Attitudes Towards Mental Health in the Tech Workplace

Data Science Society GM Project

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“

Some days, the best thing about the job is the chair spins.”

-Unknown

Our Question:

What are the strongest predictors of certain attitudes towards mental health in the tech workplace?

1.Understanding the Data

Tables & Visualizations

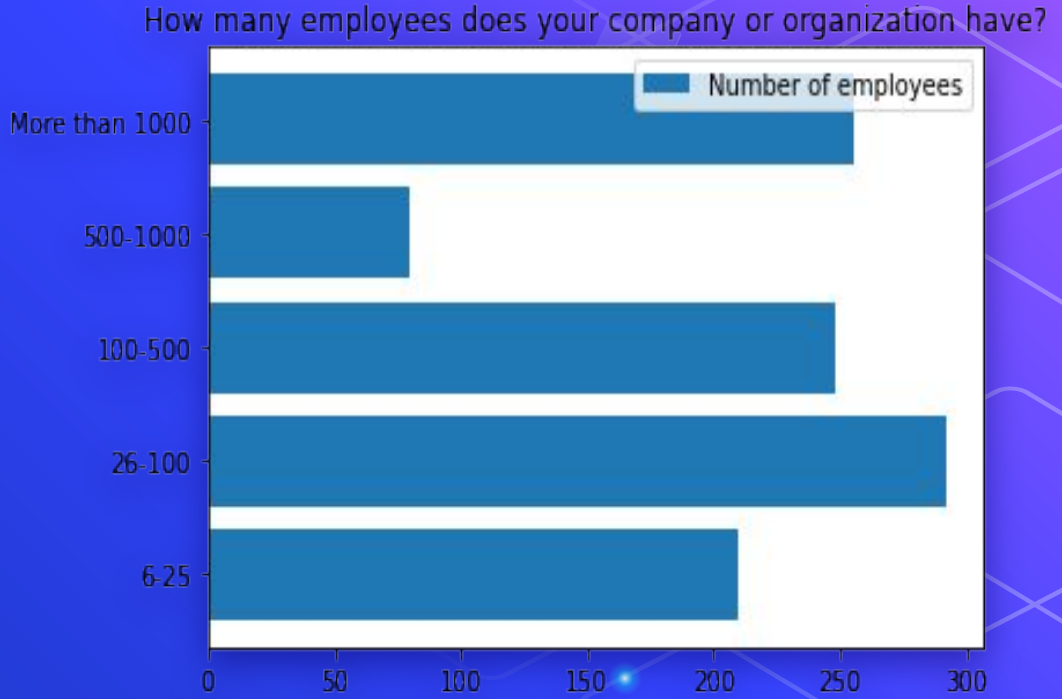
Reading our Data

- import pandas as pd
- read_file = pd.read_csv('mental-health-in-tech-2016_20161114.csv')
- Then we sorted the data and dropped columns that were not necessary

Matplotlyb.py plot to visualize our table

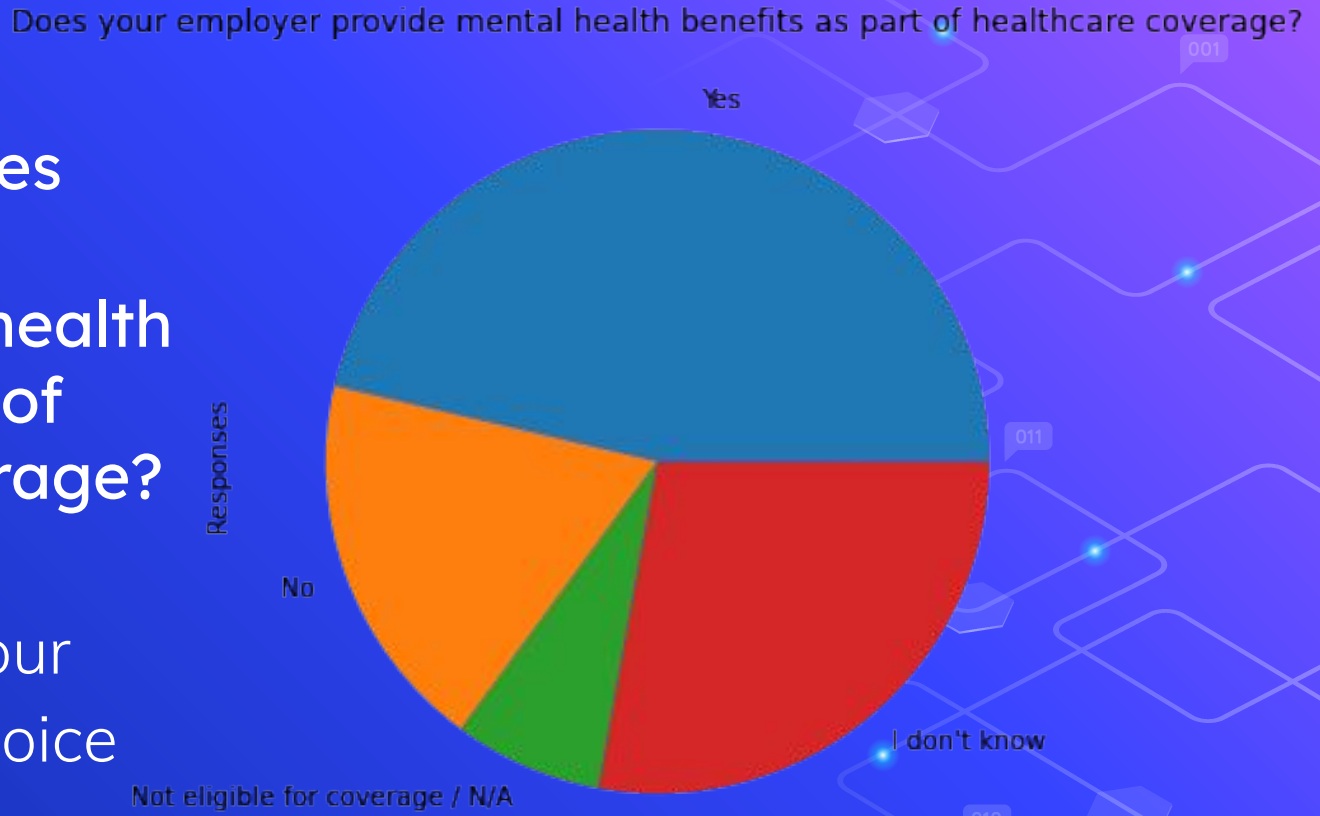
Question: How many employees does your company/ organization have?

-bar graph was our visualization of choice



Question: Does your employer provide mental health benefits as part of healthcare coverage?

-a pie chart was our visualization of choice



Difficulties

- Data from free response survey
- Yes or No → 0 or 1
- Female/F/female/f → Female
- Male/M/male/m → Male
- ‘6-25', '26-100', '100-500'
  → Small
- '500-1000', 'More than 1000'
  → Large

	How many employees does your company or organization have?	Does your employer provide mental health benefits as part of healthcare coverage?	Do you know the options for mental health care available under your employer-provided coverage?	Has your employer ever formally discussed mental health (for example, as part of a wellness campaign or other official communication)?	Does your employer offer resources to learn more about mental health concerns and options for seeking help?	Is your anonymity protected if you choose to take advantage of mental health or substance abuse treatment resources provided by your employer?	If a mental health issue prompted you to request a medical leave from work, asking for that leave would be:	Do you think that discussing a mental health disorder with your employer would have negative consequences?	Do you think that discussing a physical health issue with your employer would have negative consequences?	Would you feel comfortable discussing a mental health disorder with your coworkers?
0	26-100	Not eligible for coverage / N/A	NaN	No	No	I don't know	Very easy	No	No	Maybe
1	6-25	No	Yes	Yes	Yes	Yes	Somewhat easy	No	No	Maybe
2	6-25	No	NaN	No	No	I don't know	Neither easy nor difficult	Maybe	No	Maybe
4	6-25	Yes	Yes	No	No	No	Neither easy nor difficult	Yes	Maybe	Maybe

Male
Male
male
M
male
Male
F
Female
male
Male
Female
Male
Male
Male
Female
Male
Female
Male
F
female
male
Male
Unicorn
male
M
Male
Cis Male
male
Male
m

2. A/B Testing

Our method of Statistical Inference

Initial Testing...

Null Hypothesis: Providing mental health benefits does not impact comfort in discussing mental health with a supervisor

Alternative Hypothesis: Providing mental health benefits makes employees more comfortable with discussing mental health with a supervisor

Test Statistic: Difference between the proportion of people who are comfortable talking about their mental health issues among those who get mental health benefits and proportion of people comfortable talking about mental health issues who do not get those benefits.

Null Hypothesis: The size of the company does not have an effect on whether employees are comfortable discussing mental health issues in a small or large company.

Alternative Hypothesis: People are more likely to be comfortable discussing mental health issues with a supervisor in a small company than in a bigger company.

Test Statistic: One-sided - Difference between the average of proportions of people who are comfortable talking about their mental health issues in a small company and the average of proportions of people who think the same way at a large company.

Observed test statistic:
0.0867736

P-Value: 0.015

P-Value:

The p-value is low, which means the alternative hypothesis is favored. People are more comfortable discussing mental health issues at a smaller company than a larger one.

Null Hypothesis: Gender does not have an impact in discussing mental health with a supervisor.

Alternative Hypothesis: Gender does have an impact in discussing mental health with a supervisor.

Test Statistic: Two-sided: Absolute difference between the average of the distribution of people who are comfortable talking about their mental health issues among females and the mean of the distribution of people comfortable talking about mental health issues among males.

Observed test statistic:
0.0076556

P-Value: 0.935

P-Value:

The p-value is high, which means the null hypothesis is favored. Gender does not have a significant impact when discussing mental health with a supervisor.

Conclusions

Gender was not a statistically significant determinant of mental health attitudes. However, the size of companies was statistically significant.

Implications for the Future

Thanks!

Any questions?