

# In 2014, Did Employers in the US Tech Industry Recognize the Importance of Mental Health?

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## 1 Introduction, Loading, and Cleaning

### Goal

A crucial aspect of a healthy and productive workplace is management's understanding of the importance of mental health, especially in fast-paced or high-growth sectors of the economy. Given the tech industry's rapid growth over the past few decades, I believe it would be valuable to examine the industry's employee access to mental health resources and their understanding of these resources.

I aim to answer the question: In 2014, did employers in the US tech industry recognize the importance of mental health?

### Benefits of Survey Data

As this dataset includes thoughts from the workers' perspectives, it provides a closer look into gauging the need for mental health resources and whether resources currently offered are effective. To fully answer the question I propose, feedback from the employers would also be needed to compare the resources that are perceived to be available and which resources are actually available. With the

limited data, however, I am still able to at least understand which resources employees perceive to be available. Additionally, the data provide insight as to whether an employee perceives that an employer recognizes the importance of mental health.

### Presentation Contents

- Accordingly, I break down my analysis into three areas, which align closely with the variables provided in the dataset:
  1. Whether there is a need for mental health resources in the workplace,
  2. whether the employer is perceived to recognize the importance of mental health, and
  3. whether the employer offers resources to employees for mental health issues.

The dataset can be found here. ()

Comments are very welcome!

[1.1 Loading Packages](#)[1.2 Loading the Data and First Peek](#)[1.3 Cleaning Age and Timestamp](#)[1.4 Cleaning Gender](#)[1.5 Filtering Data](#)

Look at code for details.

[CODE](#)

## 2 Analysis

- As noted in the introduction, I break down my analysis into three areas:
  1. Whether there is a need for mental health resources in the workplace,
  2. whether the employer is perceived to recognize the importance of mental health, and
  3. whether the employer offers resources to employees for mental health issues.

### 2.1 Need for Mental Health Resources

#### Mental Health Condition Prevalence

A large portion of the United States population faces issues with mental health. According to the National Institute of Mental Health (NIMH), about 17.9% of the US population experienced a mental illness from 2014-2015.

(<https://www.nimh.nih.gov/health/statistics/prevalence/any-mental-illness-ami-among-us-adults.shtml>) Naturally, any survey taken will have some bias, but the NIMH notes that about 1/3 of the sample did not complete the survey and that those with mental illness may disproportionately fall into this category.

It is important to note that the NIMH survey only counted mental illnesses that are diagnosable or disorders are mentally-, behaviorally-, or emotionally-based. Thus, the self-reporting from the respondents may not reflect the actual prevalence of mental health issues. The consequences of this are discussed in the conclusion section.

### Indicators of Mental Health Prevalence in Dataset

- There are three possible indicators of the prevalence of mental health issues:
  1. Family History: Do you have a family history of mental illness?
  2. Treatment: Have you sought treatment for a mental health condition?
  3. Work Interference: If you have a mental health condition, do you feel that it interferes with your work?

### Things to Keep in Mind

Though asking about treatment can and does weed out self-diagnosis of mental illness, 'treatment' and 'mental illness' are not clearly defined. Additionally, 'mental health condition' and "mental illness" seemed to be used interchangeably throughout the survey. Consequently, by responding "yes" to seeking treatment for a mental health condition, respondents may mean that they have had therapy for a breakup or that they had pills described to them for a diagnosis of depression.

This bias is incredibly important to keep in mind when looking at the results, especially considering that the answers to this question are the primary indicators of mental for the analysis. Note that, in this analysis, I use 'mental illness' and 'mental health condition' interchangeably unless specified by the survey.

### Graphs

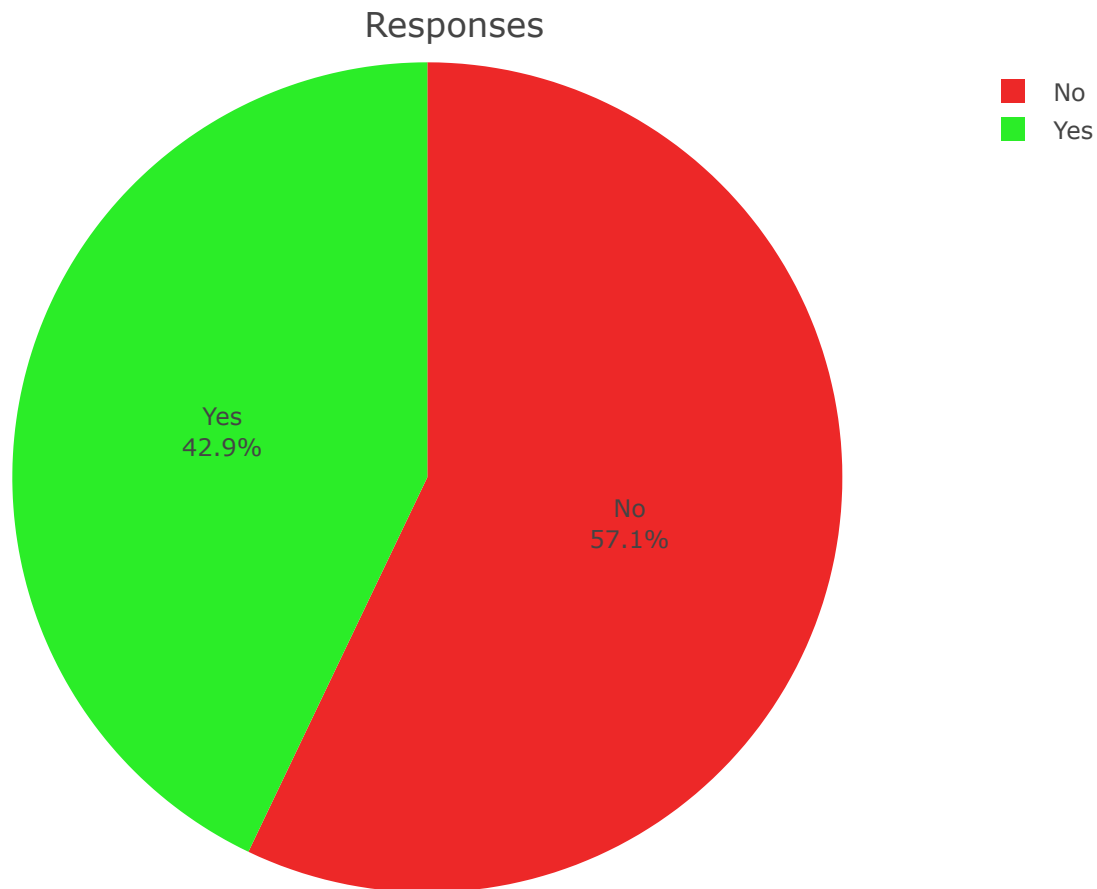
Here's a look at these variables. Note that I include the questions asked to the respondents before the figures so that the responses are given further context.

2.1.1 Family History

2.1.2 Treatment

2.1.3 Work Interfere

### Do you have a family history of mental illness?

[CODE](#)

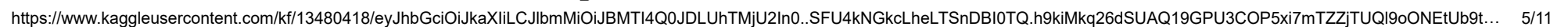
Based on the sample, a large percentage of people in the tech industry in the US have a family history of mental illness.

## 2.2 Perceptions of Employer Recognition of the Importance of Mental Health

Now that we see that a large percentage (over half!) of the sample experience mental health issues (as indicated by their seeking of treatment), I am interested to see how the recognition of the importance of mental health is perceived.

### 2.2.5 Observed Consequence

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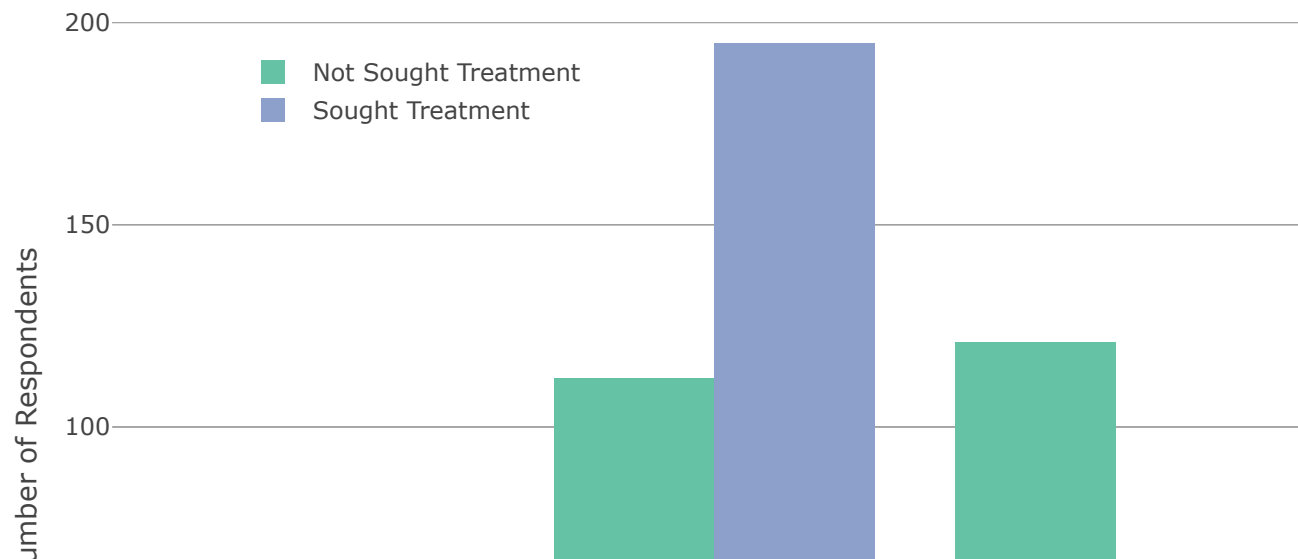
- As I suspected, there are some differences in the perceptions of those who have sought treatment for mental vs. those who have not:
  - Those who have sought treatment for mental perceive it to be more difficult to take medical leave for their mental
  - That being said, the numbers are fairly similar.
- Regardless, a large number of people do not know how easy it would be to take medical leave for mental .

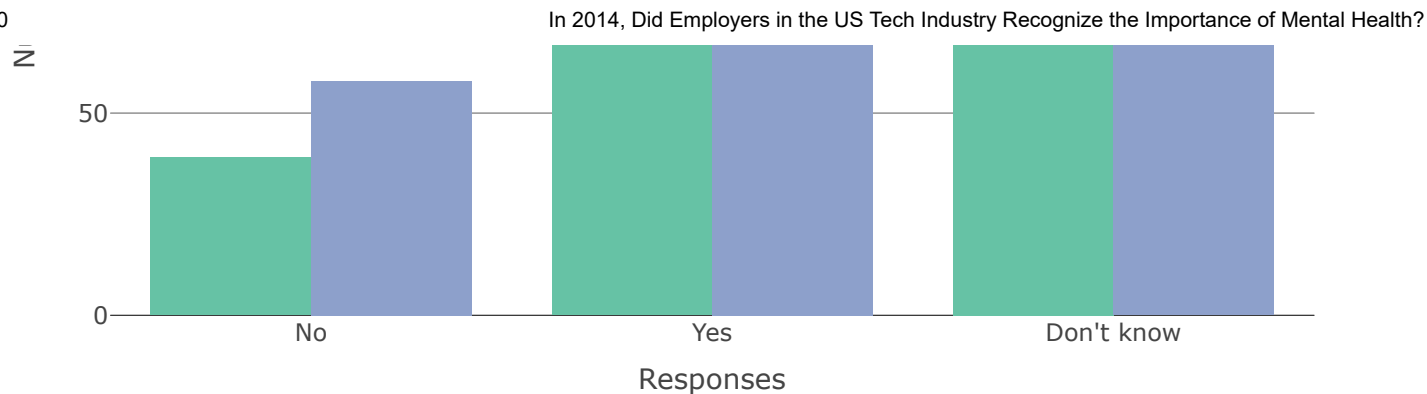
## 2.3 Actual Availability of Resources

Here is a look into whether resources are available to employees for mental health! Again, I break down into those who have sought treatment and those who have not.

[2.3.1 Benefits](#)[2.3.2 Care Options](#)[2.3.3 Wellness Program](#)[2.3.4 Seek Help](#)[2.3.5 Anonymity](#)

### Does your employer provide mental health benefits?

[CODE](#)



For the most part, it looks like a majority of respondents indicated that mental health benefits are provided by an employer. Unsurprisingly, those who have sought treatment know better than those who have not whether their employer does or does not provide these benefits.

### 3 Conclusions and Recommendations

- Before jumping to conclusions, it is important to understand some of the limitations of this data. These include, but are not limited to, the following:
  - Given that anyone can visit Open Source Mental Illness (<https://osmihelp.org/>)'s website and take the survey, there is probably a lot of bias in the representation of the members of the industry.
  - The purpose of the organization is to raise awareness of mental health in the tech and open source workplace. Though I applaud this goal (it truly is an amazing one!), the questions may be formatted as to bring about a specific conclusion aligning with their end-goal.
  - More will be discussed in the coming sections!

#### 3.1 Need for Resources

##### 3.1.1 Measuring Mental Health Prevalence

###### **Sought Treatment Variable**

Although the measure of mental illness is difficult in general, the closest measure in this dataset is the “sought treatment” variable, which indicates whether a respondent has sought treatment for a mental health condition.

## Family History and Work Interference Variables

In the section above, I also included the “family history” and “work interfere” variables, through which respondents indicate whether they have a family history of mental illness and how much their mental health condition interferes with their work, respectively.

As we can see by the tables below, those with a family history of mental illness have higher rates of having sought treatment, and those who experience work interference due to a mental health condition are more likely to have sought treatment for a mental health condition.

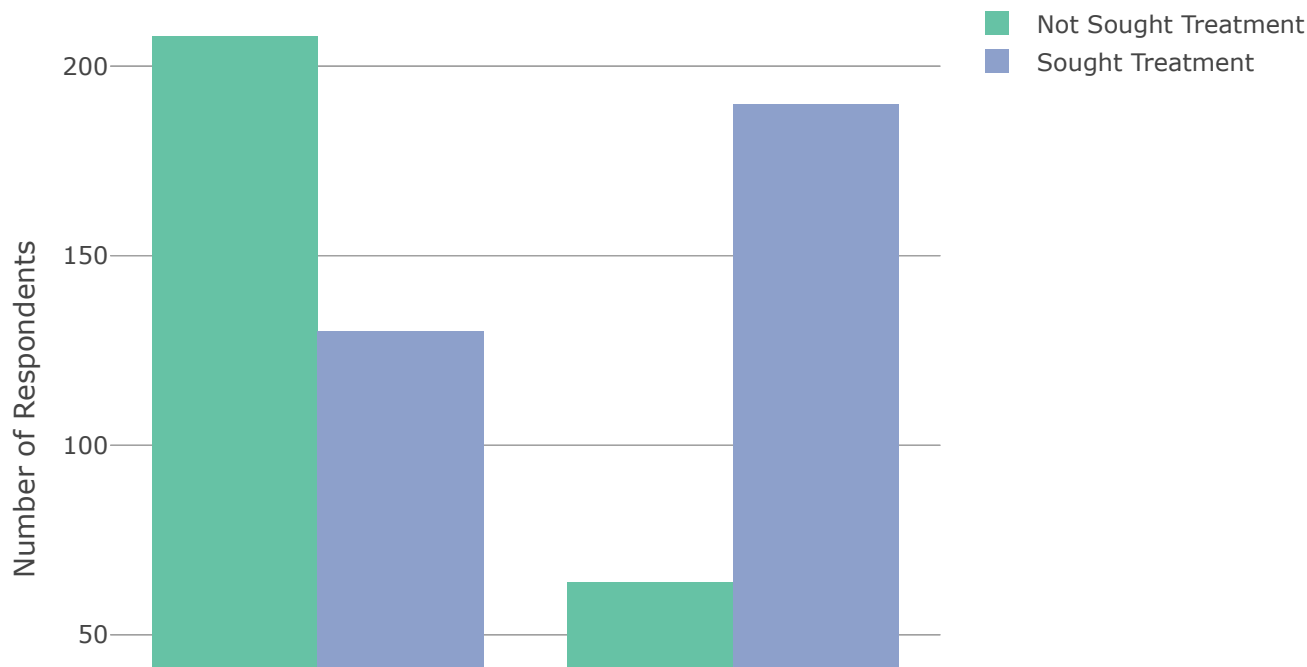
Accordingly, these variables all roughly articulate the same thing - the prevalence of mental health issues in our sample.

3.1.1.1 Similarities: Treatment and Family History

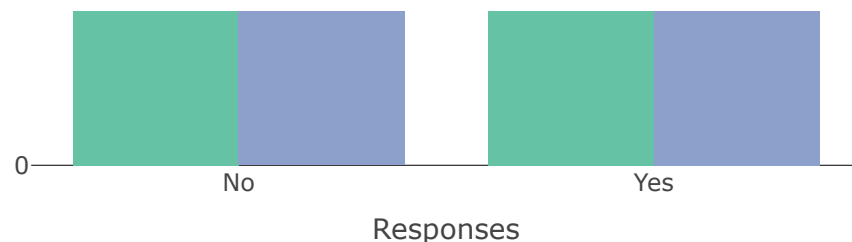
3.1.1.2 Similarities: Treatment and Work Interference

### Do you have a family history of mental illness?

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### 3.1.2 Are Resources Needed?

*Short answer: It's complicated!*

#### Possible Conclusions

- If these variables indeed indicate the prevalence of mental illness in the tech industry, then the rates are incredibly different from the general population. The results from this sample suggest that either:
  1. the rates of mental illness in the tech industry are much higher than outside the tech industry,
  2. the rates of mental illness in the tech industry are similar to outside the industry and the sample was incredibly biased in this respect, or
  3. a mixture of the two.

#### Possible Consequences

- If (1) is true, then the need for mental health resources and employer recognition is very high, at least compared with other industries.
- If (2) is true, we cannot draw any conclusions on prevalence and need for resources, and thus would need a more representative sample before making conclusions about people outside our sample.
- If (3) is true, more data would need to be collected, but it would appear that the prevalence rate of mental illness is still higher in the tech industry, indicating a need for resources.

#### Final Notes on Necessity of Resources

- Ultimately, it would be improper to draw any of these conclusions due to lack of data and context.
- That being said, due to the number of people who responded, there are some valuable insights provided regarding the perception of recognition by employers and the actual availability of resources, especially for those with mental health conditions.

## 3.2 Do Employers Recognize the Importance of Mental Health?

*Short answer: Inconclusive*

### **Environment May be Open Among Coworkers...**

- But many fewer employees feel comfortable speaking to their supervisors about mental health. This may indicate that the work environment is open, to an extent, and that social structures are in place to allow coworkers to feel welcomed.

### **Lack of Systems**

- However, it does not appear that there are systems in place for employees to discuss or take medical leave for mental health issues.
- If these systems were in place, many more employees would know how easy it is to take medical leave for a mental health condition.
- Furthermore, a majority of respondents would not feel that discussing their mental health issues might cause negative consequences and more would be willing to discuss their mental health issues with their supervisors.

**Conclusion** \* Ultimately, the variables in this dataset do not allow a firm conclusion to be made as to whether employers recognize the importance of mental health. \* But it appears that the tech industry may be on the right track, as many employees are willing to discuss their mental health issues with at least of their coworkers and supervisors. \* The number of observed negative consequences for those with mental health conditions seems low, though a baseline would be helpful in determining whether the tech industry's rate is actually low.

## 3.3 Do Employers Offer Benefits/Resources for Mental Health Issues?

*Short answer: Maybe?*

### **There are Definitely Some Resources**

- As indicated by the high number of affirmative responses for questions asking if employers offer mental health benefits or resources, it appears there are at least some resources available to employees.

### **Communication About Resources Could Be Better**

- Across all the questions regarding availability and knowledge of benefits, many respondents indicated that they did not know what benefits or resources were available to them.

- Furthermore, over half of respondents answered that their employer has not discussed mental health as a part of an employee wellness program.