

Exploring the Correlations Between Happiness and Other Key Factors in U.S. States

Author: Ting-Yu Hu (Anita Hu)

1. Introduction

- Background and Objective:

This project seeks to explore the key factors influencing happiness across U.S. states and analyze the relationships between **happiness**, **obesity rates**, **work environments**, **community environment**, and **emotional and physical well-being**. By understanding how these factors connect, I hope to offer ideas that could help shape policies and better allocate resources, ultimately improving people's lives across regions.

- Project Goal:

- Take a closer look at how happiness is spread across different states.
 - Investigate the connection that exists between happiness and other indicators, such as the prevalence of obesity, emotional and physical health, workplace environment, and community environment.
 - Make suggestions for policies that can raise happiness and quality of life.
-

2. Data Overview

- Data Source:

This project uses data from publicly available government datasets and research institutions, including information on Happiness Scores, Obesity Rates, and various State Indicators.

- Data Description:

(The data includes the following columns)

State: State name

Happiness Score: Happiness score of the state

Obesity Rate: Percentage of the population in each state that is obese

Emotional & Physical Well-Being Rank: Emotional and physical well-being ranking of the state

Work Environment Rank: Work environment ranking of the state

Community & Environment Rank: Ranking based on community and environmental conditions

3. Data Exploration and Cleaning

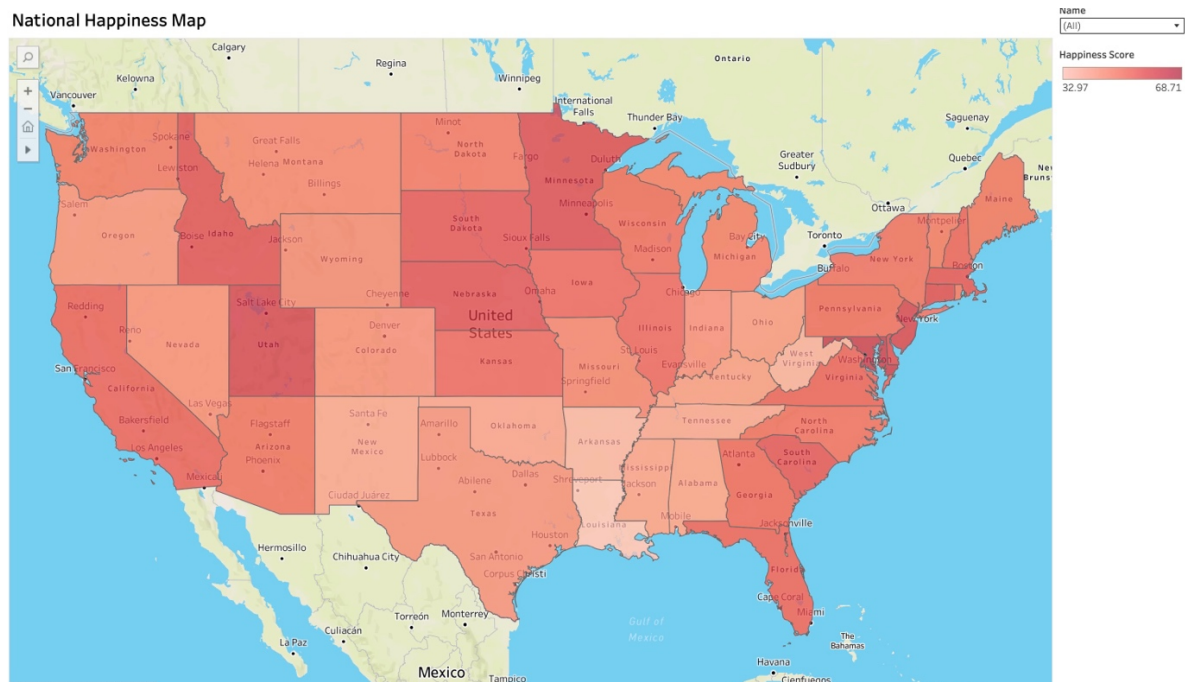
1. Import both datasets (**Happiness Dataset** and **Obesity Dataset**) into Tableau.
2. Combine Datasets (**Inner Join**)
3. Select the relevant columns
4. Ensure Data Types

Column	Data Type
State	string
Happiness Score	int
Obesity Rate	float
Emotional & Physical Well-Being Rank	int
Work Environment Rank	int
Community & Environment Rank	int

4. Data Visualization in Tableau

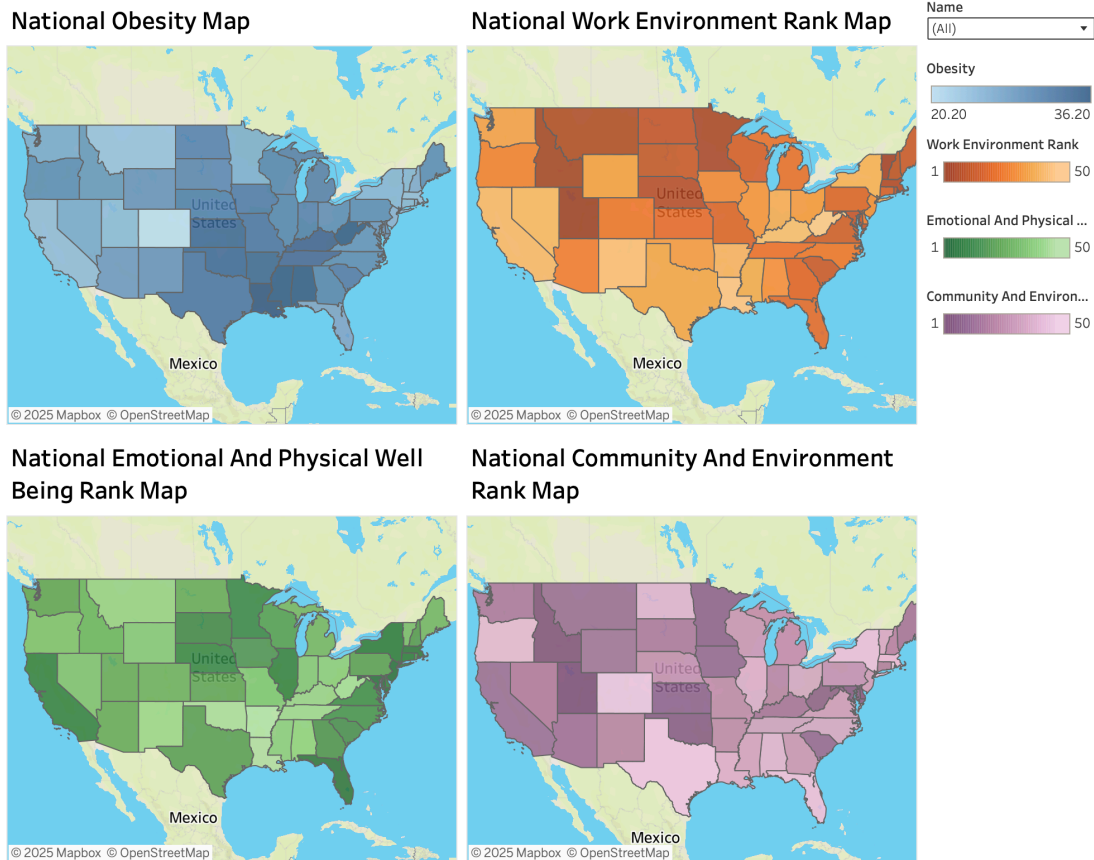
Map:

- National Happiness Map



This map shows the **Happiness Score** across various states in the U.S.

- Color Interpretation:
 - Darker areas:** States with higher happiness scores (more intense colors, closer to the red spectrum).
 - Lighter areas:** States with lower happiness scores (lighter colors, closer to the white spectrum).
- National Obesity, Work Environment, Emotional/Physical Well-Being, and Community Environment Rank Maps



- National Obesity Map:**
 - Color Interpretation:
 - Darker areas:** states with higher obesity rates.
 - Lighter areas:** States with lower obesity rates.
- National Work Environment Rank Map:**
 - Color Interpretation:
 - Darker areas:** states with better work environment rankings (more favorable work conditions).
 - Lighter areas:** states with worse work environment rankings.
- National Emotional and Physical Well-Being Rank Map:**

- Color Interpretation:
Darker areas: states with better emotional and physical well-being rankings.
Lighter areas: states with worse emotional and physical well-being rankings.

d. National Community and Environment Rank Map:

- Color Interpretation:
Darker areas: states with better community and environmental rankings.
Lighter areas: states with worse community and environmental rankings.

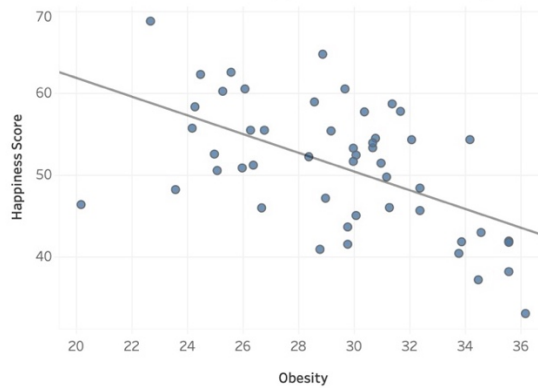
Observation:

Region	Obesity Rate	Work Environment	Emotional and Physical Well-being	Community and Environmental Factors	Overall Happiness
West Coast	Low	Positive	High	Strong	High
Northeast	Moderate	Moderate	High	Strong	High
Mountain States	Low	Moderate	High	Strong	High
Southern States	High	Poor	Low	Weak	Low
Midwestern States	High	Poor	Low	Weak	Low

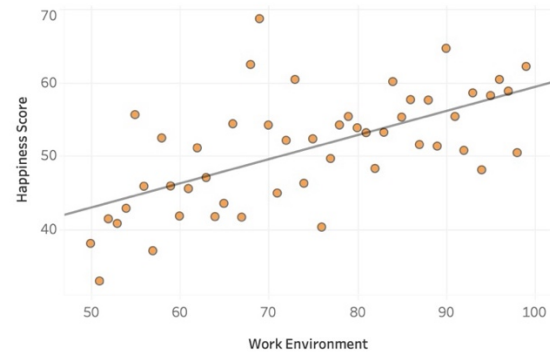
Scatter Chart:

- Correlation Between Happiness and Other Factors

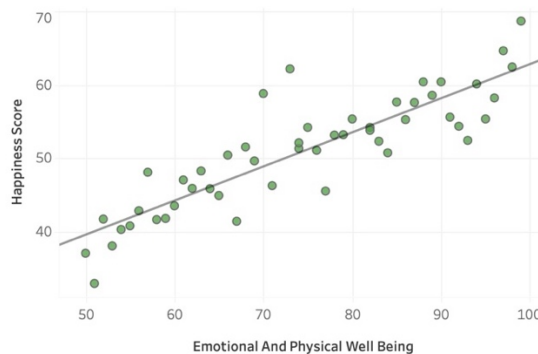
Correlation Between Happiness and Obesity



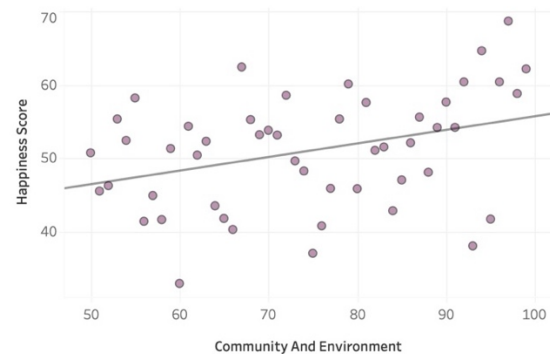
Correlation Between Happiness and Work Environment



Correlation Between Happiness and Emotional/Physical Well-Being



Correlation Between Happiness and Community/Environment



a. Happiness vs. Obesity

- Visual Representation:

The scatter plot shows a **negative correlation** between Happiness Scores and Obesity Rates.

- Analysis:

This reinforces the idea that obesity rates significantly influences overall well-being and happiness. Health interventions targeting obesity could improve quality of life.

b. Happiness vs. Work Environment

- Visual Representation:

The scatter plot shows a **positive correlation** between Happiness Scores and Work Environment.

- Analysis:

The plot suggests that improving job satisfaction, work-life balance, and creating a supportive work environment can have a substantial impact on a state's overall happiness.

c. Happiness vs. Emotional/Physical Well-Being

- Visual Representation:
The plot shows a **positive correlation** between Happiness Scores and Emotional/Physical Well-Being.
- Analysis:
States investing in mental health services and ensuring access to healthcare will likely see a rise in happiness.

d. Happiness vs. Community/Environment

- Visual Representation:
The scatter plot shows a **positive correlation** between Happiness Scores and Community/Environment.
- Analysis:
Creating stronger community ties and improving environmental quality, such as enhancing public spaces and providing better environmental conditions, could boost happiness.

Observation:

Factor	Impact on Happiness	Correlation
Obesity Rate	Strong	Negative
Work Environment	Moderate	Positive
Community/Environmental Factors	Weak	Positive
Emotional/Physical Well-Being	Strongest	Positive

5. Summary & Recommendations:

- Summary:

Happiness Levels	Region	Factors
Higher	- West Coast States - Northeast States - Mountain States	- Low obesity rates - Strong work environments (Solid economic opportunities) - Strong healthcare systems - Well-developed social support systems
Lower	- Southern States - Midwestern States	- Economic instability - Limited access to mental health and healthcare services

		- Poor work environment - High obesity rates
--	--	---

- Recommendations:

- For lower happiness areas

Recommendation Area	Solution 1	Solution 2
Economic Stability	Create more job opportunities through economic development programs that help improve the job market and lift people out of poverty	Support local small businesses and entrepreneurial ventures, providing funding and resources to boost the local economy
Healthcare Access	Expand access to healthcare services, especially mental health services, to improve residents' overall physical and emotional well-being	Increase the number of healthcare facilities and provide subsidized healthcare options for low-income families
Public Health Initiatives	Address the obesity epidemic by promoting healthy lifestyles through education and nutrition programs	Focus on preventive healthcare and mental health services to improve overall well-being
Work Environment	Improve work conditions , increase job satisfaction , and promote work-life balance in these regions to help employees feel more motivated and productive	Promote employee benefits , workplace wellness programs , and labor rights to enhance a better work environment
Community Engagement	Encourage community-building activities and volunteerism to strengthen strong social ties and support networks	Invest in public spaces such as parks, recreational facilities, and communal areas to offer people opportunities to gather and connect, fostering community cohesion

- For higher happiness areas

Recommendation Area	Solution 1	Solution 2
Maintain High Standards of Living	Keep focusing on improving healthcare, education, and community support systems to ensure people continue to lead fulfilling lives	Take steps to invest in sustainability and protect the environment , making sure that future generations enjoy the same quality of life
Promote Active Lifestyles	Encourage outdoor activities and ensure everyone has easy access to parks and fitness programs, so that living a healthy and happy life becomes part of daily routine	
Social Support and Mental Health Services	Ensure people have access to mental health services and social safety nets to maintain emotional and physical well-being	
Economic Development	Keep fostering a strong economy that supports high-paying jobs, affordable housing, and provides more opportunities for everyone	

6. References:

- World Population Review - Happiest States 2025, from <https://worldpopulationreview.com/state-rankings/happiest-states>
- DATA.GOV - National Obesity By State, from <https://catalog.data.gov/dataset/national-obesity-by-state-d765a>