Mental Health in Technology: Data Quality Report

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Overview

In recent years, mental health has become less stigmatized and a bigger concern in our society due to increasing numbers of individuals being diagnosed with mental illness. However, in many industries – particularly technology – discussing mental health in the workplace is taboo. Moreover, many employers both in the US and internationally do not provide healthcare coverage for mental health concerns.

Over the course of August 27th – 28th 2014, an international survey was conducted by the nonprofit Open Sourcing Mental Illness to determine workplace attitudes towards mental health and what benefits employers give out to aid with mental health treatment, particularly within technology. 1,259 respondents were asked 26 questions relating to their demographic information, their employer, mental health and what benefits were offered by their employer for mental health treatment. The results of the survey are summarized below.

Questions in Survey

The questions in the survey and their associated feature markers are as follows:

- 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?

- mental_health_consequence: Do you think that discussing a mental health issue with your employer would have negative consequences?
- physical_health_consequence: 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 supervisor(s)?
- mental_health_interview: Would you bring up a mental health issue with a potential employer in an interview?
- physical_health_interview: Would you bring up a physical health issue with a potential employer in an interview?
- mental_vs_physical: Do you feel that your employer takes mental health as seriously as physical health?
- obs_consequences: Have you heard of or observed negative consequences for coworkers with mental health conditions in your workplace?
- comments: Any additional notes or comments

Summary of Participant Demographical Information

- Age
    - Five Number Summary: -1726e+03, 2.700e+01, 3.600e+01, 1.000e+11
    - Minimum: -1726
   - Median: 31
    - Maximum: 1.000e+11
    - Mean: 79428148

Participants by Age
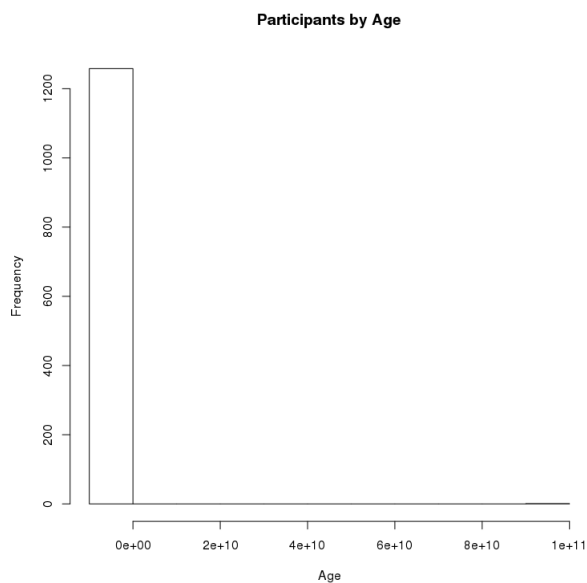
The following graph demonstrates the population breakdown with outliers (likely false information included).

Participants by Age
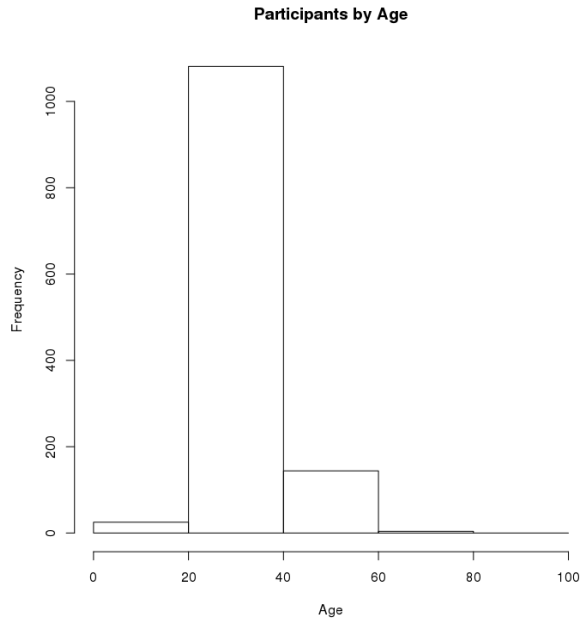
This graph demonstrates participants' ages in 20-year age brackets, excluding the outliers.

- Gender
  - Since gender was an open-answer question on this forum, there were a variety of responses to this question which refer to the same gender(s) (ex. F, female, and Female all refer to women).
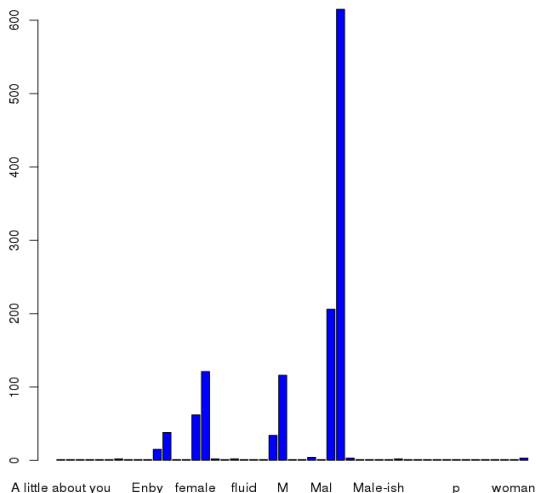
Based on the number of 'M' associated results, it seems that most participants were male (over 75%).

- Country

Country	Number of Participants
Australia	21
Austria	3
Bahamas, The	1

Belgium	6
Bosnia and Herzegovina	1
Brazil	6
Bulgaria	4
Canada	72
China	1
Colombia	2
Costa Rica	1
Croatia	2
Czech Republic	1
Denmark	2
Finland	3
France	13
Georgia	1
Germany	45
Greece	2
Hungary	1
India	10
Ireland	27
Israel	5
Italy	7
Japan	1
Latvia	1
Mexico	3
Moldova	1
Netherlands	27
New Zealand	8
Nigeria	1
Norway	1
Philippines	1
Poland	7
Portugal	2
Romania	1
Russia	3
Singapore	4
Slovenia	1
South Africa	6
Spain	1
Sweden	7
Switzerland	7
Thailand	1
United Kingdom	185
United States	751
Uruguay	1
Zimbabwe	1

- States
  - This data only includes the subsector of participants who live in the US, all others had this value missing.

State	Number of Participants
AL	8
AZ	7
CA	138
CO	9
CT	4
DC	4
FL	15
GA	12
IA	4
ID	1
IL	29
IN	27
KS	3
KY	5
LA	1
MA	20
MD	8
ME	1
MI	22
MN	21
MO	12
MS	1
NC	14
NE	2
NH	3
NJ	6
NM	2
NV	3
NY	57
OH	30
OK	6
OR	29
PA	29
RI	1
SC	5
SD	3
TN	45
TX	44
UT	11
VA	14

|	
VT	3
WA	70
WI	12
WV	1
WY	2
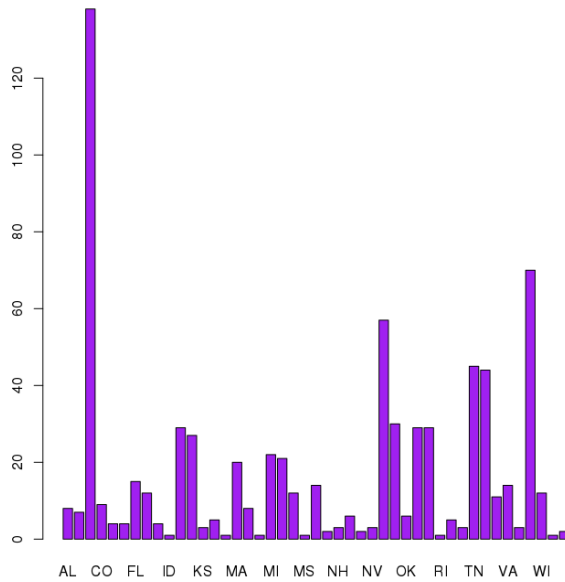
The tall bar near CO represents California and the bar representing about 75 respondents near WI signifies Washington. This suggests that most American respondents were from the West Coast.

Employment, Family History and Mental Health Treatment

- Place of Employment
  - Only 637 respondents worked in a primarily "tech company/organization" at the time of this survey, 622 did not.
- Number of Employees

| Number of Employees	Frequency
1-5	162
6-25	290
26-100	289
100-500	176
500-1000	60
More than 1000	282
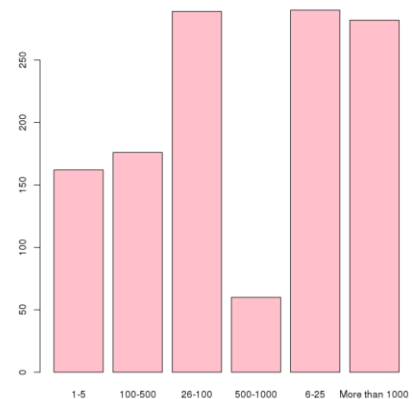
- Self-Employment
  - Of the respondents, 1095 are not self-employed and 146 are.
- Family History
  - Of the respondents, 767 have a family history of mental health issues and 492 do not.
- Treatment
  - Of the respondents, 622 were not receiving mental health treatment and 637 were.
- Remote Work
  - 883 respondents did not work remotely (at least 50% of the time), 376 did.
- Work Interference
  - This was a measure of how often respondents' mental health interfered with their work.

Mental Illness and Employee Knowledge of Benefits

- Benefits
  - Respondents were asked whether the company provides mental health benefits to employees.

Mental Health Benefits	Respondents
No	374
Don't know	408
Yes	477
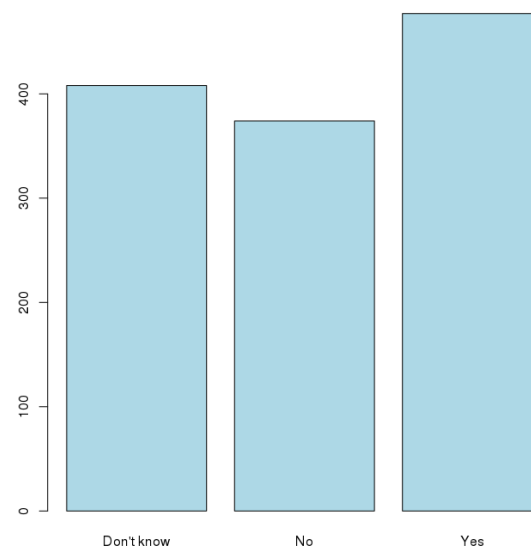
- Care Options
  - Participants were asked if they knew the options for mental health the employer provides.

| Care Options	Frequency
No	501
Not sure	314

Yes	444

- Wellness Program
  - o Participants specified if their company's wellness program had ever mentioned mental health.

Wellness Program	Frequency
No	842
Don't know	188
Yes	229

- Seek Help
  - o Employees were asked if their employer provides resources for them to seek help for mental health resources.

Response	Frequency
No	646
Don't know	363
Yes	250
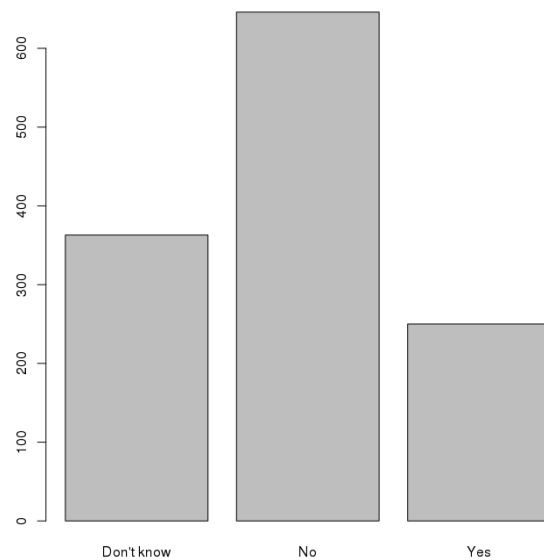
Workplace Attitudes Towards Mental and Physical Health

- Anonymity
  - o Participants were asked should they choose to engage in mental health services if it would be anonymous.

Category	Frequency
No	65
Don't know	819
Yes	375

- Coworkers
  - Participants were asked if they would be willing to discuss their mental health with their coworkers. This was one of the target features in the project.
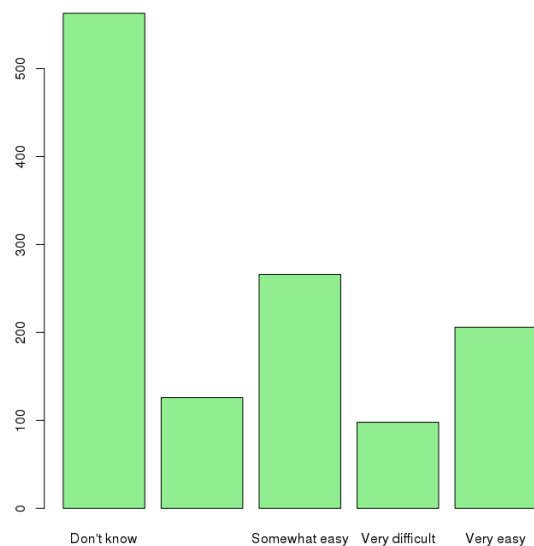
Category	Frequency
No	260
Some of them	774
Yes	225

- Supervisor
  - Participants were asked if they would be willing to discuss their mental health with their supervisor(s). This was one of the target features in the study.

Category	Frequency
No	393
Some of them	350
Yes	225

- Leave
  - Participants were asked how easy it is for them to take leave for mental health issues.

	Frequency
Very easy	206
Somewhat easy	266
Don't know	563
Somewhat difficult	126
Very difficult	98

- Mental Health Consequences
  - Respondents declared whether there would be ramifications for discussing their mental health.

| Category	Frequency

No	490
Maybe	477
Yes	292

- Physical Health Consequences
  - Respondents declared whether there would be ramifications for discussing their physical health at work.

Category	Frequency
No	925
Maybe	273
Yes	61

- Mental vs. Physical
  - Employees were asked if their employers took mental health as seriously as physical health.

Category	Frequency
No	340
Don't know	576
Yes	343
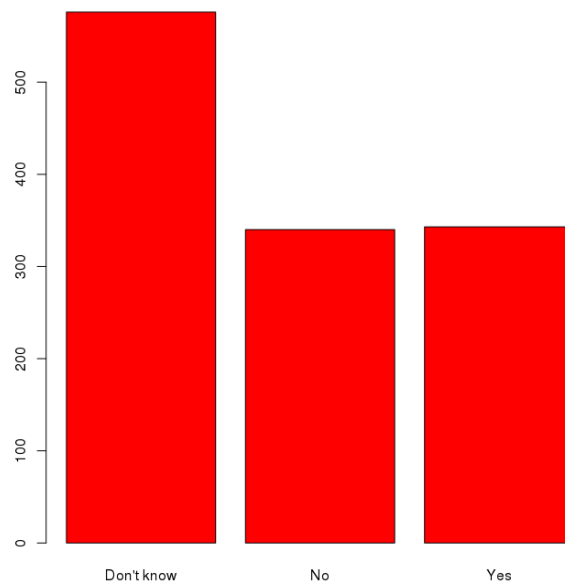
- Observed Consequences
  - Employees were asked if they had ever observed someone else having consequences for discussing their mental health.

True/ False	Frequency
True	184
False	1095

- Comments
    - Participants could add comments in the final field if they wished. However, many were left blank.

Participants' Opinions on Revealing Medical Conditions

- Mental Health Interview
    - Participants were asked if they would be willing to discuss a mental health condition in an interview.

Category	Frequency
No	1008
Maybe	207
Yes	44

- Physical Health Interview
    - Participants were asked if they'd be willing to discuss a physical health condition in an interview.

Category	Frequency
No	500
Maybe	557
Yes	202

Cleanup Procedure Summary

1. Timestamps, the country field, and comments were removed since only participants from the US were used and comment data was too varied to be of any use.
2. The gender fields were normalized to form the following 4 categories: Cis Female, Trans Female, Cis Male and Non-binary.
3. Certain responses were deleted or edited if the user put in an erroneous age.
4. After reviewing the initial models, other features were deleted in an effort to improve model accuracy.