

Mental Health in the Workplace

Michelle Devine

2022-09-19

```
library(knitr)
library(skimr)
library(ggplot2)
library(tidyverse)

## -- Attaching packages ----- tidyverse 1.3.2 --
## v tibble 3.1.8      v dplyr 1.0.10
## v tidyr 1.2.1      v stringr 1.4.1
## v readr 2.1.2      v forcats 0.5.2
## v purrr 0.3.4
## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()     masks stats::lag()

library(dplyr)
```

Mental Health in the Workplace Document.

In this day and age mental health gets talked about more and more especially when it comes to the work place. People are feeling overwhelmed with not only work but also with aspects that go on outside the workplace. But how do you employees feel when it's all become too much and they need help? Do employers provide employees the resources to get help? Are they punished for asking for help? Questions like these we hope to get some insight in from this dataset I used: click here <https://www.kaggle.com/datasets/osmi/mental-health-in-tech-survey>. This data is a bit outdated as it is from 2014. There is a continuation of this data from 2016 <https://www.kaggle.com/datasets/osmi/mental-health-in-tech-2016>

Load the Data

```
MH_in_tech <- read.csv("survey.csv")
```

```
summary(MH_in_tech)
```

```
##   Timestamp           Age           Gender           Country
## Length:1259      Min.   :-1.726e+03 Length:1259      Length:1259
## Class :character 1st Qu.: 2.700e+01 Class :character Class :character
## Mode  :character Median : 3.100e+01 Mode  :character Mode  :character
##                Mean   : 7.943e+07
##                3rd Qu.: 3.600e+01
##                Max.    : 1.000e+11
##   state      self_employed family_history treatment
## Length:1259 Length:1259      Length:1259 Length:1259
## Class :character Class :character Class :character Class :character
## Mode  :character Mode  :character Mode  :character Mode  :character
```

```

##
##
##
## work_interfere    no_employees    remote_work    tech_company
## Length:1259      Length:1259    Length:1259    Length:1259
## Class :character  Class :character Class :character Class :character
## Mode :character   Mode :character Mode :character Mode :character
##
##
##
## benefits          care_options    wellness_program seek_help
## Length:1259      Length:1259    Length:1259    Length:1259
## Class :character  Class :character Class :character Class :character
## Mode :character   Mode :character Mode :character Mode :character
##
##
##
## anonymity         leave           mental_health_consequence
## Length:1259      Length:1259    Length:1259
## Class :character  Class :character Class :character
## Mode :character   Mode :character Mode :character
##
##
##
## phys_health_consequence coworkers        supervisor
## Length:1259      Length:1259    Length:1259
## Class :character  Class :character Class :character
## Mode :character   Mode :character Mode :character
##
##
##
## mental_health_interview phys_health_interview mental_vs_physical
## Length:1259      Length:1259    Length:1259
## Class :character  Class :character Class :character
## Mode :character   Mode :character Mode :character
##
##
##
## obs_consequence    comments
## Length:1259      Length:1259
## Class :character  Class :character
## Mode :character   Mode :character
##
##
##

```

```
skim_without_charts(MH_in_tech)
```

Table 1: Data summary

Name	MH_in_tech
Number of rows	1259
Number of columns	27

Column type frequency:

Table 1: Data summary

character	26
numeric	1
Group variables	None

Variable type: character

skim_variable	n_missing	complete_rate	min	max	empty	n_unique	whitespace
Timestamp	0	1.00	19	19	0	1246	0
Gender	0	1.00	1	46	0	49	0
Country	0	1.00	5	22	0	48	0
state	515	0.59	2	2	0	45	0
self_employed	18	0.99	2	3	0	2	0
family_history	0	1.00	2	3	0	2	0
treatment	0	1.00	2	3	0	2	0
work_interfere	264	0.79	5	9	0	4	0
no_employees	0	1.00	3	14	0	6	0
remote_work	0	1.00	2	3	0	2	0
tech_company	0	1.00	2	3	0	2	0
benefits	0	1.00	2	10	0	3	0
care_options	0	1.00	2	8	0	3	0
wellness_program	0	1.00	2	10	0	3	0
seek_help	0	1.00	2	10	0	3	0
anonymity	0	1.00	2	10	0	3	0
leave	0	1.00	9	18	0	5	0
mental_health_consequence	0	1.00	2	5	0	3	0
phys_health_consequence	0	1.00	2	5	0	3	0
coworkers	0	1.00	2	12	0	3	0
supervisor	0	1.00	2	12	0	3	0
mental_health_interview	0	1.00	2	5	0	3	0
phys_health_interview	0	1.00	2	5	0	3	0
mental_vs_physical	0	1.00	2	10	0	3	0
obs_consequence	0	1.00	2	3	0	2	0
comments	1095	0.13	1	3548	0	160	1

Variable type: numeric

skim_variable	n_missing	complete_rate	mean	sd	p0	p25	p50	p75	p100
Age	0	1	79428148	2818299443	-1726	27	31	36	1e+11

If you look at the data from the summary code, the Age variable is showing up as a character where it needs to be an integer, so I'm going to change that.

```
MH_in_tech$Age <- as.integer(MH_in_tech$Age)
```

```
## Warning: NAs introduced by coercion to integer range
```

Now lets take a look.

```
summary(MH_in_tech)
```

```
##      Timestamp           Age           Gender           Country
## Length:1259      Min.   :-1726.00      Length:1259      Length:1259
## Class :character  1st Qu.:  27.00      Class :character  Class :character
## Mode  :character  Median :  31.00      Mode  :character  Mode  :character
##                      Mean  :   30.78
##                      3rd Qu.:  36.00
##                      Max.   :  329.00
##                      NA's   :1
##      state      self_employed      family_history      treatment
## Length:1259      Length:1259      Length:1259      Length:1259
## Class :character  Class :character  Class :character  Class :character
## Mode  :character  Mode  :character  Mode  :character  Mode  :character
##
##
##
## work_interfere      no_employees      remote_work      tech_company
## Length:1259      Length:1259      Length:1259      Length:1259
## Class :character  Class :character  Class :character  Class :character
## Mode  :character  Mode  :character  Mode  :character  Mode  :character
##
##
##
##      benefits      care_options      wellness_program      seek_help
## Length:1259      Length:1259      Length:1259      Length:1259
## Class :character  Class :character  Class :character  Class :character
## Mode  :character  Mode  :character  Mode  :character  Mode  :character
##
##
##
##      anonymity      leave      mental_health_consequence
## Length:1259      Length:1259      Length:1259
## Class :character  Class :character  Class :character
## Mode  :character  Mode  :character  Mode  :character
##
##
##
##      phys_health_consequence      coworkers      supervisor
## Length:1259      Length:1259      Length:1259
## Class :character  Class :character  Class :character
## Mode  :character  Mode  :character  Mode  :character
##
##
##
##      mental_health_interview      phys_health_interview      mental_vs_physical
## Length:1259      Length:1259      Length:1259
## Class :character  Class :character  Class :character
## Mode  :character  Mode  :character  Mode  :character
```

```
##
##
##
##
## obs_consequence      comments
## Length:1259          Length:1259
## Class :character      Class :character
## Mode :character       Mode :character
##
##
##
##
```

This data set contains 1259 observations and 27 variables/columns.

The variables are labeled as such:

Timestamp

Age

Gender

Country

state: *If you live in the United States, which state or territory do you live in?*

self_employed: *Are you self-employed?*

family_history: *Do you have a family history of mental illness?*

treatment: *Have you sought treatment for a mental health condition?*

work_interfere: *If you have a mental health condition, do you feel that it interferes with your work?*

no_employees: *How many employees does your company or organization have?*

remote_work: *Do you work remotely (outside of an office) at least 50% of the time?*

tech_company: *Is your employer primarily a tech company/organization?*

benefits: *Does your employer provide mental health benefits?*

care_options: *Do you know the options for mental health care your employer provides?*

wellness_program: *Has your employer ever discussed mental health as part of an employee wellness program?*

seek_help: *Does your employer provide resources to learn more about mental health issues and how to seek help?*

anonymity: *Is your anonymity protected if you choose to take advantage of mental health or substance abuse treatment resources?*

leave: *How easy is it for you to take medical leave for a mental health condition?*

mentalhealthconsequence: *Do you think that discussing a mental health issue with your employer would have negative consequences?*

physhealthconsequence: *Do you think that discussing a physical health issue with your employer would have negative consequences?*

coworkers: *Would you be willing to discuss a mental health issue with your coworkers?*

supervisor: *Would you be willing to discuss a mental health issue with your direct supervisor(s)?*

mentalhealthinterview: *Would you bring up a mental health issue with a potential employer in an interview?*

physhealthinterview: *Would you bring up a physical health issue with a potential employer in an interview?*

mentalvsphysical: *Do you feel that your employer takes mental health as seriously as physical health?*

obs_consequence: *Have you heard of or observed negative consequences for coworkers with mental health conditions in your workplace?*

comments: *Any additional notes or comments*

Testing to see what the charts will look like on here

Hoping this works *I decided to filter the data and just use the data from the United States seeing as it made up 751 of the observations, almost 60% of the dataset. With that kind of outlier graphing the data would be too skewed.*

I used the code below tally how many observations are “United States”

```
MH_in_tech%>%
  dplyr::group_by(Country == "United States")%>%
  tally()
```

```
## # A tibble: 2 x 2
##   `Country == "United States"`      n
##   <lgl>                        <int>
## 1 FALSE                        508
## 2 TRUE                         751
```

I wanted to make note, that the amount of participants working in tech were 1031 and the amount of non tech employees were 228. And among those who work in the United States, **611** work for a tech company while **140** do not.

I also wanted to make note that California seems to have a great stake in this data set than the other states. 138 of the responses from the United States came from California, making up 18.75% the total from the US. I filtered that by using the code below:

```
MH_in_tech%>%
  dplyr::group_by(state == "CA")%>%
  tally()
```

```
## # A tibble: 3 x 2
##   `state == "CA"`      n
##   <lgl>              <int>
## 1 FALSE              606
## 2 TRUE               138
## 3 NA                 515
```

I filtered that with the code below:

```
MH_in_tech%>%
  dplyr::group_by(Country == "United States", tech_company)%>%
  tally()
```

```
## # A tibble: 4 x 3
## # Groups:   Country == "United States" [2]
##   `Country == "United States"` tech_company      n
##   <lgl>                        <chr>        <int>
## 1 FALSE                      No             88
```

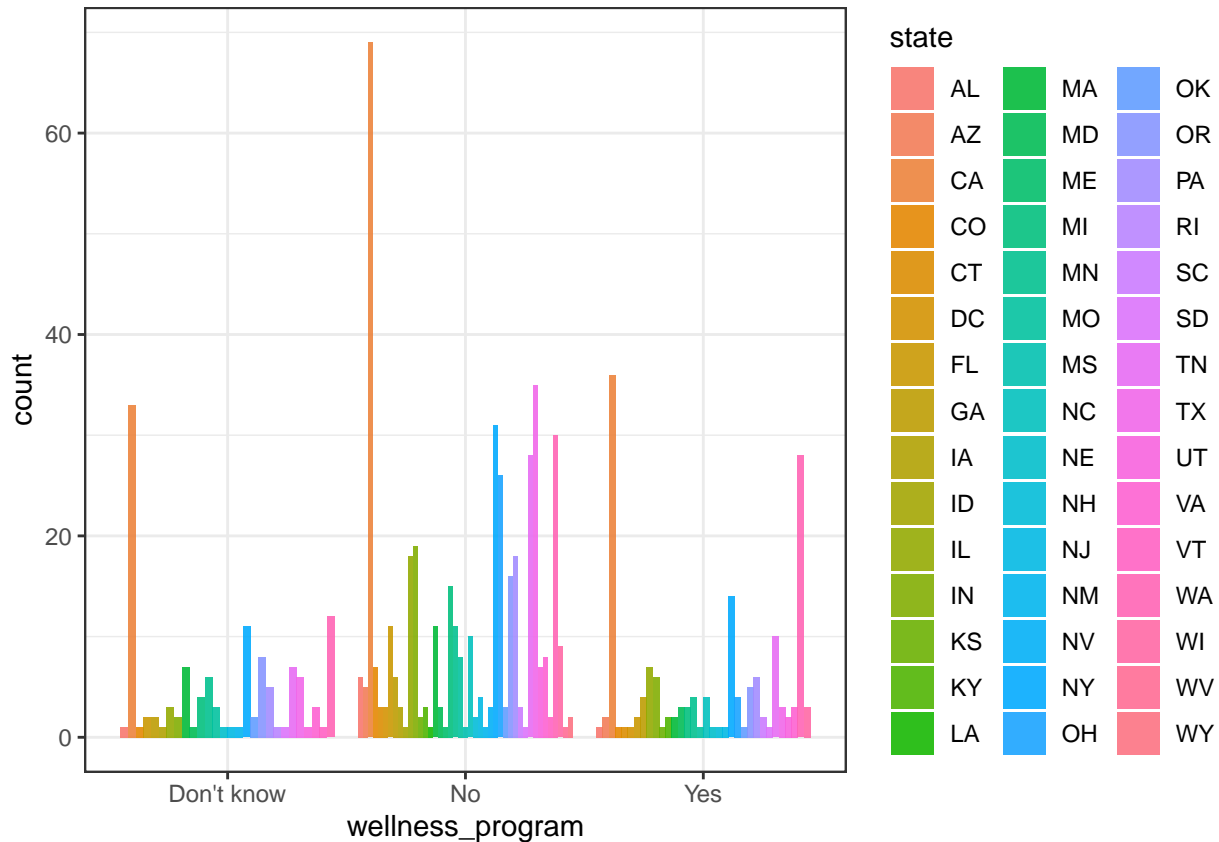
## 2 FALSE	Yes	420
## 3 TRUE	No	140
## 4 TRUE	Yes	611

A graph and table showing relation between variables “wellness program” and “state”:

```
table(MH_in_tech$state,MH_in_tech$wellness_program)
```

```
##
##      Don't know No Yes
## AL          1  6   1
## AZ          0  5   2
## CA         33 69  36
## CO          1  7   1
## CT          0  3   1
## DC          0  3   1
## FL          2 11   2
## GA          2  6   4
## IA          1  3   0
## ID          0  1   0
## IL          3 18   8
## IN          2 19   6
## KS          0  2   1
## KY          0  3   2
## LA          0  1   0
## MA          7 11   2
## MD          1  4   3
## ME          0  1   0
## MI          4 15   3
## MN          6 11   4
## MO          3  8   1
## MS          0  1   0
## NC          0 10   4
## NE          1  0   1
## NH          0  2   1
## NJ          1  4   1
## NM          1  1   0
## NV          0  3   0
## NY         11 32  14
## OH          0 26   4
## OK          2  3   1
## OR          8 16   5
## PA          5 18   6
## RI          1  0   0
## SC          0  3   2
## SD          1  1   1
## TN          7 28  10
## TX          6 35   3
## UT          1  8   2
## VA          3  8   3
## VT          1  2   0
## WA         12 30  28
## WI          0  9   3
## WV          0  1   0
## WY          0  2   0
```

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(wellness_program, fill = state))+
  geom_bar(position="dodge", alpha = 0.89) +
  theme_bw()
```



YES=167 NO=455 DON'T KNOW=129

From the data above it shows that a little more than **60%** of employers in the US did not discuss mental health as a part of a their wellness program. That's not to say that they don't see it as important but it could be a tell that employers may not necessarily see it as a priority.

A graph and table showing the relation between variables “seek help” and “state”:

```
table(MH_in_tech$state,MH_in_tech$seek_help)
```

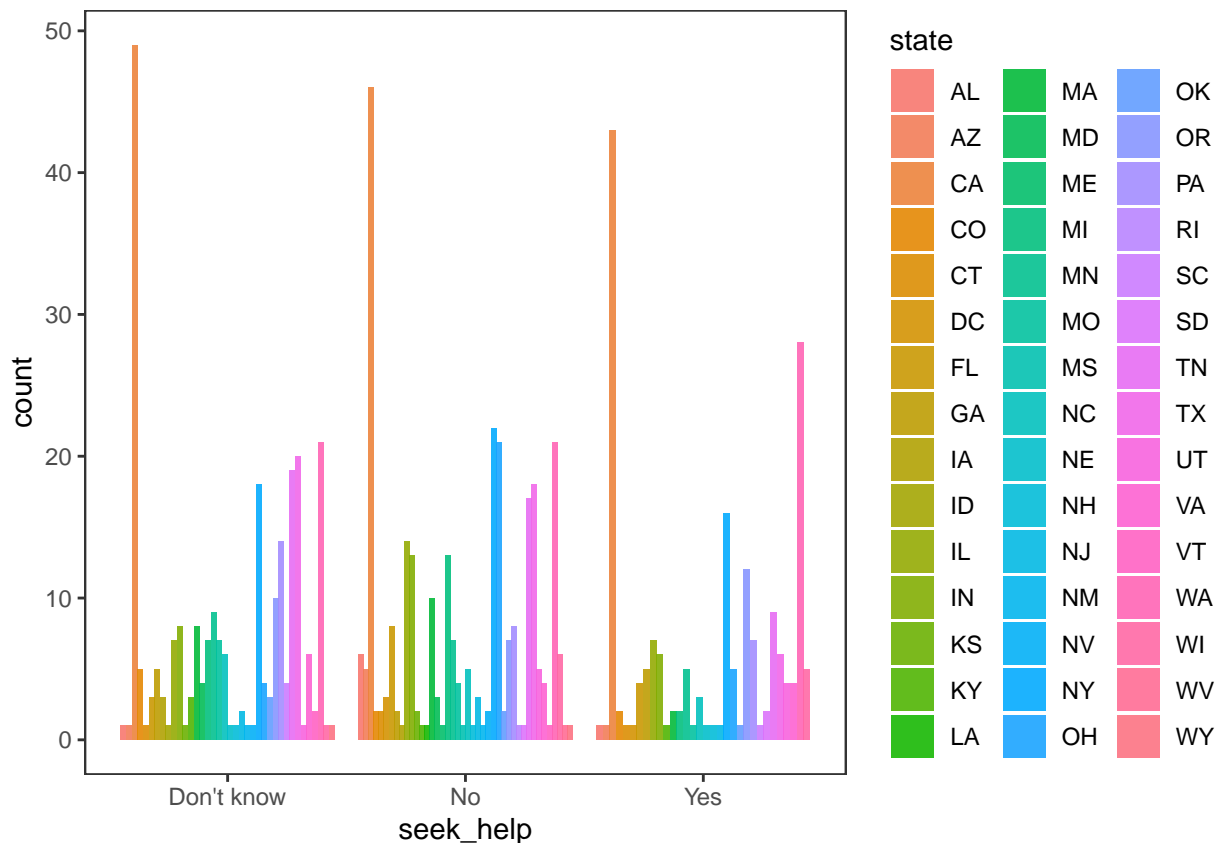
```
##
##      Don't know No Yes
##  AL           1  6  1
##  AZ           1  5  1
##  CA          49 46 43
##  CO           5  2  2
##  CT           1  2  1
##  DC           0  3  1
##  FL           3  8  4
##  GA           5  2  5
##  IA           3  1  0
##  ID           1  0  0
```


##	IL	7	14	8
##	IN	8	13	6
##	KS	1	2	0
##	KY	3	1	1
##	LA	0	1	0
##	MA	8	10	2
##	MD	4	4	0
##	ME	0	1	0
##	MI	7	13	2
##	MN	9	7	5
##	MO	7	4	1
##	MS	0	1	0
##	NC	6	5	3
##	NE	1	0	1
##	NH	1	1	1
##	NJ	2	3	1
##	NM	1	1	0
##	NV	1	2	0
##	NY	18	23	16
##	OH	4	21	5
##	OK	3	2	1
##	OR	10	7	12
##	PA	14	8	7
##	RI	0	1	0
##	SC	4	0	1
##	SD	0	1	2
##	TN	19	17	9
##	TX	20	18	6
##	UT	1	6	4
##	VA	6	4	4
##	VT	2	1	0
##	WA	21	21	28
##	WI	1	6	5
##	WV	0	1	0
##	WY	1	1	0

```

MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(seek_help, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89) +
  theme_bw()+
  theme(panel.grid.major = element_blank(), panel.grid.minor = element_blank())

```



YES=189 NO=300 DON'T KNOW=262 Almost 40% of employees in the United States went on record to say that their employers does not provided resources about mental health or in seeking help, while almost 35% don't know whether their employers provide these resources. Not knowing or not having the resources provided by your employer does not make it impossible to seek or get help, but it may be a factor when trying to get affordable help.

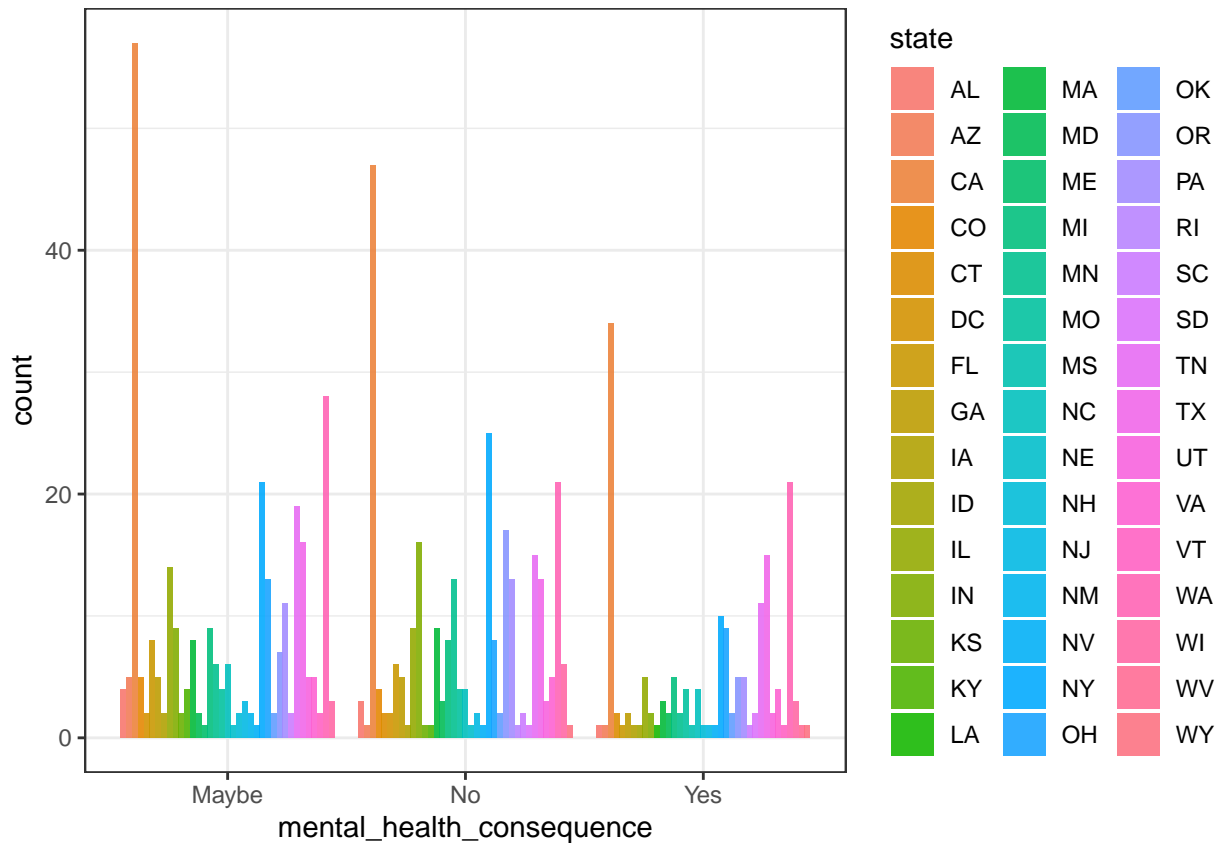
A graph and table in relation to the variable “Mental Health Consequence” and “state”:

```
table(MH_in_tech$state,MH_in_tech$mental_health_consequence)
```

```
##
##      Maybe No  Yes
##  AL      4   3   1
##  AZ      5   1   1
##  CA     57  47  34
##  CO      5   4   0
##  CT      0   2   2
##  DC      2   2   0
##  FL      8   6   1
##  GA      5   5   2
##  IA      2   1   1
##  ID      0   0   1
##  IL     14   9   6
##  IN      9  16   2
##  KS      2   1   0
##  KY      4   1   0
##  LA      0   0   1
##  MA      8   9   3
```

```
## MD      3  3  2
## ME      1  0  0
## MI      9  8  5
## MN      6 13  2
## MO      4  4  4
## MS      0  0  1
## NC      6  4  4
## NE      1  1  0
## NH      2  0  1
## NJ      3  2  1
## NM      2  0  0
## NV      1  1  1
## NY     22 25 10
## OH     13  8  9
## OK      2  2  2
## OR      7 17  5
## PA     11 13  5
## RI      0  1  0
## SC      2  2  1
## SD      0  1  2
## TN     19 15 11
## TX     16 13 15
## UT      6  3  2
## VA      5  5  4
## VT      2  0  1
## WA     28 21 21
## WI      3  6  3
## WV      0  0  1
## WY      0  1  1
```

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(mental_health_consequence, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89) +
  theme_bw()
```



YES=171 NO=280 MAYBE=300 Close to **23%** of employees responded to **YES** to the possibility of negative consequences for bringing up mental health with your employer. While almost **40%** answered **MAYBE**. With a little over **60%** between the two it goes to say that some employees may be afraid to speak up if they think they may need help with mental health. Ultimately being afraid to speak up out of fear of negative consequence may cause detriment to employees.

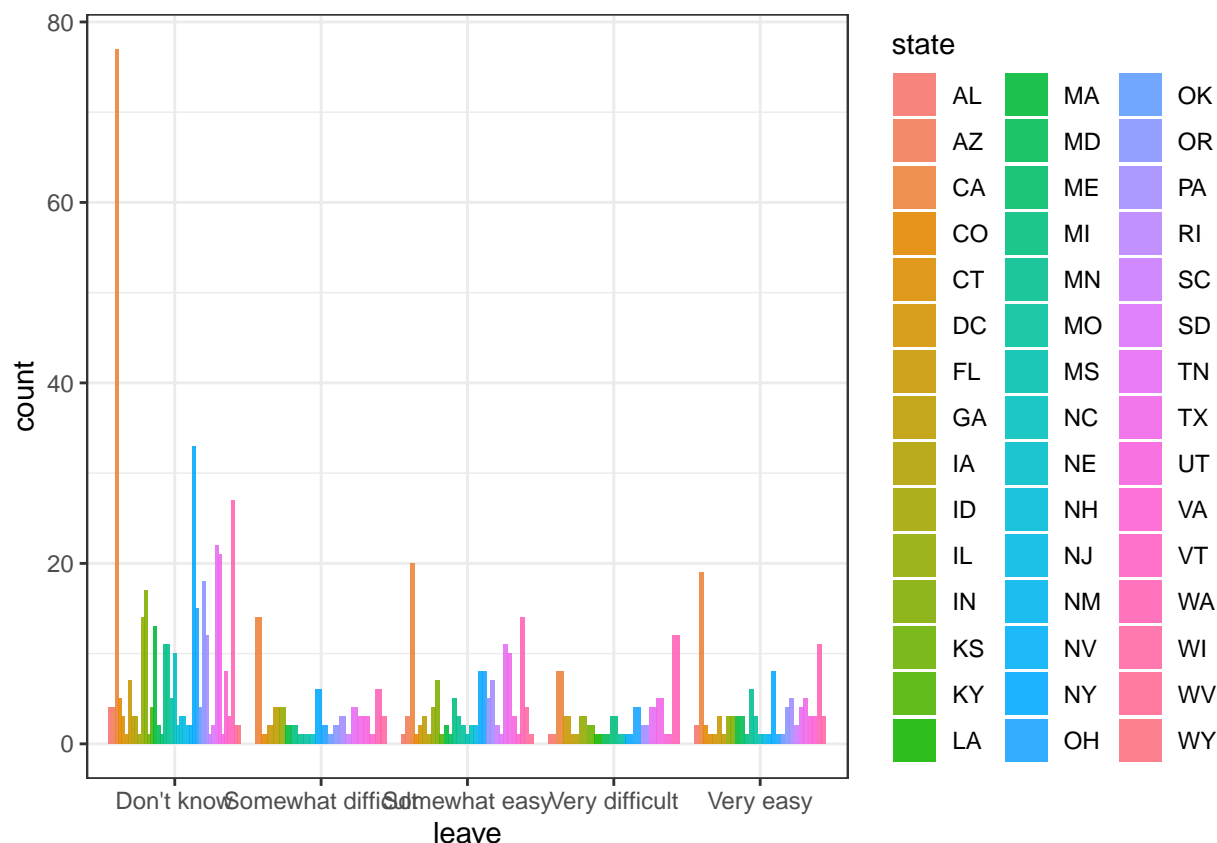
A graph and table showing the relation between the variables “Leave” and “State”.

```
table(MH_in_tech$state,MH_in_tech$leave)
```

```
##
##      Don't know Somewhat difficult Somewhat easy Very difficult Very easy
##  AL           4                0                1                1                2
##  AZ           4                0                3                0                0
##  CA          77               14               20                8               19
##  CO           5                1                1                0                2
##  CT           3                0                0                0                1
##  DC           1                0                2                0                1
##  FL           7                2                0                3                3
##  GA           3                4                3                1                1
##  IA           3                0                1                0                0
##  ID           1                0                0                0                0
##  IL          14                4                4                3                4
##  IN          17                0                7                0                3
##  KS           1                0                0                2                0
##  KY           4                0                1                0                0
##  LA           0                0                0                1                0
##  MA          13                2                2                0                3
```

##	MD	2	0	1	1	4
##	ME	1	0	0	0	0
##	MI	11	2	5	3	1
##	MN	11	1	3	0	6
##	MO	5	1	2	1	3
##	MS	0	0	1	0	0
##	NC	10	1	2	0	1
##	NE	2	0	0	0	0
##	NH	3	0	0	0	0
##	NJ	3	0	2	0	1
##	NM	2	0	0	0	0
##	NV	2	0	0	0	1
##	NY	33	6	9	1	8
##	OH	15	2	8	4	1
##	OK	4	1	0	0	1
##	OR	18	2	5	0	4
##	PA	12	3	7	2	5
##	RI	1	0	0	0	0
##	SC	0	1	2	0	2
##	SD	2	0	1	0	0
##	TN	22	4	11	4	4
##	TX	21	3	10	5	5
##	UT	2	3	3	0	3
##	VA	8	1	1	1	3
##	VT	3	0	0	0	0
##	WA	27	6	14	12	11
##	WI	2	3	4	0	3
##	WV	0	0	1	0	0
##	WY	2	0	0	0	0

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(leave, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89) +
  theme_bw()
```



VERY EASY=108 VERY DIFFICULT=53 SOMEWHAT EASY=137 SOMEWHAT DIFFICULT=68 DON'T KNOW=385

While only around 14% of employees say it's **Very Easy** to take leave for a mental health condition, a whopping **51%** don't know. That's not to say that they weren't informed about how medical leave works. It could mean they've never needed to take any leave so they just aren't informed on how it works. Meanwhile **16%** had some sort of difficulty trying to get medical leave, and although that's not high it would be better if that percentage was lower as to not deter or make thing harder for employees who are already having a difficult time.

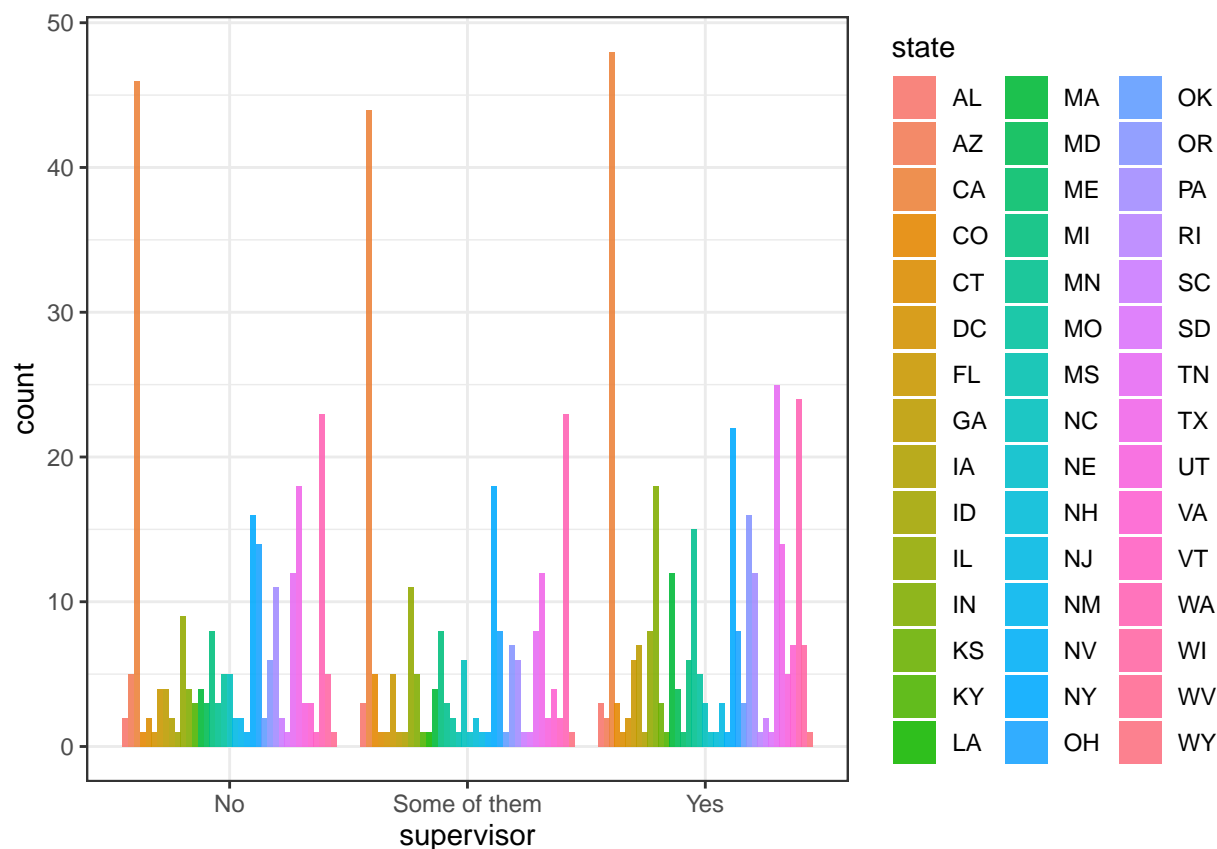
A graph and table showing the relation between the variables "Supervisor" and "State":

```
table(MH_in_tech$state,MH_in_tech$supervisor)
```

```
##
##      No Some of them Yes
##  AL   2           3   3
##  AZ   5           0   2
##  CA  46          44  48
##  CO   1           5   3
##  CT   2           1   1
##  DC   1           1   2
##  FL   4           5   6
##  GA   4           1   7
##  IA   2           1   1
##  ID   1           0   0
##  IL   9          11   9
##  IN   4           5  18
##  KS   0           0   3
```

```
## KY 3      1  1
## LA 0      1  0
## MA 4      4 12
## MD 3      0  5
## ME 0      0  1
## MI 8      8  6
## MN 3      3 15
## MO 5      2  5
## MS 0      1  0
## NC 5      6  3
## NE 0      1  1
## NH 0      2  1
## NJ 2      1  3
## NM 2      0  0
## NV 1      1  1
## NY 16     19 22
## OH 14      8  8
## OK 2      1  3
## OR 6      7 16
## PA 11      6 12
## RI 0      0  1
## SC 2      1  2
## SD 1      1  1
## TN 12      8 25
## TX 18     12 14
## UT 3      3  5
## VA 3      4  7
## VT 1      2  0
## WA 23     23 24
## WI 5      0  7
## WV 1      0  0
## WY 0      1  1
```

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(supervisor, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89) +
  theme_bw()
```



YES=304 SOME OF THEM=209 NO=238 From the data above it shows that a little over **40%** of employees in the United States say that can or do feel comfortable going to their direct supervisor about their mental health. Which is great, feeling comfortable with your supervisor makes for better employees when they are feeling heard and seen.

A bar graph and table showing the relation between variables, “Obs_Consequences” and “state”:

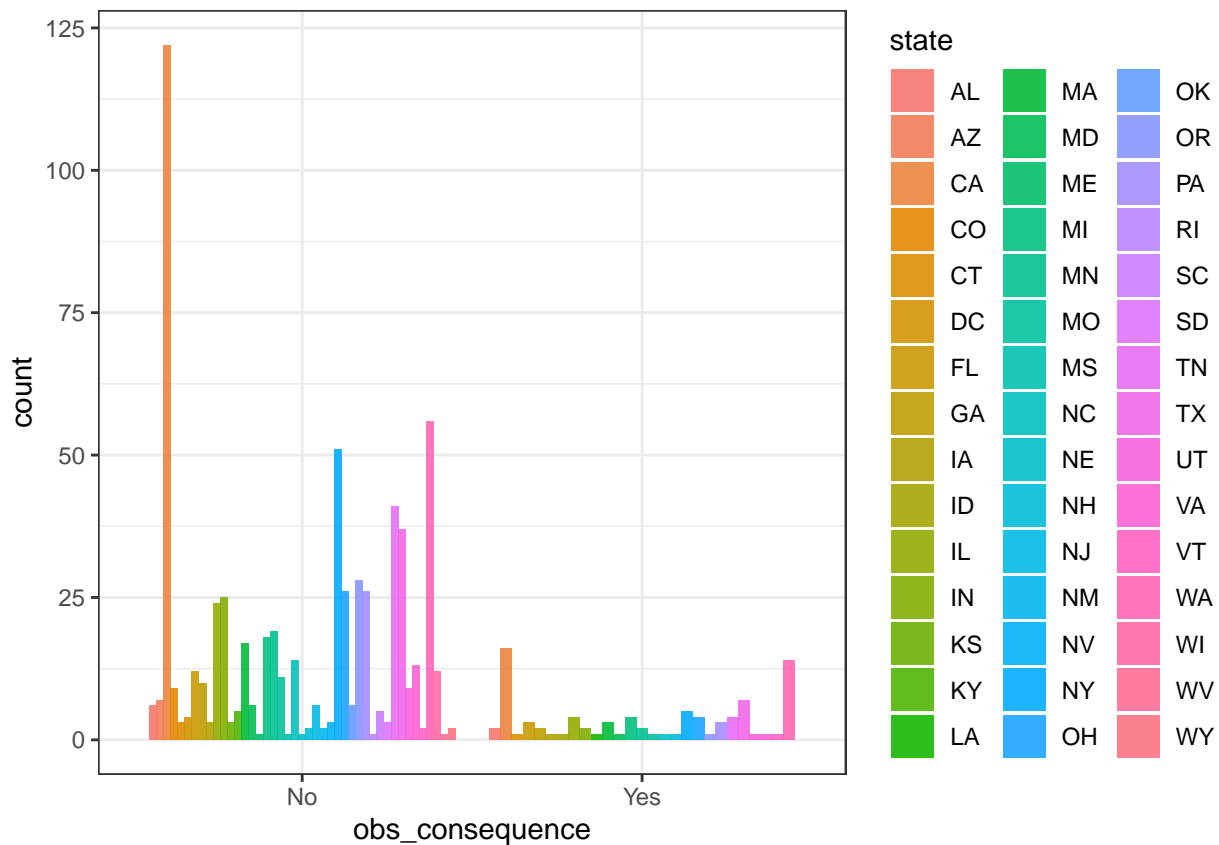
```
table(MH_in_tech$state,MH_in_tech$obs_consequence)
```

```
##
##      No Yes
##  AL    6  2
##  AZ    7  0
##  CA  122 16
##  CO    9  0
##  CT    3  1
##  DC    4  0
##  FL   12  3
##  GA   10  2
##  IA    3  1
##  ID    0  1
##  IL   24  5
##  IN   25  2
##  KS    3  0
##  KY    5  0
##  LA    0  1
##  MA   17  3
```



```
## MD 7 1
## ME 1 0
## MI 18 4
## MN 19 2
## MO 11 1
## MS 1 0
## NC 14 0
## NE 1 1
## NH 2 1
## NJ 6 0
## NM 2 0
## NV 3 0
## NY 52 5
## OH 26 4
## OK 6 0
## OR 28 1
## PA 26 3
## RI 1 0
## SC 5 0
## SD 3 0
## TN 41 4
## TX 37 7
## UT 10 1
## VA 13 1
## VT 2 1
## WA 56 14
## WI 12 0
## WV 1 0
## WY 2 0
```

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(obs_consequence, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89) +
  theme_bw()
```



YES=89 NO=662 The data above shows that more than **85%** of employees in the US have **NOT** observed consequences to employees for speaking out about their mental health.

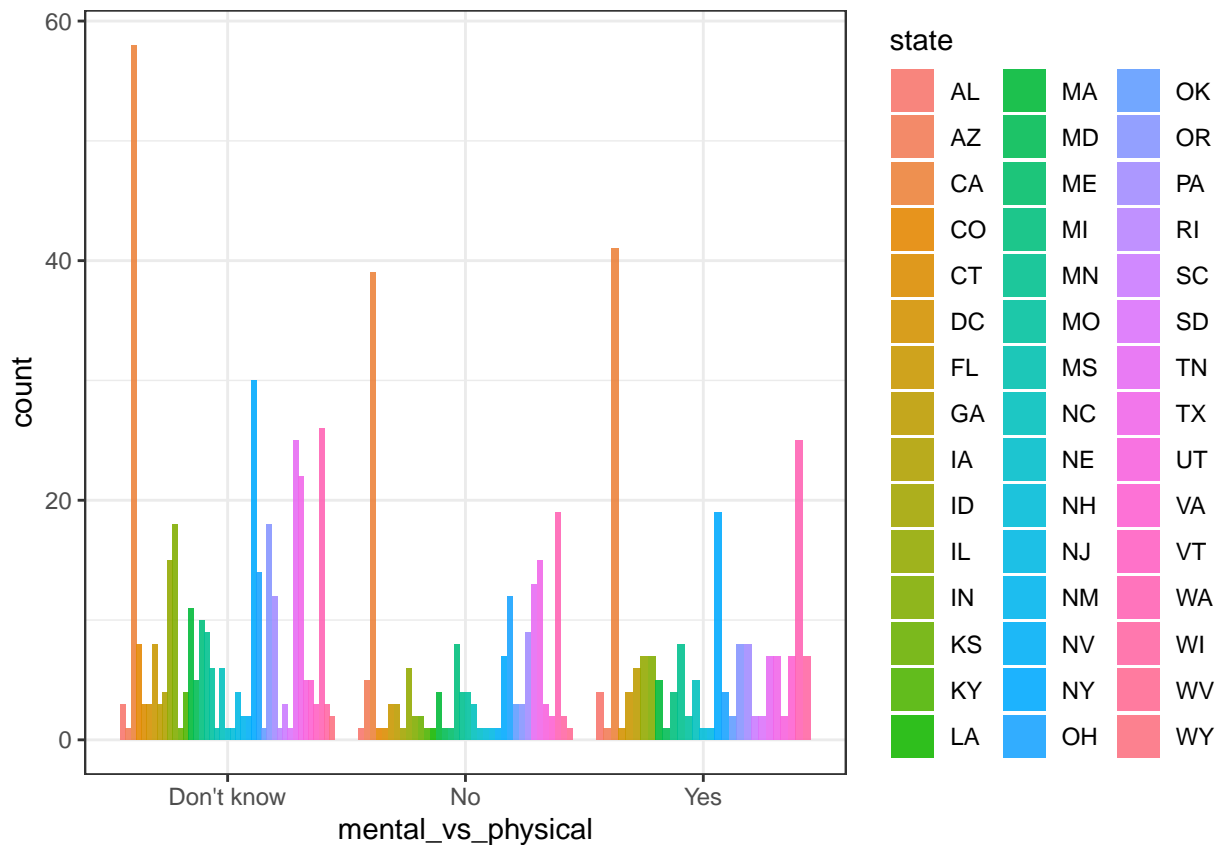
A graph and table showing the relation between variables “mentalvsphysical” and “state”:

```
table(MH_in_tech$state,MH_in_tech$mental_vs_physical)
```

```
##
##      Don't know No Yes
##  AL           3  1  4
##  AZ           1  5  1
##  CA          58 39 41
##  CO           8  1  0
##  CT           3  1  0
##  DC           3  0  1
##  FL           8  3  4
##  GA           3  3  6
##  IA           4  0  0
##  ID           0  1  0
##  IL          15  6  8
##  IN          18  2  7
##  KS           1  2  0
##  KY           4  1  0
##  LA           0  1  0
##  MA          11  4  5
##  MD           5  1  2
##  ME           0  1  0
##  MI          10  8  4
```

```
## MN      9  4  8
## MO      6  4  2
## MS      1  0  0
## NC      6  3  5
## NE      1  1  0
## NH      1  1  1
## NJ      4  1  1
## NM      2  0  0
## NV      2  1  0
## NY     31  7 19
## OH     14 12  4
## OK      1  3  2
## OR     18  3  8
## PA     12  9  8
## RI      1  0  0
## SC      3  0  2
## SD      1  0  2
## TN     25 13  7
## TX     22 15  7
## UT      5  4  2
## VA      5  2  7
## VT      3  0  0
## WA     26 19 25
## WI      3  2  7
## WV      0  1  0
## WY      2  0  0
```

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(mental_vs_physical, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89) +
  theme_bw()
```



YES=201 NO=187 DON'T KNOW=363 From the data above, a little more than **26%** of the of employees in the United States say that their employers take their mental health as important as their physical health. While that is a little over a quarter of the responses just a little less than **25%** say that their employers don't take it as seriously, and a just over **48%** don't know if their employer takes mental health as seriously. When getting a job you always they always make an effort to include benefits, and one of them being medical insurance. A good way to let employees know that mental health is taking seriously is also covering therapy, or other types of mental care so employees know that it is just as necessary as physical care.

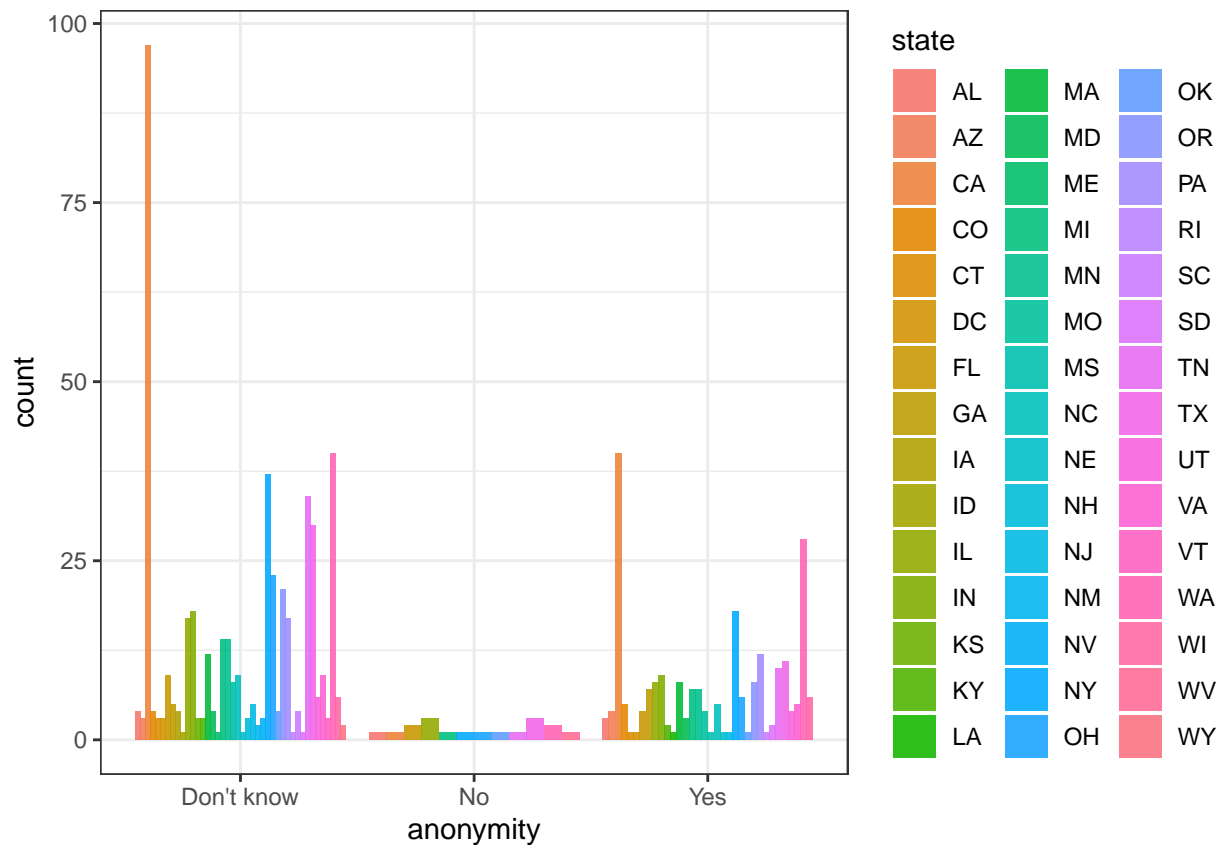
A graph and table showing the relation between variables “anonymity” and “state”:

```
table(MH_in_tech$state, MH_in_tech$anonymity)
```

```
##
##      Don't know No Yes
##  AL           4  1  3
##  AZ           3  0  4
##  CA          97  1 40
##  CO           4  0  5
##  CT           3  0  1
##  DC           3  0  1
##  FL           9  2  4
##  GA           5  0  7
##  IA           4  0  0
##  ID           1  0  0
##  IL          17  3  9
##  IN          18  0  9
##  KS           3  0  0
##  KY           3  0  2
```

##	LA	0	0	1
##	MA	12	0	8
##	MD	4	0	4
##	ME	1	0	0
##	MI	14	1	7
##	MN	14	0	7
##	MO	8	0	4
##	MS	0	0	1
##	NC	9	0	5
##	NE	1	0	1
##	NH	3	0	0
##	NJ	5	0	1
##	NM	2	0	0
##	NV	3	0	0
##	NY	38	1	18
##	OH	23	1	6
##	OK	4	1	1
##	OR	21	0	8
##	PA	17	0	12
##	RI	1	0	0
##	SC	4	0	1
##	SD	1	0	2
##	TN	34	1	10
##	TX	30	3	11
##	UT	7	0	4
##	VA	9	0	5
##	VT	3	0	0
##	WA	40	2	28
##	WI	6	0	6
##	WV	0	1	0
##	WY	2	0	0

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(anonymity, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89) +
  theme_bw()
```



NO=19 YES=237 DON'T KNOW=495

With close to **66%** of employees not knowing if they're anonymity is protected if they came forward with mental health concerns or substance abuse issues, the likelihood that they would come forward is lessened with the possible fear that there may be negative consequences in asking for help.

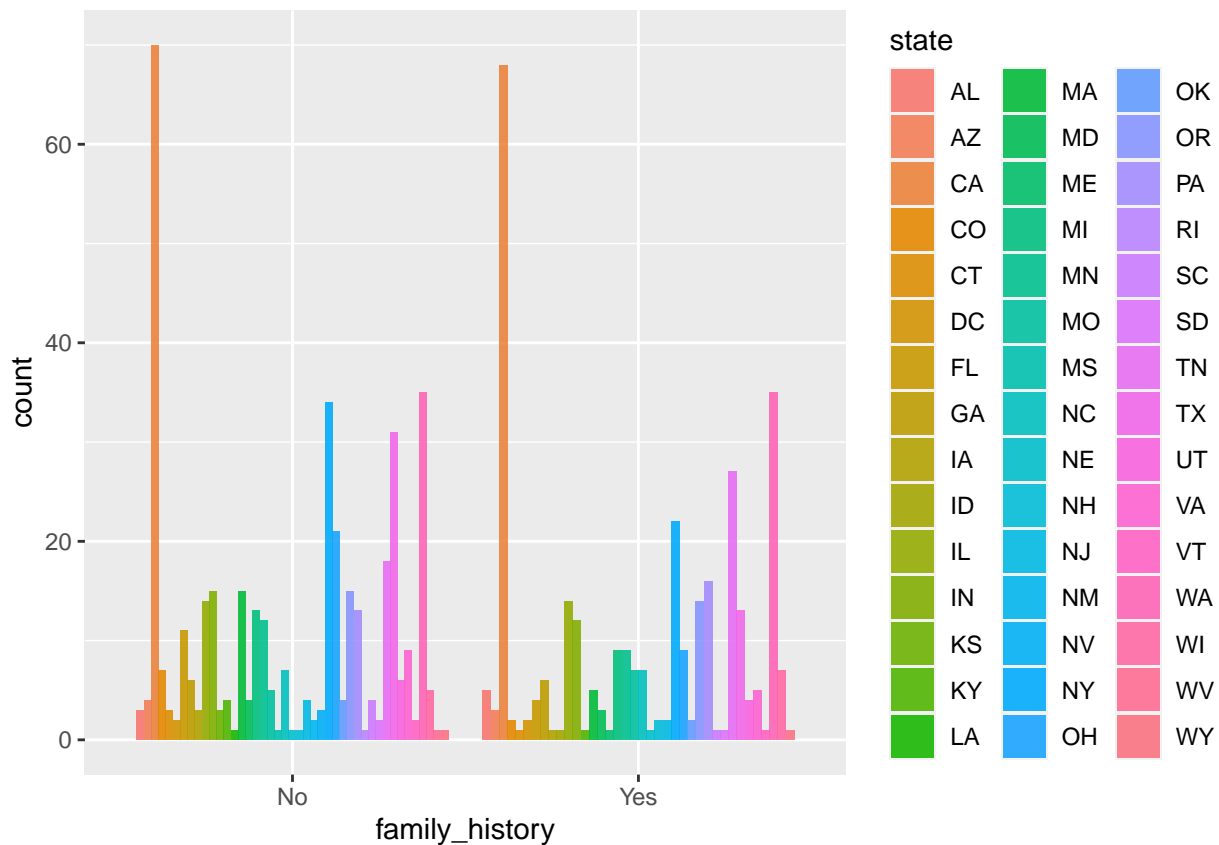
A graph and table showing the relation between variables, "family_history" and "state":

```
table(MH_in_tech$state,MH_in_tech$family_history)
```

```
##
##      No Yes
##  AL   3   5
##  AZ   4   3
##  CA  70  68
##  CO   7   2
##  CT   3   1
##  DC   2   2
##  FL  11   4
##  GA   6   6
##  IA   3   1
##  ID   0   1
##  IL  14  15
##  IN  15  12
##  KS   3   0
##  KY   4   1
##  LA   1   0
##  MA  15   5
##  MD   5   3
```

```
## ME 0 1
## MI 13 9
## MN 12 9
## MO 5 7
## MS 1 0
## NC 7 7
## NE 1 1
## NH 1 2
## NJ 4 2
## NM 2 0
## NV 3 0
## NY 35 22
## OH 21 9
## OK 4 2
## OR 15 14
## PA 13 16
## RI 1 0
## SC 4 1
## SD 2 1
## TN 18 27
## TX 31 13
## UT 7 4
## VA 9 5
## VT 2 1
## WA 35 35
## WI 5 7
## WV 1 0
## WY 1 1
```

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(family_history, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89)
```



NO=421 YES=330 More than **55%** of employees have answered no to having having a family history of mental health issues, while just under **44%** answered yes to mental health running in their family. With a number that high it seems that employers should try and include mental health resources in their employees benefits package. Although majority of this demographic said no to it running in the family, having the resources available to you may put employees at ease if they ever do need to use them.

A graph and table showing the relation between variables, “work_interfere” and “state”:

```
table(MH_in_tech$state, MH_in_tech$work_interfere)
```

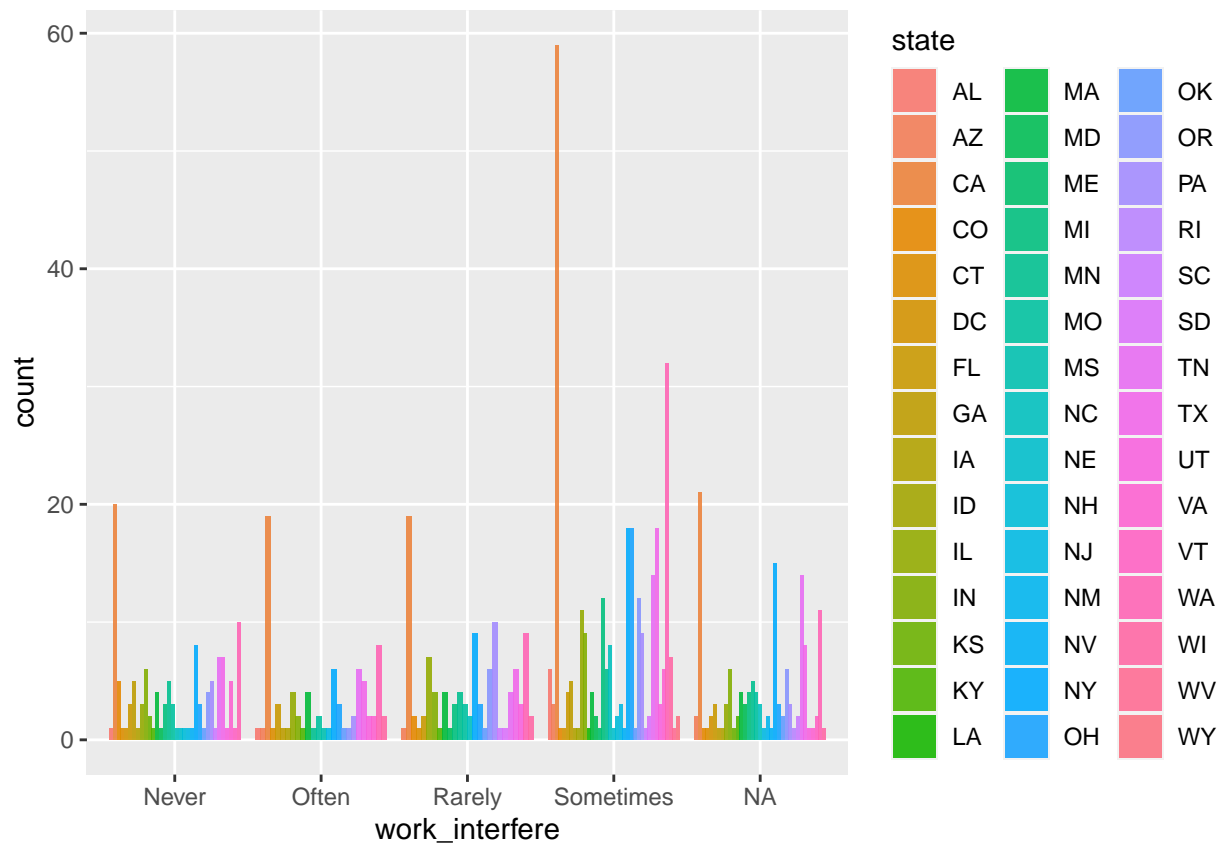
```
##
##      Never Often Rarely Sometimes
##  AL      1      1      0          6
##  AZ      0      1      1          3
##  CA     20     19     19         59
##  CO      5      0      2          1
##  CT      1      1      1          0
##  DC      1      0      0          1
##  FL      3      3      2          4
##  GA      5      1      0          5
##  IA      1      1      0          1
##  ID      0      0      0          1
##  IL      3      5      7         11
##  IN      6      2      4          9
##  KS      2      0      0          0
##  KY      1      1      1          0
##  LA      0      0      0          1
##  MA      4      4      4          4
```


##	MD	1	0	1	3
##	ME	0	0	0	1
##	MI	3	0	3	12
##	MN	5	1	4	6
##	MO	3	2	3	0
##	MS	0	1	0	0
##	NC	1	0	2	8
##	NE	1	0	0	1
##	NH	1	0	0	2
##	NJ	1	1	0	3
##	NM	0	0	0	0
##	NV	1	0	0	1
##	NY	8	6	9	18
##	OH	3	3	3	18
##	OK	1	1	1	1
##	OR	4	1	6	12
##	PA	5	2	10	9
##	RI	0	0	0	0
##	SC	1	0	1	1
##	SD	0	0	1	2
##	TN	7	6	4	14
##	TX	7	5	6	18
##	UT	1	2	3	4
##	VA	5	2	0	6
##	VT	1	0	0	0
##	WA	10	8	9	32
##	WI	0	2	2	7
##	WV	0	0	0	1
##	WY	0	0	0	2

```

MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(work_interfere, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89)

```



NEVER=125 **OFTEN=82** **RARELY=111** **SOMETIMES=289** **NA=144** Out of the 751 observations coming from the United States, 144 of them were N/A in this variable leaving almost **20%** of the data not counting directly to the responses. With combination of slightly over **31%**, 236 employees responded that their mental health condition **NEVER** or **RARELY** interferes with their work. Meanwhile almost **50%** of employees responded that their mental health conditions **SOMETIMES** or **OFTEN** interferes with their work. With that kind of margin, having a supervisor you can talk to about said issues may be able to alleviate some stress, and help in finding out what resources may be available to help cope.

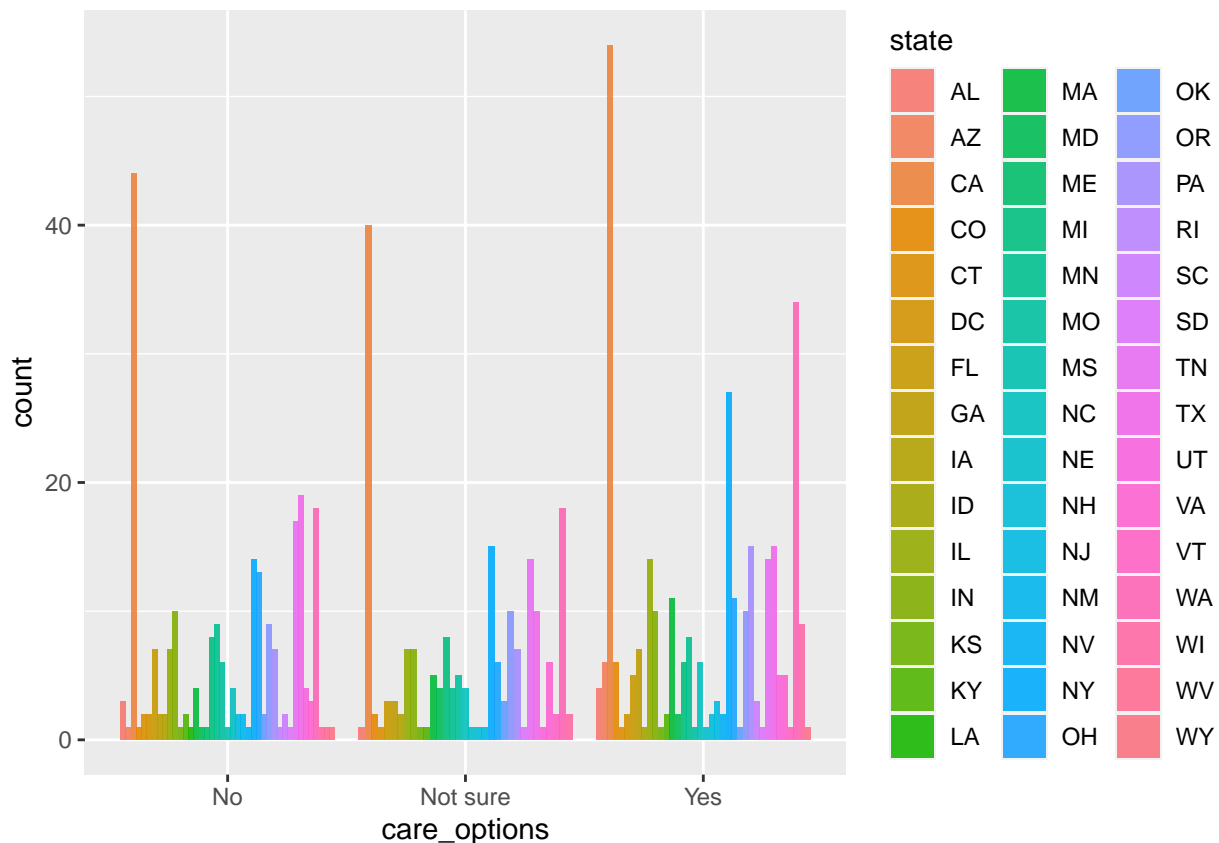
A graph and table showing the relation between variables, “care_options” and “state”:

```
table(MH_in_tech$state,MH_in_tech$care_options)
```

```
##
##      No Not sure Yes
##  AL    3         1  4
##  AZ    1         0  6
##  CA  44        40 54
##  CO    1         2  6
##  CT    2         1  1
##  DC    2         0  2
##  FL    7         3  5
##  GA    2         3  7
##  IA    2         2  0
##  ID    0         0  1
##  IL    7         7 15
##  IN   10         7 10
##  KS    1         1  1
##  KY    2         1  2
```

```
## LA 1 0 0
## MA 4 5 11
## MD 2 4 2
## ME 1 0 0
## MI 8 8 6
## MN 9 4 8
## MO 6 5 1
## MS 1 0 0
## NC 4 4 6
## NE 0 1 1
## NH 0 1 2
## NJ 2 1 3
## NM 2 0 0
## NV 1 0 2
## NY 14 15 28
## OH 13 6 11
## OK 2 3 1
## OR 9 10 10
## PA 7 7 15
## RI 1 0 0
## SC 2 0 3
## SD 1 1 1
## TN 17 14 14
## TX 19 10 15
## UT 5 1 5
## VA 3 6 5
## VT 0 2 1
## WA 18 18 34
## WI 1 2 9
## WV 1 0 0
## WY 1 0 1
```

```
MH_in_tech%>%
  filter(Country == "United States") %>%
  drop_na(state) %>%
  ggplot(aes(care_options, fill = state))+
  geom_bar(position= "dodge", alpha = 0.89)
```



NO=239 NOT SURE=201 YES=311

Over **40%** of employees responded **YES** to knowing what care options their employers provide when it comes to mental health. With that being said almost **59%** either don't know their care options for mental health or are unclear on what they are.

*Although it seems that we're make large strides for mental health in the workplace as a country, it looks like there are still some efforts to be made. A lot of employees seem to **NOT** know what's available to them in regards to mental health at work. One can make the assumption that they were not informed, or not informed well enough. Employers for new hires and even current employees could make more of an effort in letting their employees know what their benefits package include, for both medical care and mental health care.*

Allowing your employees to come to you when they are feeling mentally unwell, without fear of negative consequence leaves the door open for employees to feel safe and get the help they need to continue to do great work. Monthly or quarterly check ins on mental health with employees gives the impression that they are more than a number, and that you care about who they are as a person behind all the work they do for company.