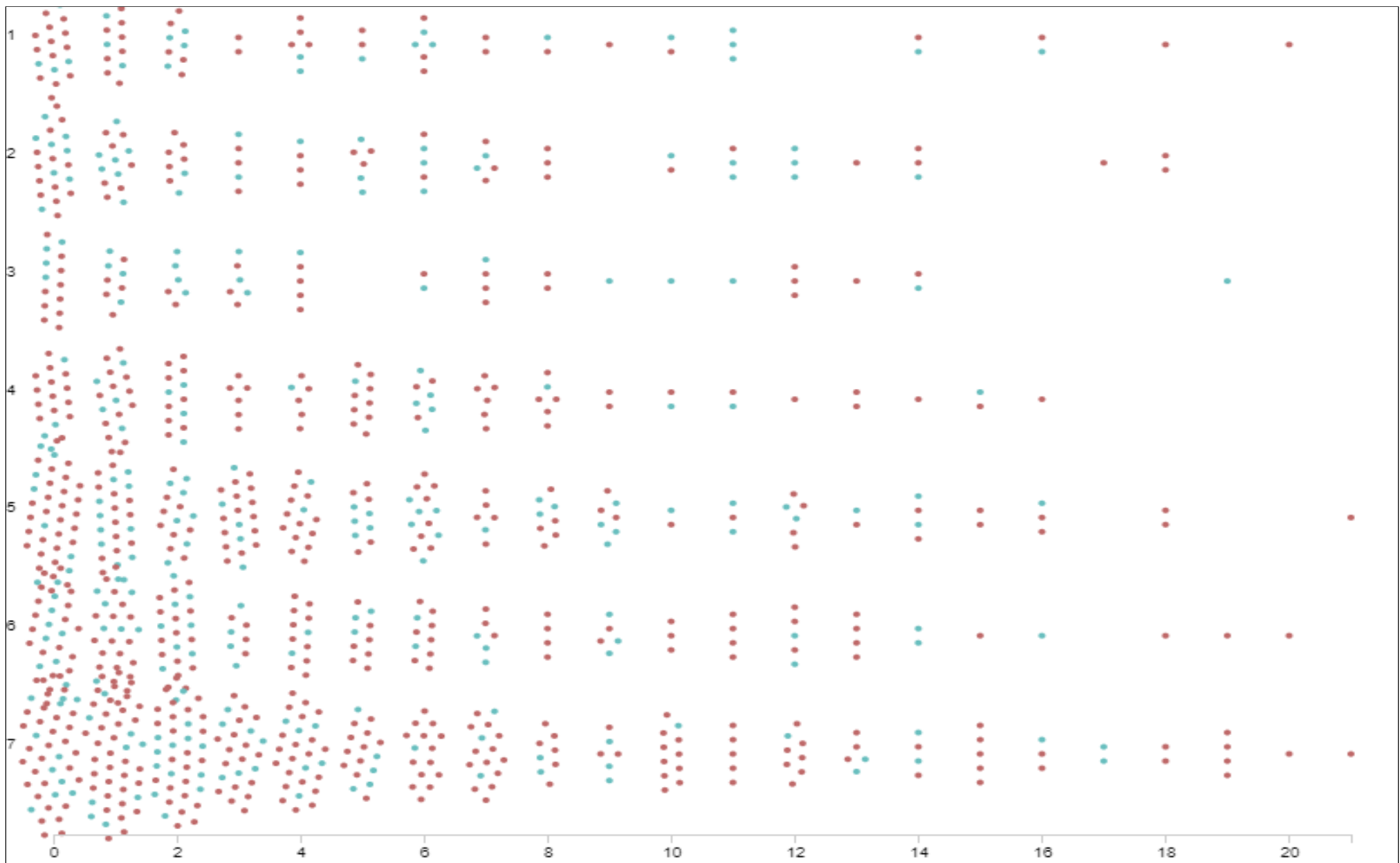


A Manifesto : Epidemic of the soul; a digital virus

A Minyoung Na works

How might I create an interactive data visualization using D3.js to highlight the correlation between mental health problems and internet use among college students?



Time period: 2016 Janurary
Frequency of updates: None
Source: Non-government.
Open Source Methodology:research platform www.unipark.de.
Reliability: Survey data.

Availability at different geographical levels: None
Confidentiality: Individual information is protected
Descriptives:
Depression measurement :
x axis - DASS depression test (Max 21 min 0)
y axis - social media count (1 to 7)

Mental health problems are getting more recognition in the dawn of the new decade. However, many people are still ignorant of the causes that results in increase of depressive symptoms. I wanted to showcase the factors in which that most affect a student’s mental health. I chose the college students to be at the center of this analysis because the problem feels so much more personal, as I have seen many friends struggle through mental health issues.

I chose the web to be my medium as for its flexibility, approachability and expressivity.

Then, what data would I need to research in order to demonstrate the epidemic of the soul?

1. Study of the social meia use of the American popluation and its trends. There was a research done by the PLOS ONE that compare the personality traits and mental health of individuals who used facebook and other social media and who did not. The link to the reserach is <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0166999>

The Focus of this visualization is to tell how internet use among college students may affect their mental health. In order to do so, I need more detailed information on usage patterns rather than just volumes of use.

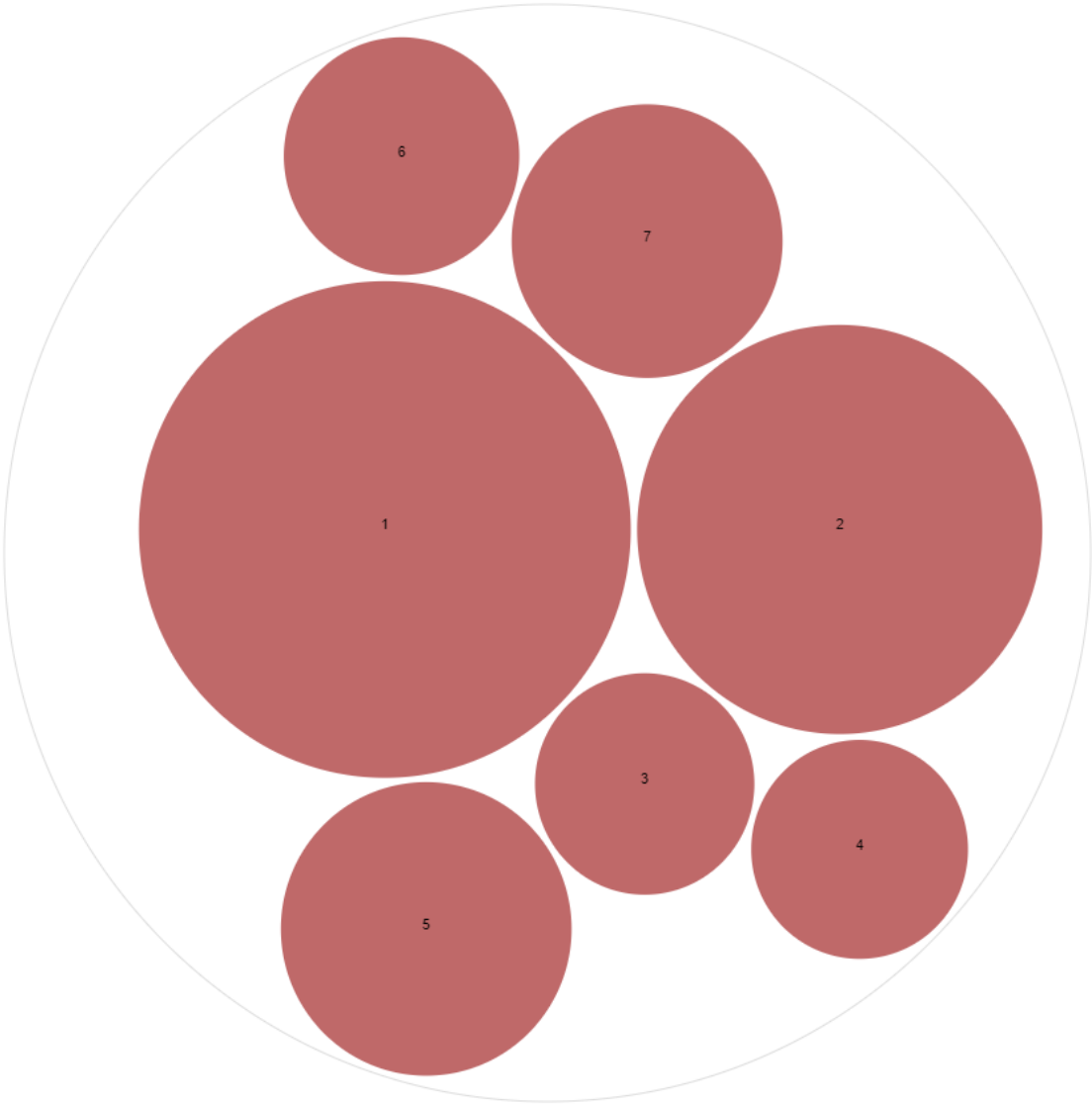
One form of metric that could be useful for my research is the ratio of time spent vs. time active My intuition tells me that users who post more could be presented as narcssisitc while users who spend lots of time yet don't post can be considered more reserved (Therefore more likely to be suffering from facebook envy)

In order to conduct further research I may have to delve in to facebook analytics and see the user data and its corresponding metadata.

My goal is to ultimately have an interactive website. In order to do that I need a good pipeline managing both the front end and the back end.

Firstly, I want the data to be more configurable in a sense that users could tweak the variables themselves. For instance,users should be able to see the different results coming from data collected from different types of social media. This will require lots of programming in Javascript

Secondly, I want data to be represented very aesthetically. My motto has been, from the start of the class ,to influence the world in a postive light, and I hope that this project will be reflective ofo that thought process. I will be updating the progress through github



Time period: 2017 March
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Reliability: Survey data.

Availability at different geographical levels: None
Confidentiality: Individual information is protected
Descriptives:
Depression measurement :
x axis - DASS stress test (Max 21 min 0)
y axis - Videogame frequency scale (1 to 7)

References:

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Jessica Collins, Sophie Hancock, Emma Weiss; Supervised by Hugh Stephenson, Ph.D.

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WHO is using this ? : Students, Families, Friends is being served ? : Students with depressive symptoms

There has been an abundance of research done on the topic analyzing mental health of college students.

Researchers have recently noted that the prevalence of mental health problems among college students is relatively high [1]. According to a study done by American College Health Association, at least 6.8% of the students have considered suicide in the academic year of 2016. The stats are much higher if we only consider students who have experienced depressive episodes or anxiety, jumping up to 14% and 17% each. [1]

The picture is more grim when we look into students with a status of a minority, such as LGBTQ students. It is said that 10% of the trans and 5% of the cis-gender LGBTQ students have attempted suicide [2] which is much higher than the 1% rate coming from the national average. Needless to say mean depression scores from this specific groups of students were considerably higher than the national average.

Furthermore, the mental health problems can be manifested even without and actual discriminatory behavior from the surroundings. According to a study done [3] on Muslim American College population, there was a strong correlation with the perceived levels of discrimination and mental burden on the students.

Many sources seem to suggest that there is an upward trend in mental health problems among college students[4].

The consensus in many of the literature I have researched is that mental health is something that is very difficult to handle. Even in these few papers, the population and the possible causes for certain problems are so diverse. And I think if we were to visualize something we have to find some sort of a commonality in these data and envision a potential trend.

I project that the increase in social media use (or internet use in general) may have had to the upward trend and looked more into it.

So, does the social media use exacerbate or even cause the decline in student mental health?

According to Facebook envy predicts depression symptoms[5]. However, professionals say that it is still too early to conclude whether or not facebook has effects detrimental to one's mental health. In the same paper, research actually suggests that there are certain redeeming qualities about facebook use that can actually help people gain confidence.

In a study done on German and Chinese college students, emotional exhaustion and depression are positively correlated [6] with each other and are related to Internet Use Disorder (IUD). IUD is generally associated with excessive and compulsive use of the internet.

On one study done on the general population, users were separated by their clusters based on their time spent on social media [7] (metric called mentioned by the paper as SMU, social media usage). The two specific SMU patterns—Wired and Connected—were associated with the most risk of depression and anxiety. And those two clusters are the ones with the highest frequency of usage and time on social media.

It indeed seems that this increase trend in mental health problems can partially be attributed to the rise in use of social media. However many researches also hint at the notion that internet use can also be helpful in moderation for tackling depression and anxiety.

2. Showcase a more general connection with using media and mental health. Factors other than social networking services, such as videogames were part of this research. The research was conducted to German students. The link to the research is <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0191810>

Using these data, I wanted to see if my initial hypothesis could stand. I wanted to see if there really were negative association between the hours spent on social media and mental health.