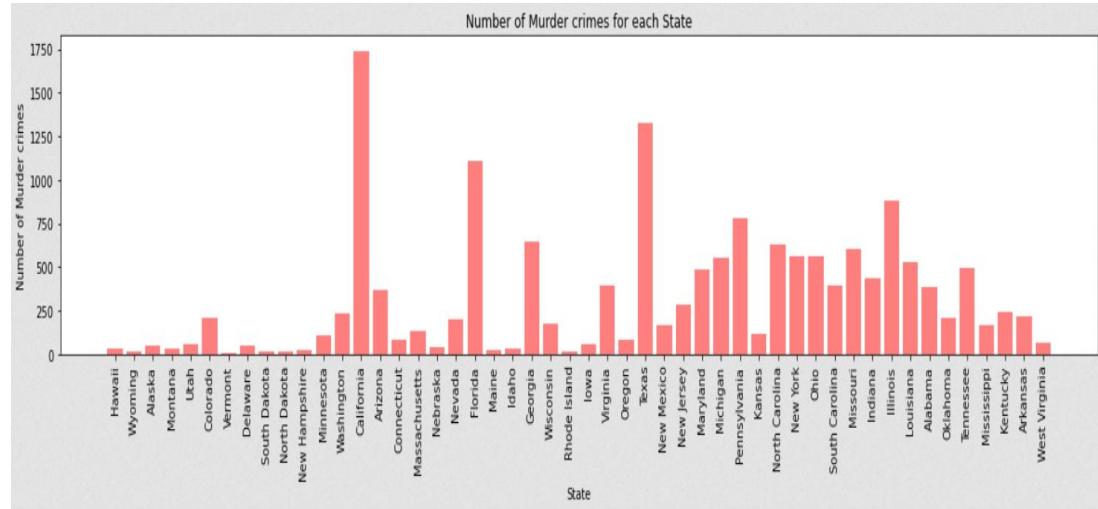
# Weather: conclusion



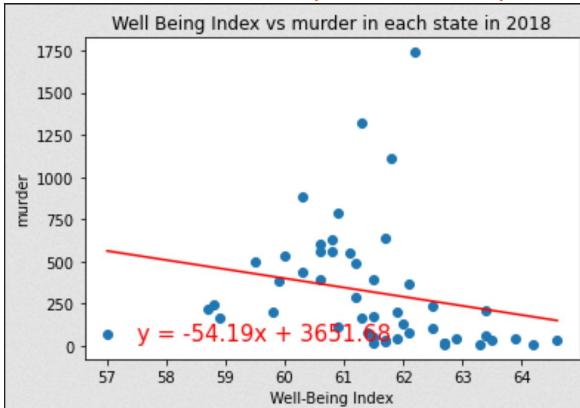
# Crime

Does a specific type of crime (burglary, larceny, motor, assault, murder, rape, robbery) have any association with well-being index (happiness level)?

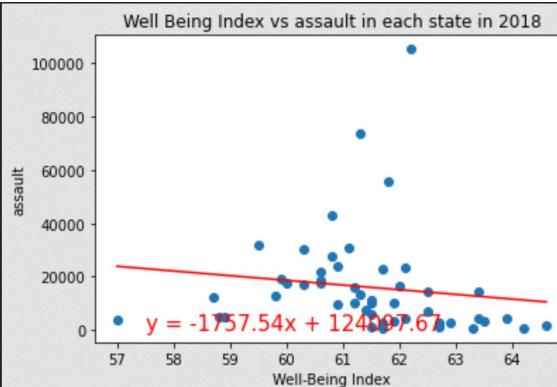
# Crime (cont)



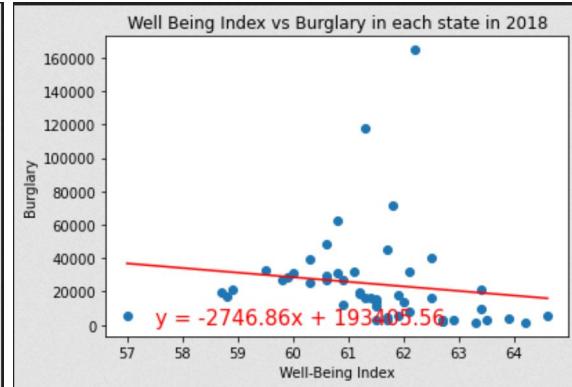
# Crime (cont)



Murder Correlation = -0.22



Assault Correlation = -0.14



Burglary Correlation = -0.14

Top 3 crimes with highest correlations (Murder, Assault, & Burglary)

# Crime: conclusion



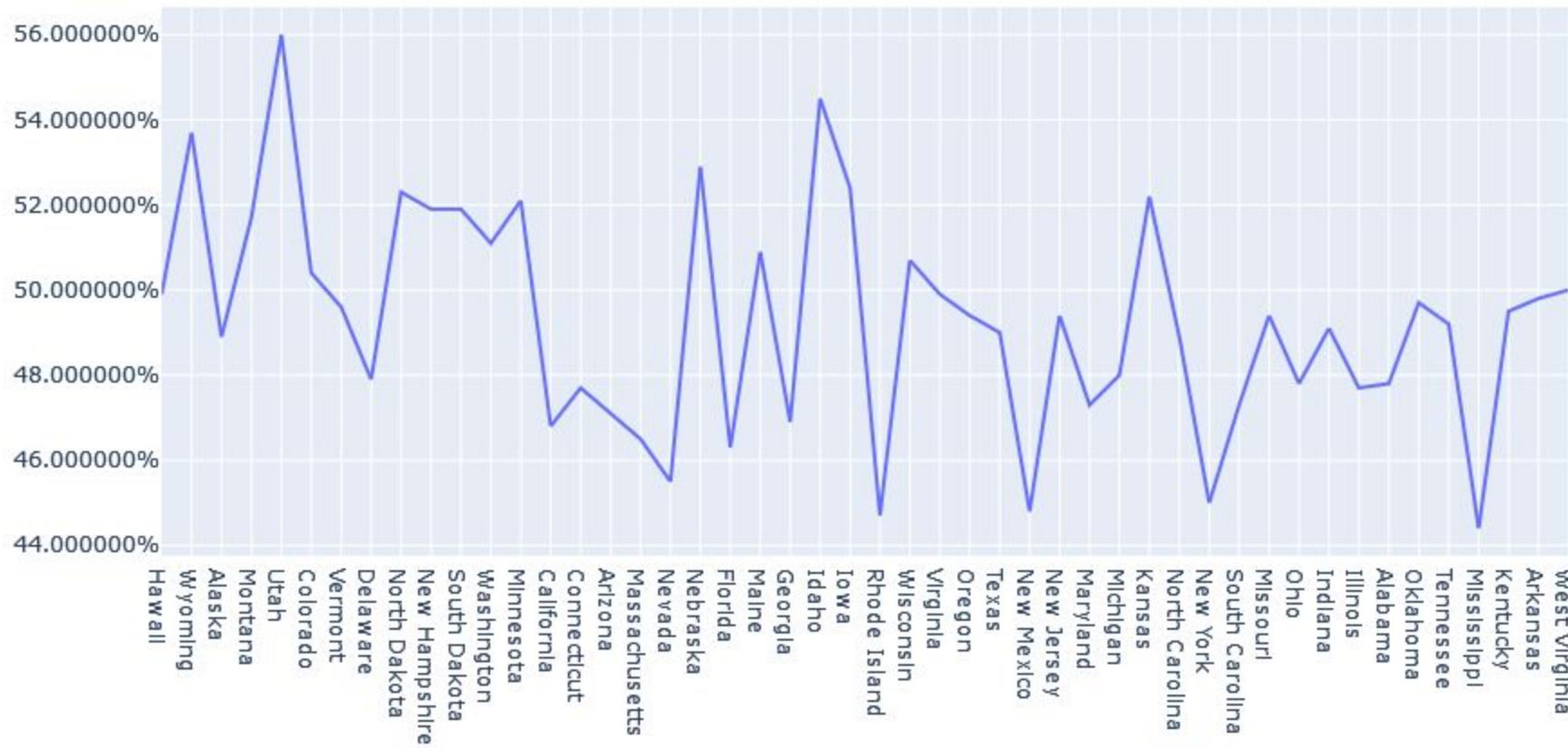
Correlations are generally too weak to conclude crime and happiness are associated

# **Family Structure**

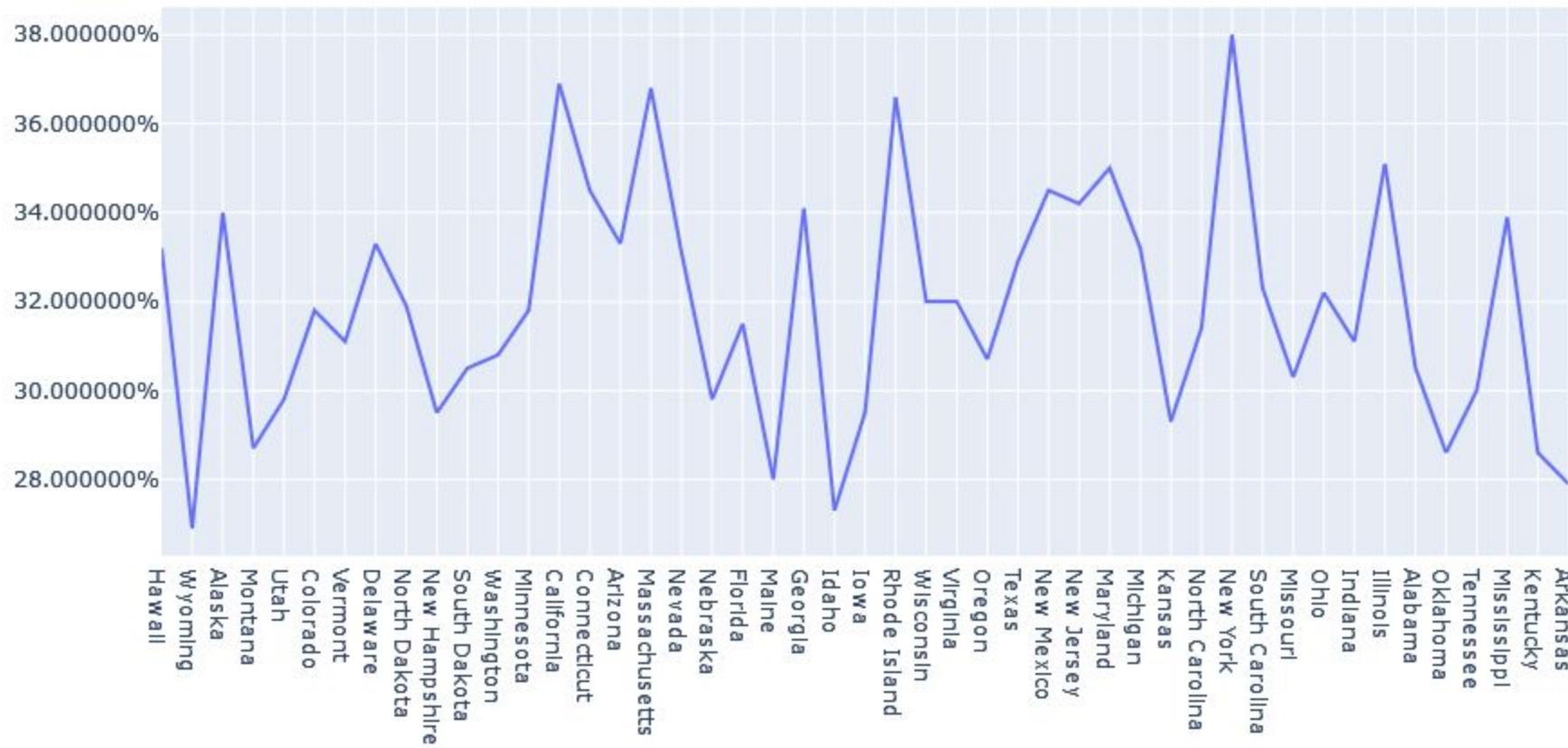
Does the family structure as it relates to being married or never married, play a role in a states well-being ranking?



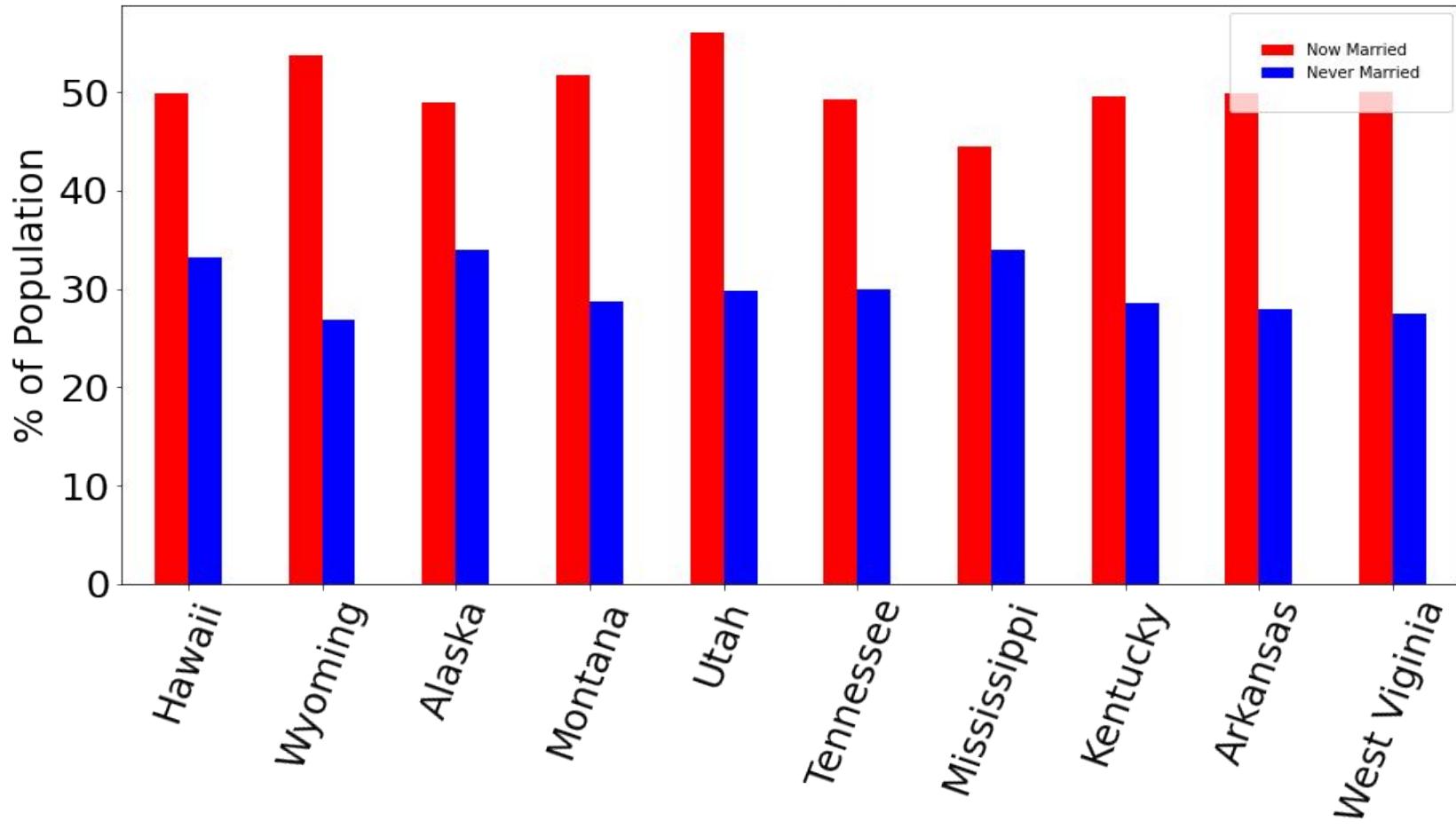
Now Married National Average = 49.3% (Max)Utah at 56% (Min)Mississippi at 44.4%



Never Married National Average = 31.78% (Max) New York at 38% (Min) Wyoming at 26.9%



## Now Married vs Never Married

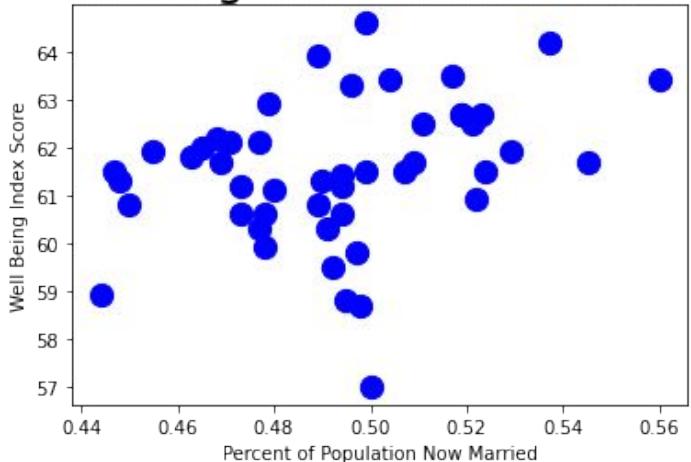


Top 5 and Bottom 5 States in Rank

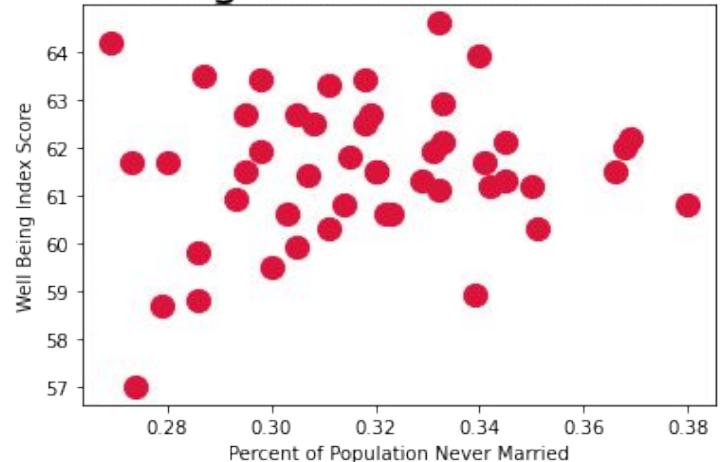
# Conclusion:

A state's percentage of people being married or never married **does not** have a correlation on a states overall well-being ranking.

Well Being Index vs Now Married



Well Being Index vs Never Married



# Can the amount of parks impact happiness?



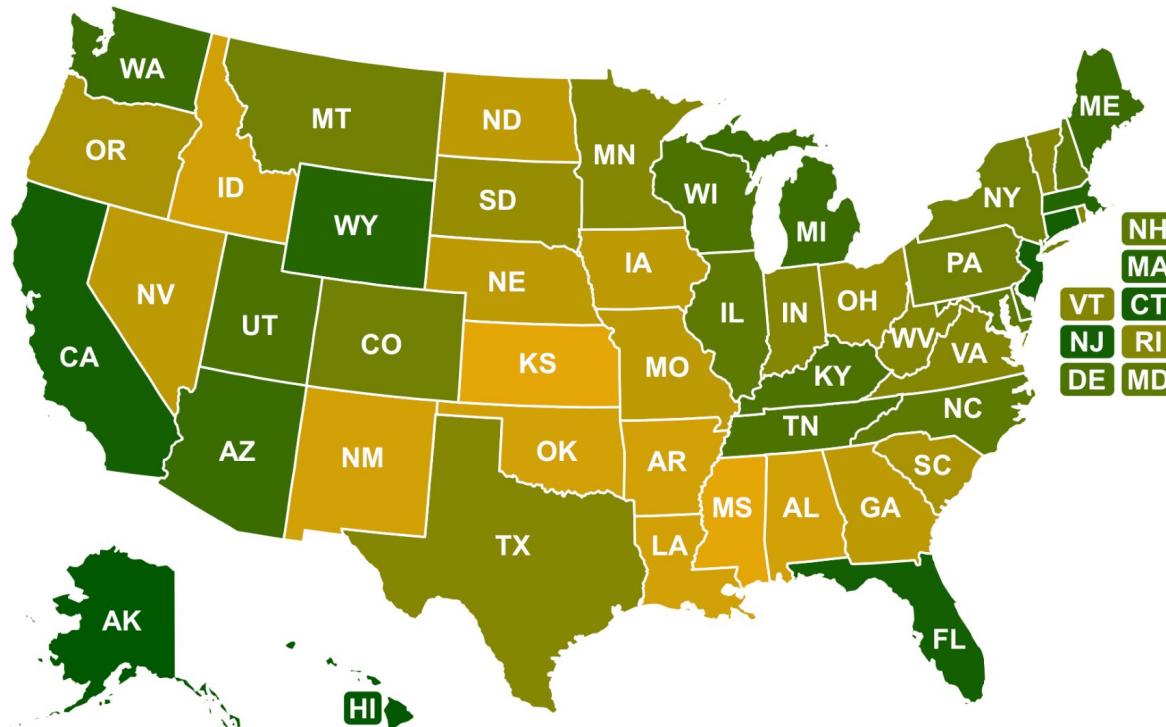
# U.S. States Ranked by State and National Park Coverage

## Top 5 States

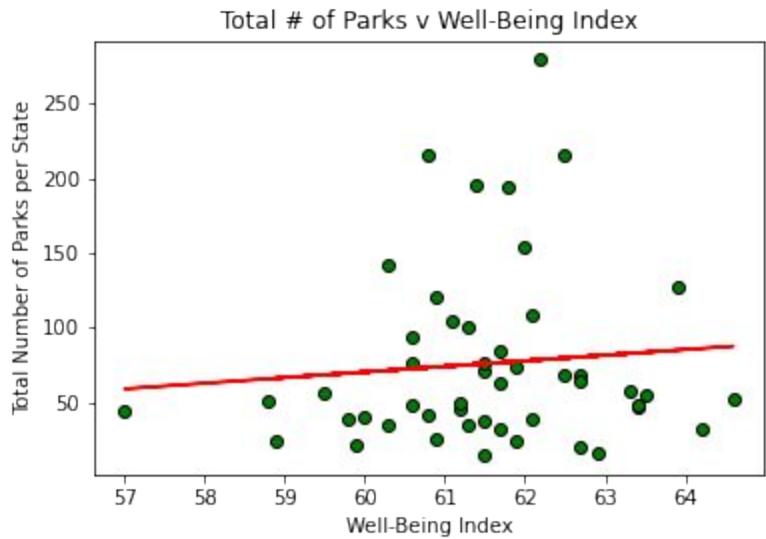
Hawaii  
Alaska  
California  
Connecticut  
New Jersey

## Btm 5 States

Alabama  
Oklahoma  
Louisiana  
Mississippi  
Kansas



# All About Parks!

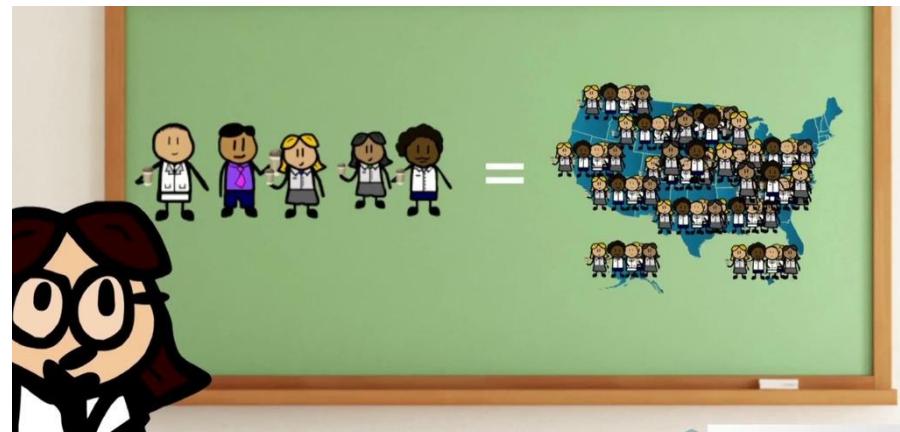


# Limiting Factors

Who is in the sample?



Sample size



**People Surveyed was:**

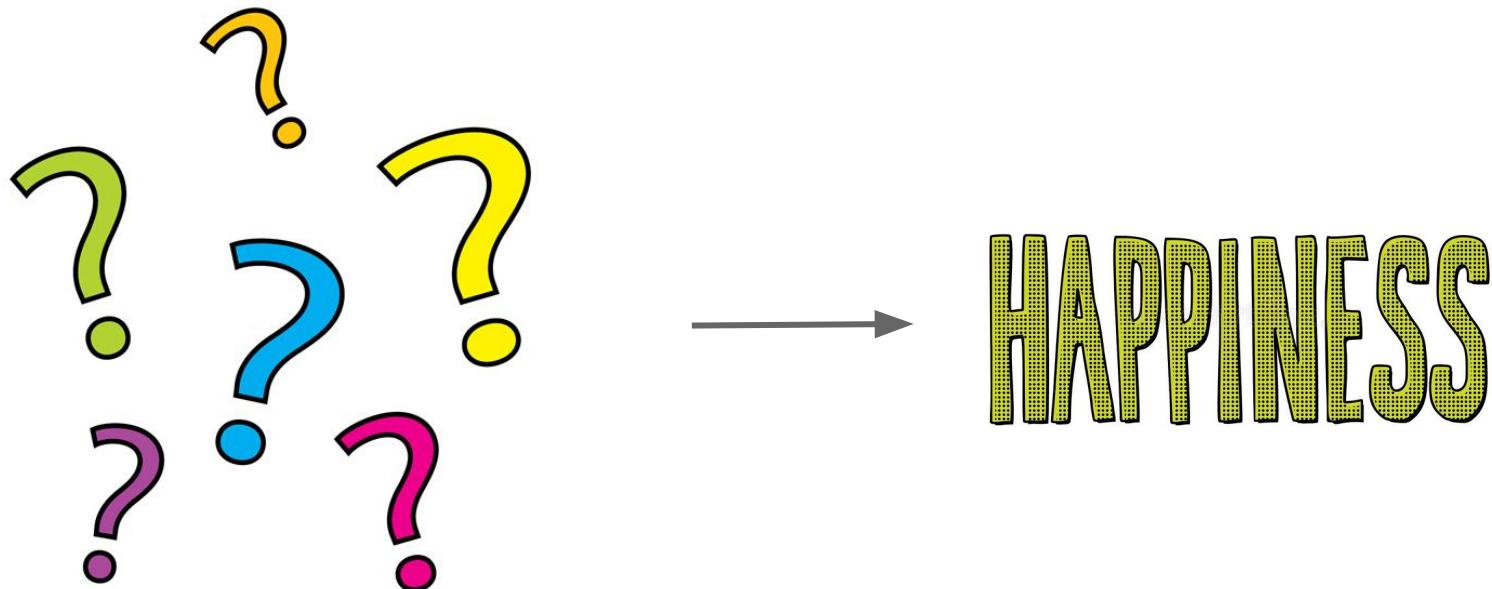
**1 in 2272 per state**

**Or**

**.0004875% average of state's population**



# Overall Conclusion



# Any Questions?

