

# Mental Health at Work

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# Background & Motivation

- In 2017, WHO estimated that 1 in 17 adults experience a serious mental illness each year<sup>1</sup>
  - More than 44 million adults are affected annually by mental illnesses, many of whom are also active within the workforce<sup>2</sup>
- Poor mental health and stress can negatively affect employee job performance, work engagement, communication with coworkers, physical capability, and other day-to-day functions<sup>3</sup>
- Only 57% of employees who report moderate depression and 40% of those who report severe depression receive treatment to control symptoms<sup>3</sup>
- Due to COVID, mental health is increasingly affecting work life
  - 55% of employees feel uncomfortable confiding in anyone at work<sup>4</sup>
  - Remote work can either be an alleviator or exacerbator of a mental illness

# Dataset Overview: Mental Health in Tech

This dataset originates from a 2014 survey that measures attitudes towards mental health and frequency of mental health disorders in the tech workplace. The original dataset is from Open Sourcing Mental Illness (OSMI).

Link: <https://www.kaggle.com/osmi/mental-health-in-tech-survey>

- **Timestamp**
- **Age**
- **Gender**
- **Country and state (if United States)**
- **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?

# Dataset Overview: Mental Health in Tech (Continued)

- **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 employer provide resources to learn more about mental health issues and how to seek help?
- **anonymity**: Is anonymity protected if employee takes advantage of mental health or substance abuse treatment?
- **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

# Relevant Research

- CDC Workplace Health Guide - Mental Health in the Workplace<sup>5</sup>
  - Tracks mental health solutions, awareness frameworks, and strategies
  - Encourages employers to monitor indicators and risk factors of mental health such as **stigma**, **lack of health care**, and **lack of social connections**
- Predictors of repeated sick leave in the workplace because of mental disorders (Sado et al.)<sup>6</sup>
  - Analyzed Return to Work (RTW) and repeated sick leave rates among 194 subjects employed at a manufacturing company
    - Exploratory Variables: RTW, sex, age at time of employment, job tenure, diagnosis, etc.
  - Methods: Univariate Analyses using log-rank test and multivariate analysis using Cox proportional hazard model
  - Results: Strongest predictors of repeated sick leave were found to be **age** and **previous sick-leave episodes**

# Hypothesis

- Target predictors: Would you be willing to discuss a mental health issue with your direct supervisor(s) {e.g., **supervisor** in the dataset}?
  - **Obs\_consequence**: Have you heard of or observed negative consequences for coworkers with mental health conditions in your workplace?
  - **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?
  - **Benefits**: Does your employer provide mental health benefits?
- **Null Hypothesis**: The 4 target predictors do not constitute the majority (50%) of feature importance when predicting whether employees are willing to discuss mental health issues with supervisors
- **Alternative Hypothesis**: The 4 target predictors constitute the majority (50%) of feature importance when predicting whether employees are willing to discuss mental health issues with supervisors

# Determined TechStack

- Google Colaboratory (Python) & Google Drive
- Github
- Visual Studio Code
  - LiveShare Extension (Potentially)