# What Makes Us Happy?

Exploring Humans' Happiness From Myself as an Individual to the United States as a Collective
by Will Peritz

Introduction

Everyone wants to be happy, but for many it is easier said than done. The goal of this project is to consider the happiness of a few different levels of community: The US as a whole, Virginia (my home state), and myself as an individual. I would like to find out how I fit into the community of which I am a part. Along the way, we will also look at some other states that provide interesting or notable data to help us understand what makes us happy. While there are probably thousands of valid factors that make up our happiness, we will explore some of the biggest ones that affect our day-to-day lives, divided into two main categories: how we treat our bodies and how we spend our time. Let's start by establishing a baseline: how happy is the US, how happy is each state, and how happy am I?

How Happy is the United States?
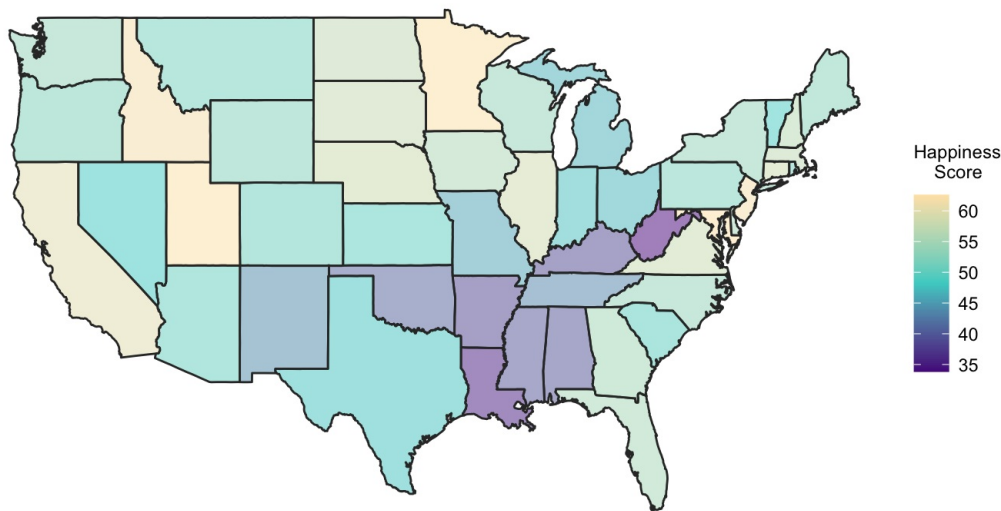
Scores range approximately from 34 to 66, with a few slight trends. The western portion of the Southeast region seems to be the least happy, while the Midwest and West regions seem very happy in general.

How Does My Score Compare?
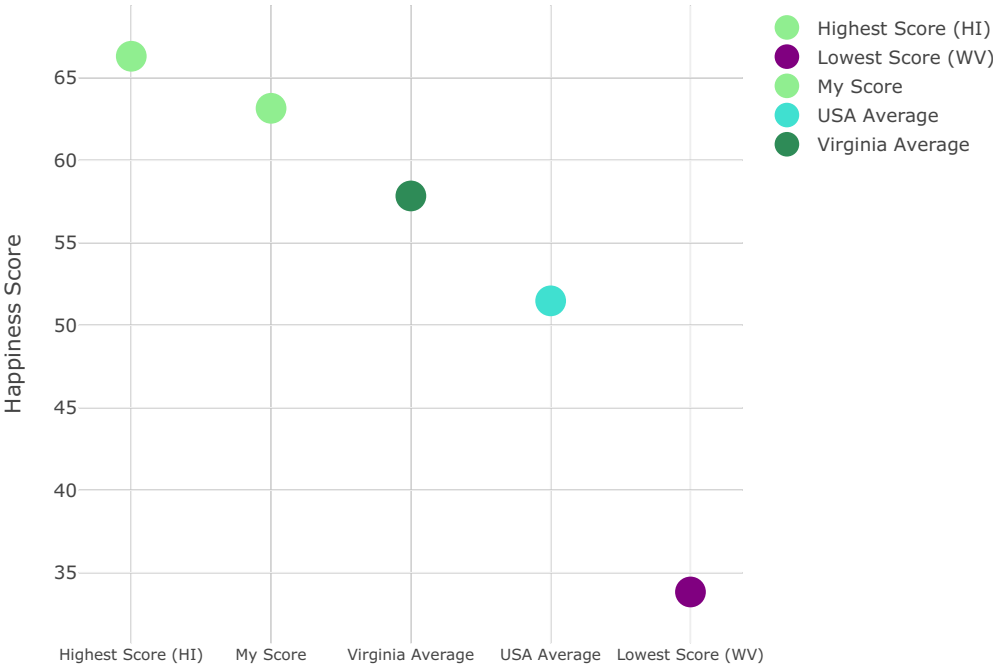
The data behind these visualizations comes from WalletHub, a trusted personal finance website that also specializes in statistics and studies. They calculated the happiness score of each state through a variety of factors, and using their methodology I was able to calculate my own on the same scale.

Here we can already gather some useful information: My score is slightly higher than Virginia's score, and slightly lower than the highest score (Hawaii). These three scores are separated by just 8.47 points. Virginia's score is 6.36 points higher than the US average, and a full 24.01 points higher than the lowest score (West Virginia). Hawaii and West Virginia being the happiest and unhappiest states, respectively, may make them useful for further analysis in the future.

Now that we know where the states fall on the happiness scale, let's dive into some of the factors that may be involved.

How We Treat Our Bodies

Let's start by analyzing physical activity and sleep, two variables that are closely connected to how we feel, in a physical and mental sense, from day to day. Studies have shown that those who exercise regularly typically have more energy and better overall health. The American Center for Disease Control states that "being physically active can improve your brain health, help manage weight, reduce the risk of disease, strengthen bones and muscles, and improve your ability to do everyday activities." Those who achieve a sufficient amount of sleep also see health benefits, some of which include falling ill less often, lowering stress, improving mood, and getting along better with others (CDC). If physical activity and sleep are known to improve health and mood, perhaps we can find a link between them and overall happiness.

Happiness and Physical Activity

A State-by-State Exploration
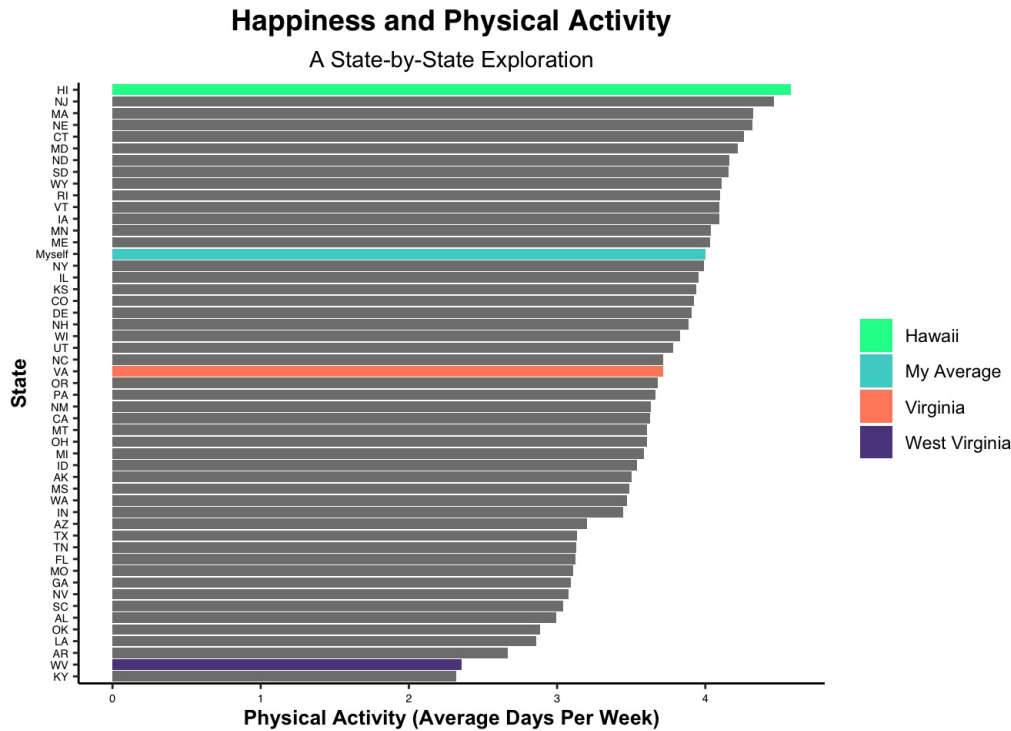
This bar chart shows each state's average number of days per week in which they achieve an adequate level of physical activity. While many of the values are very close to each other, the higher states are significantly more active than the lower ones. The difference between Hawaii and Kentucky is over two days of physical activity per week, on average. Remember that Hawaii is the happiest state in the US, while West Virginia is the unhappiest. Here we see this is almost exactly where they fall on the scale of physical activity as well. We can also see that much like with the happiness scores, my average is very close to Virginia's average, separated by less than 0.3 days per week.

Happiness and Sleep

We See Some Mixed Results
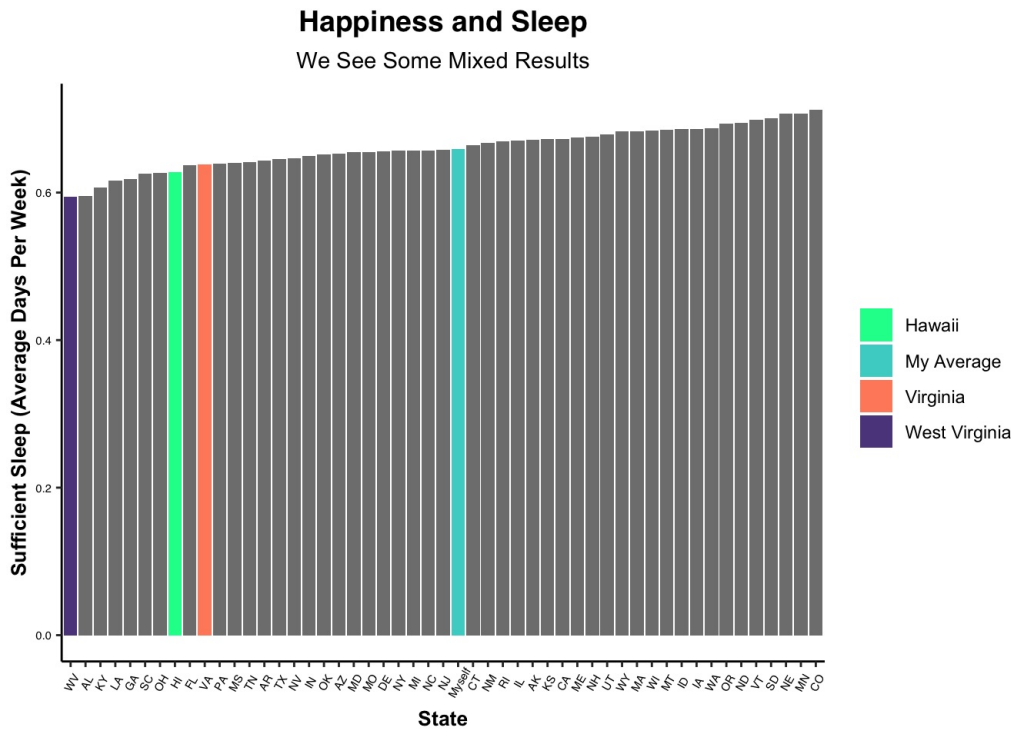
This bar chart shows each state's average percentage of days in which they achieve an adequate amount of sleep. Immediately we can notice that most of the values are so close together that it may be difficult to find an overarching trend. However, it is interesting that much like with physical activity, West Virginia lands at the bottom of all states for sufficient sleep. Hawaii, perhaps unexpectedly, is now near the bottom as well. My percentage (65.9%) visually appears to be much further away from Virginia's (63.8%) compared to the physical activity and happiness visualizations, however the difference is just 2.1%, which is not very much.
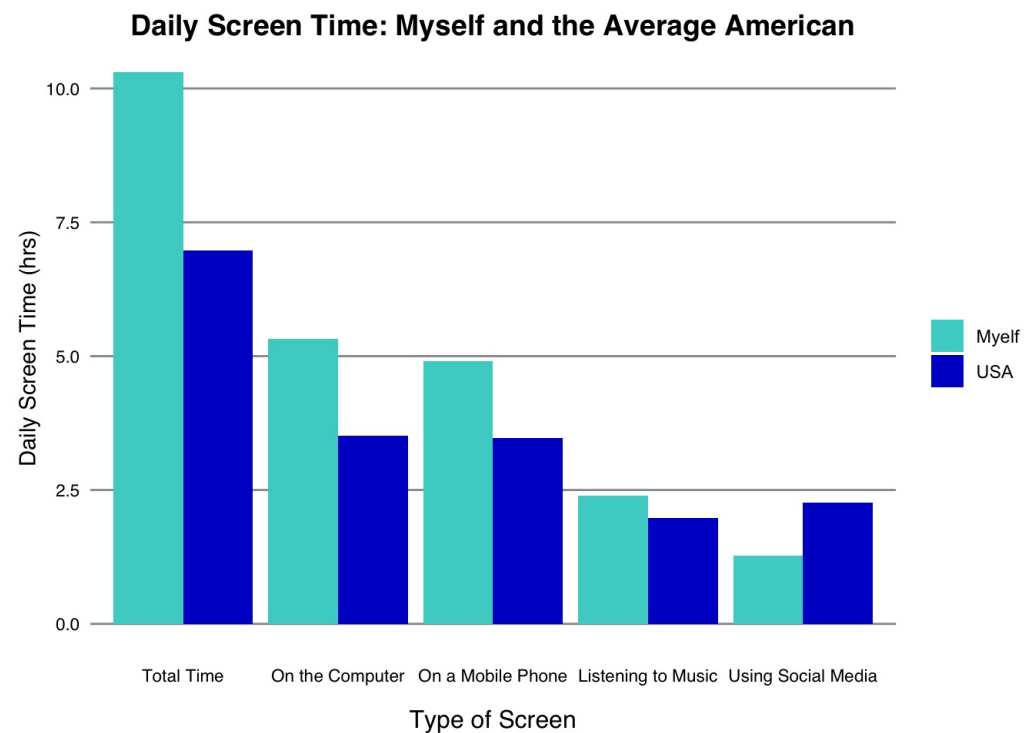
Now that we have seen how I fit into the Virginia and US communities in physical activity and sleep variables, let's see if there is a correlation between them and happiness.
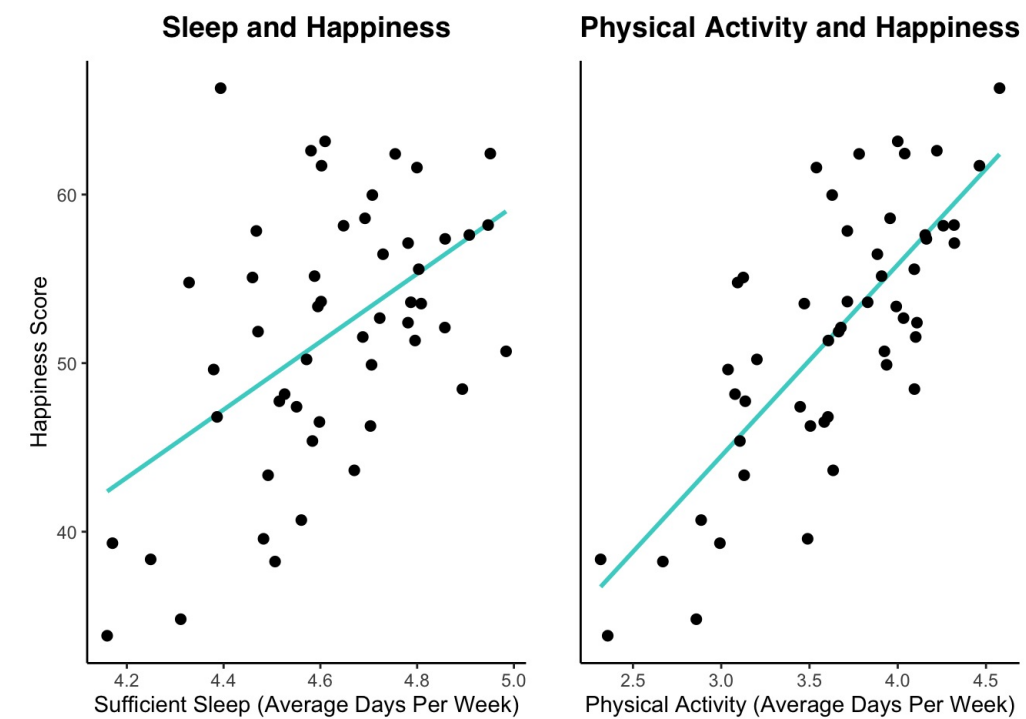
It appears as though there certainly is a positive relationship in both cases. Getting sufficient sleep and adequate exercise are both correlated with a higher happiness score. Reflecting on what this means: it makes sense that I have both similar physical activity levels and similar happiness to the state of Virginia. The same goes for sleep, although sleep and happiness is a slightly weaker relationship to match the slightly weaker correlation. We have learned something! Now let's move onto the next section.
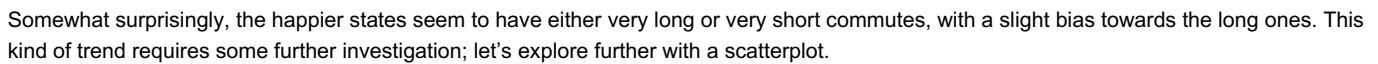
How We Spend Our Time

Let's now move to the other major factor that may be linked to our happiness: how we spend our time. The time a person spends looking at screens or using social media can have an affect on their well being. Valleywise health reports that excessive screen time can lead to "obesity, sleep problems, chronic neck and back problems, depression, and anxiety." Social media, as a subset of screen time, is said to come with its own adverse affects as well. Experts from Columbia University say that social media provides platforms for bullying and unrealistic body and lifestyle expectations. However it also allows people to socialize and learn, and they recommend using social media in small doses. With all these potential affects, perhaps we can find a connection between how we spend our time and how happy we are.

As a student in college, it makes sense that my screen time would be higher than the average American's, and this is indeed what we see. However, the trend is not completely constant- my screen time is higher in every category except for my social media usage. This could be meaningful, considering that I also have a higher happiness score than the average American. Either way, in terms of screen usage it appears as though I stand out from my larger community. This is the first metric in which I am far different from the average American, spending over 3 hours per day more than average looking at screens.

For many people in the US, jobs take up most of their time. It is not uncommon for these jobs to require near-constant screen usage, but there is also another factor that takes up their time: the commute. PassportHealth reports that a long commute can be linked to mental health problems, including depression, as well as a higher rate of obesity and less sleep. On the other hand, Harvard Business Review reports that the commute can actually be good for our health, because it promotes routine and structure in our lives, which humans naturally crave. With the potential for both positive and negative affects on our health, perhaps we will be able to see a pattern in how the commute affects our happiness.

Happiness and the Commute
A Fascinating Trend

Somewhat surprisingly, the happier states seem to have either very long or very short commutes, with a slight bias towards the long ones. This kind of trend requires some further investigation; let's explore further with a scatterplot.

How Does Happiness Change With Commute Length?

This scatter plot shows states' average commute lengths compared to their happiness scores. There is a subtle trend that becomes much more visually clear when we add a regression line.

Adding the Regression Line:
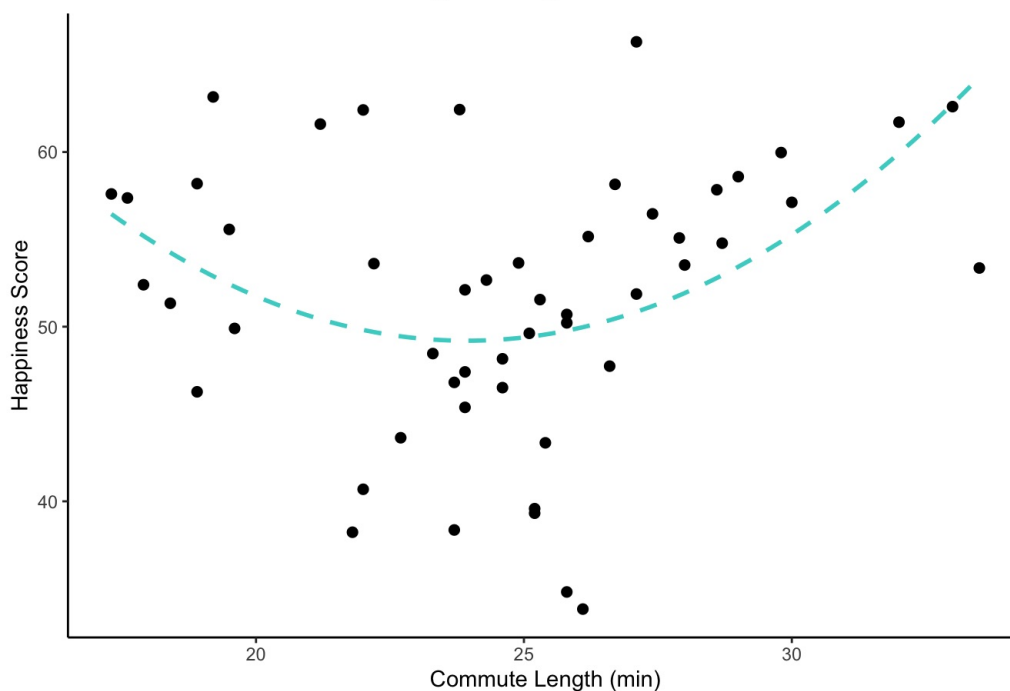
While we cannot say for sure that varying commute lengths cause a change in happiness levels, we can notice something interesting within our data. Recalling the most recent bar chart, we can see that my commute is much shorter than the average commute in Virginia, by roughly nine minutes. Because of the interesting relationship between commute and happiness, even though I am very different from my community average in terms of my commute, it still makes sense that I would be very similar in happiness. Virginia's commute is on the high end and mine is on the low end, but those both tend to be connected to higher happiness scores.

Leaving It Here

Although there are many more conditions and factors that can affect a person's happiness, we have learned a lot about the ones we have explored today. We have also seen how I fit into the Virginia and United states communities in a variety of ways: I tend to be more physically active, get more sleep, use screens more, have a shorter commute, and have a higher happiness score than the average American. I fit in to the Virginia community in my happiness score, physical activity habits, and sleep habits, but stand out in my typical commute.