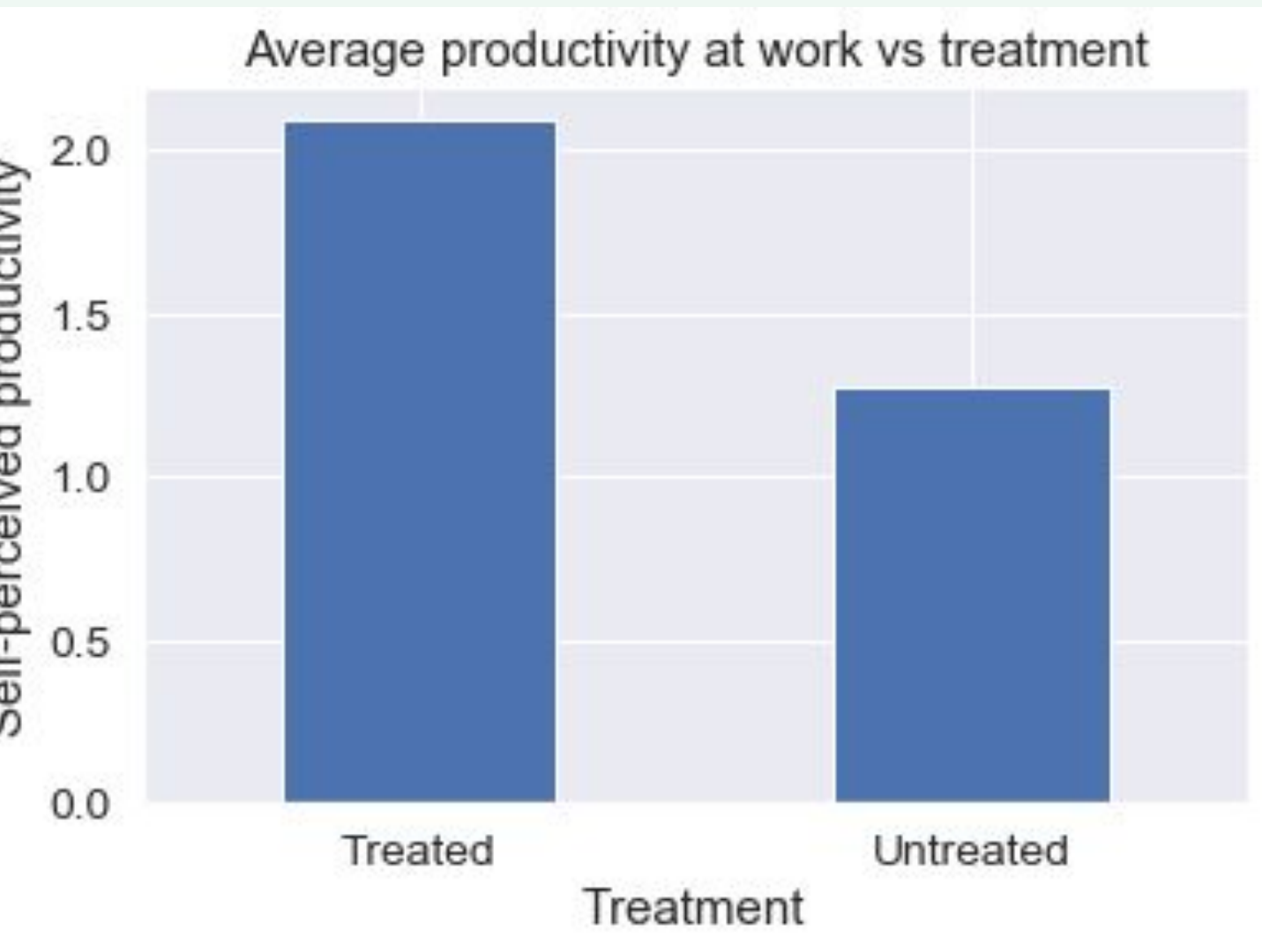


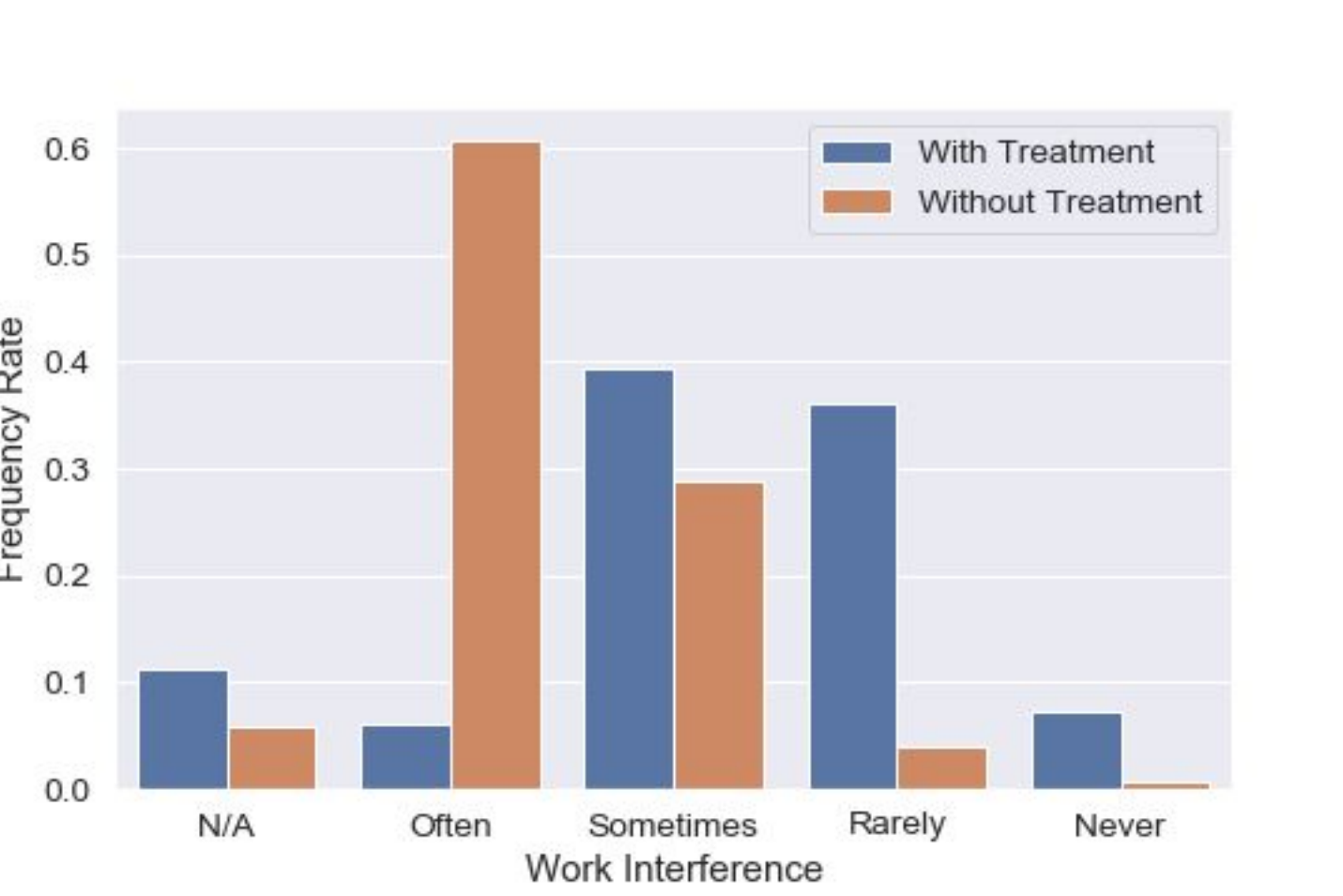
# What factors affect productivity and mental health in a tech workplace?

Ioana Anghel, Sherry Fan

Among employees with Mental Health Disorders (MHDs), those who sought treatment were more productive and experienced less interference with ability to complete work

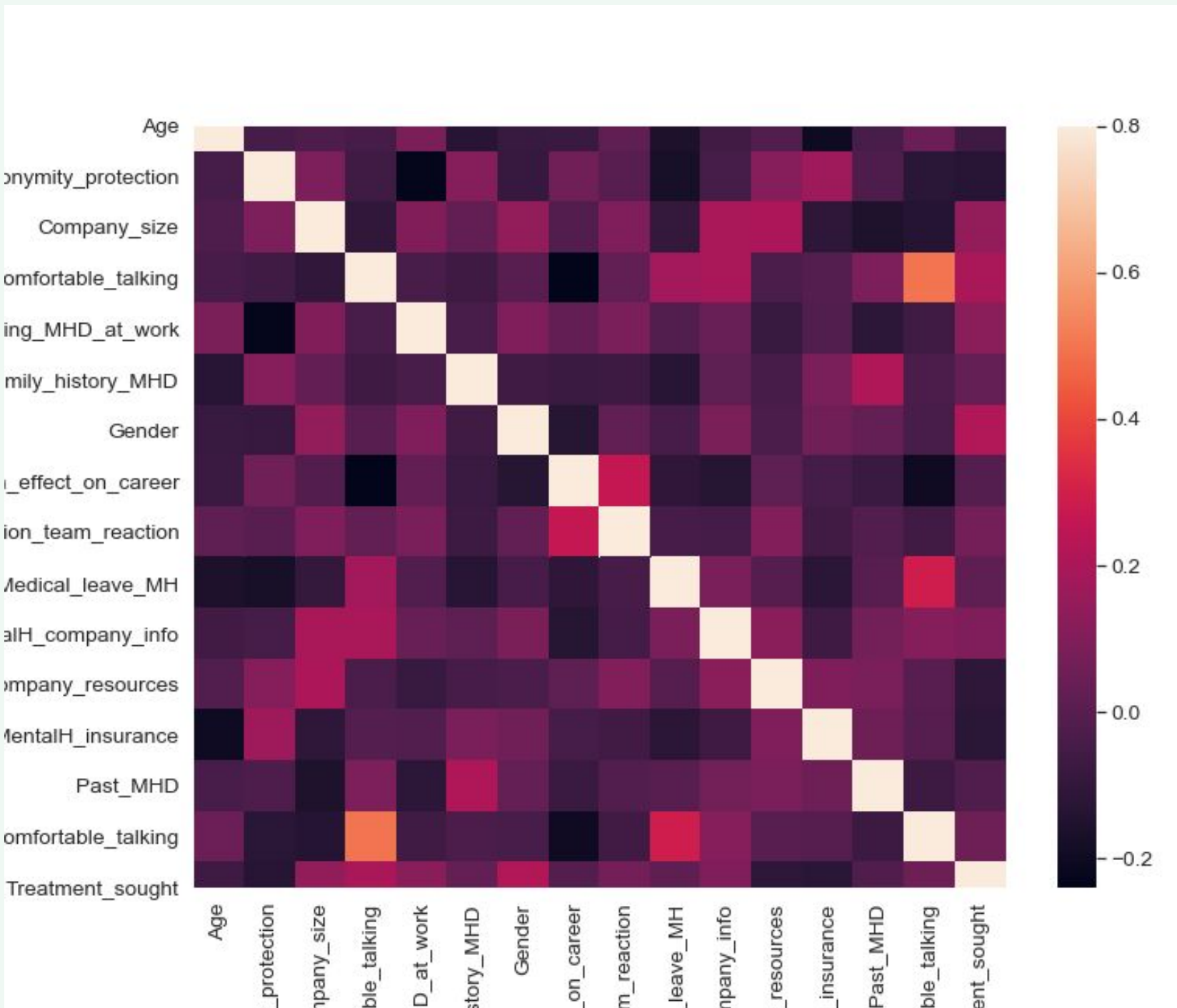


Receiving treatment for MHDs greatly improved workers’ self-rated productivity.



Those without treatment were more likely to say their MHD “sometimes” interfered with work; those who received treatment were more likely to say their MHD “rarely” or “never” interfered.

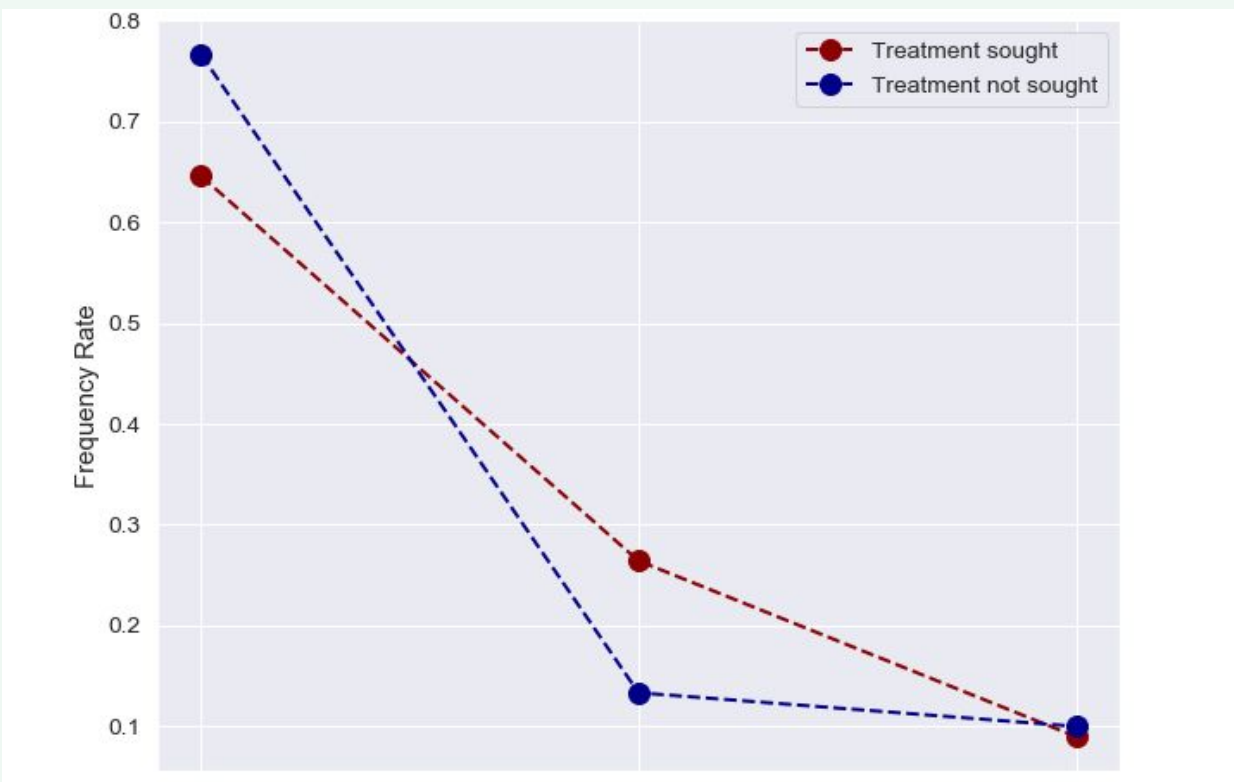
By providing insurance, resources, and paid leave and fostering a positive environment towards mental health, employers can improve the health and productivity of employees in the tech workplace.



Personal factors were important predictors of whether someone sought treatment. Company-related factors like coworkers’ attitudes, medical leave, and insurance were also important. Several predictors of whether someone sought treatment were co-correlated, such as medical leave and level of comfort disclosing MHDs to supervisors/coworkers.

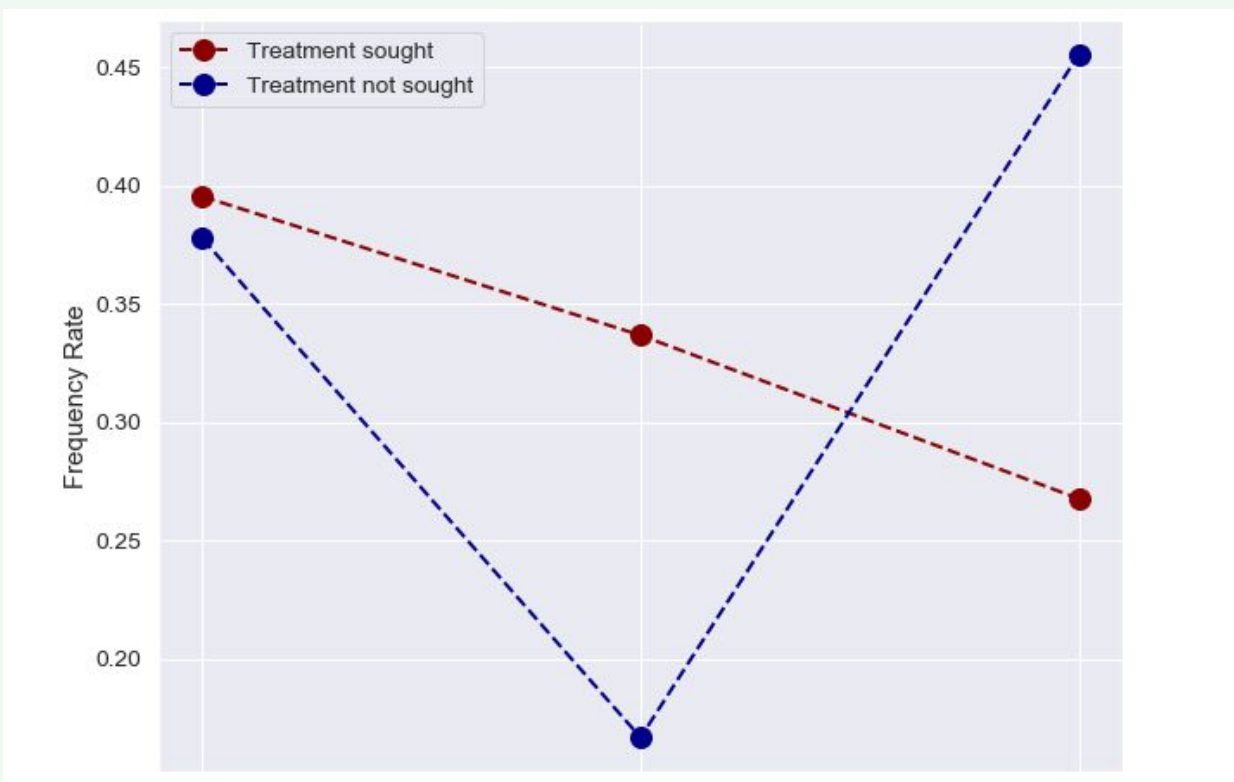
## The Big 4: Resources, Insurance, Environment, and Education

Important factors in whether workers seek treatment include company resources, insurance, and perceived work environment. Education of workers matters--those who were unsure about resources and benefits were equally unlikely to not seek treatment as those who had no access to resources or benefits.



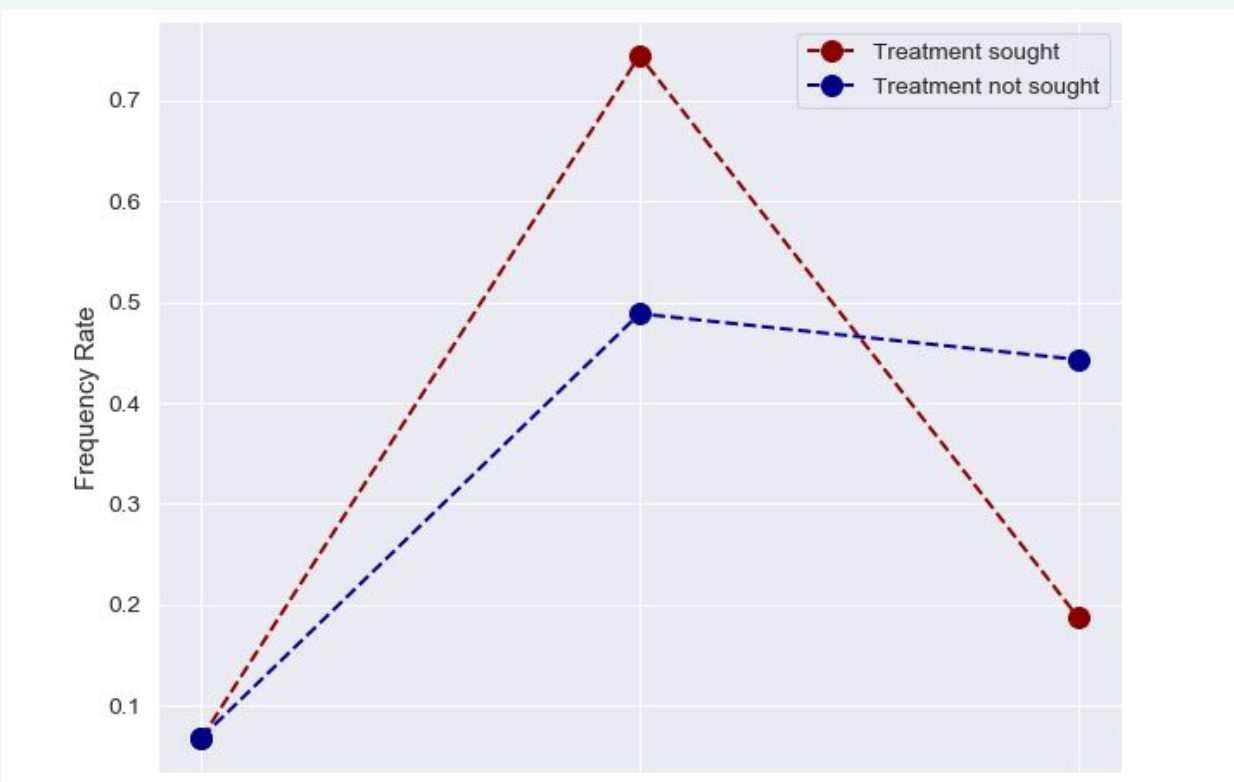
“I am a contractor so my lack of knowledge of workplace wellness stems directly from my lack of access to that material since I am not covered by it. I am aware that mental health services are available and am aware of a colleague who has taken a leave of absence to deal with mental health issues but am otherwise uninformed.”

- 2014 survey



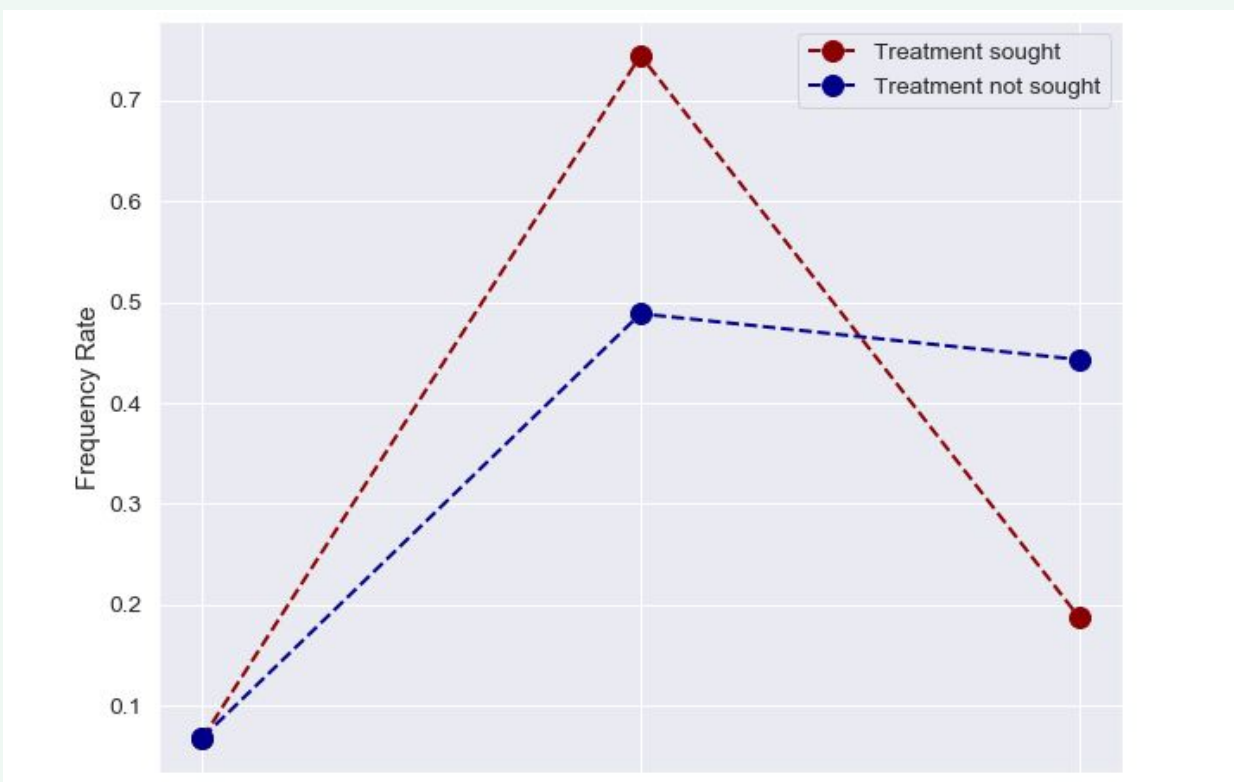
“I had to pay out of pocket, since my insurance didn’t cover therapy. I used up most of my flexible spending account with this but if I didn’t have that I would have been in trouble.”

- 2018 survey



“I informed my team I was seeking treatment and about the medications I was taking. They were all supportive and appreciated me telling them. I was able to continue therapy while succeeding at work because of our open communication.”

- 2017 survey

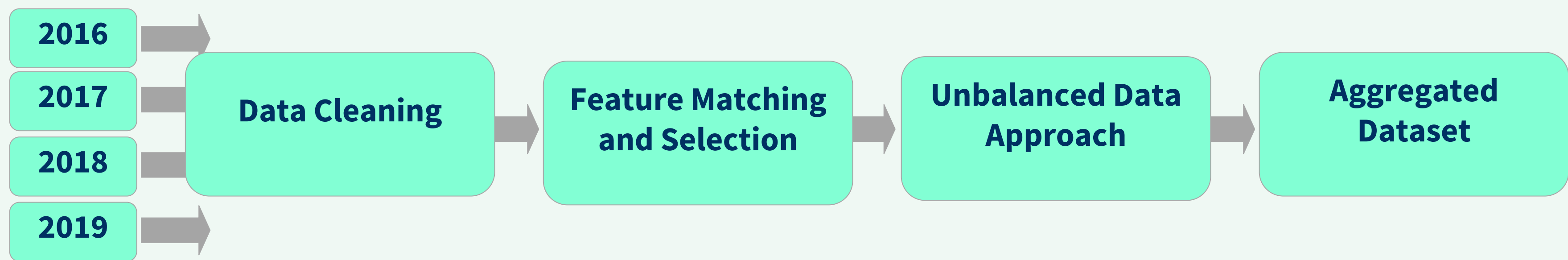


## Background

Two-thirds of tech workers feel stressed and over half (52%) have suffered either anxiety or depression at some point (BIMA). This severely impacts not only employees, but the tech industry as a whole. Employers have a duty to address the mental health issues within the workplace.

## Data

Four datasets from OSMI’s annual Mental Health in Tech survey were aggregated for this study.



## Highlights

- Employers who provide resources, insurance, and medical leave increase workers’ likelihood of seeking treatment for MHDs.
- A work environment conducive to communication about MHDs also encourages proper treatment.
- Workers who seek treatment for MHDs are more productive and experience less interference with work.

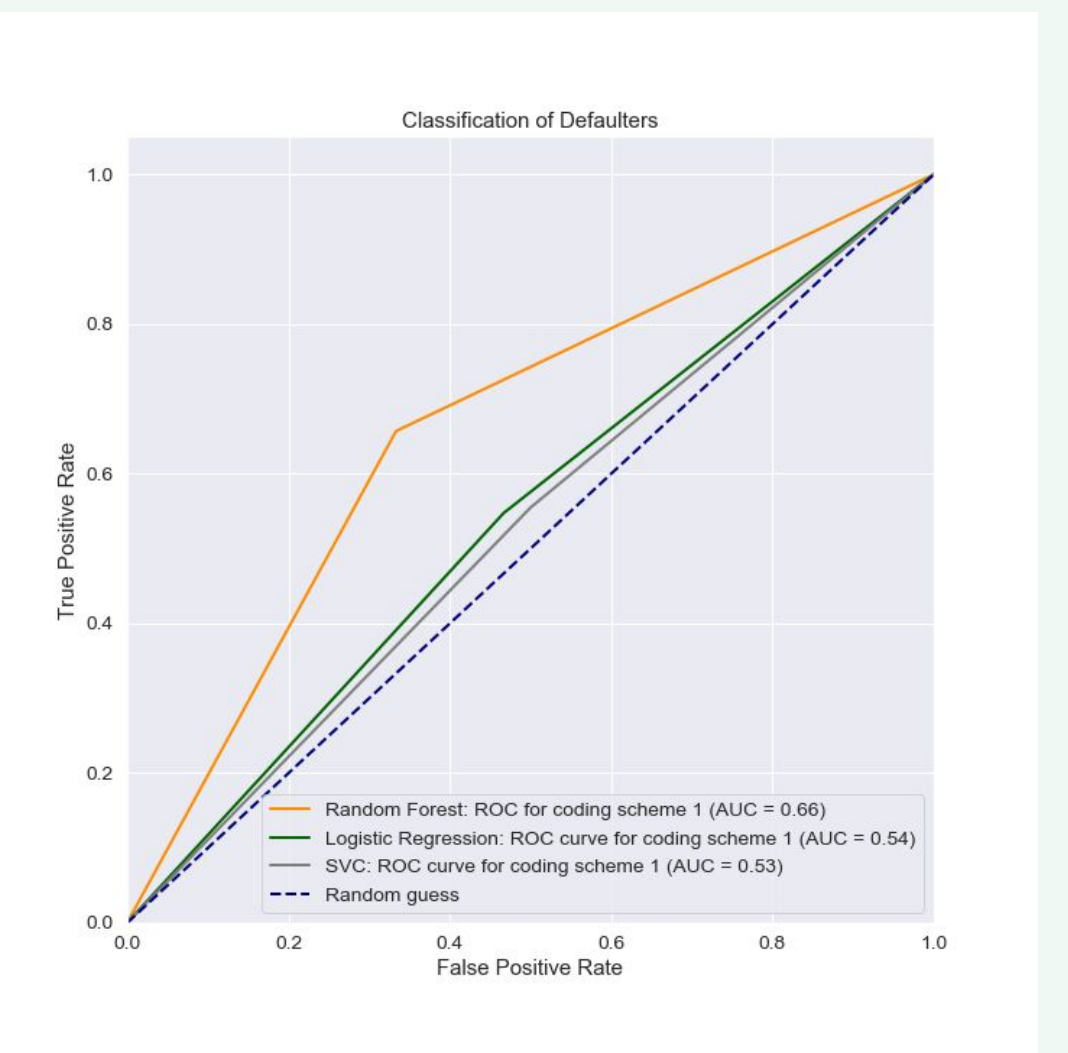
## Model

**Goal:** *predict the likelihood of a tech worker seeking mental health treatment and identify important predictors.*

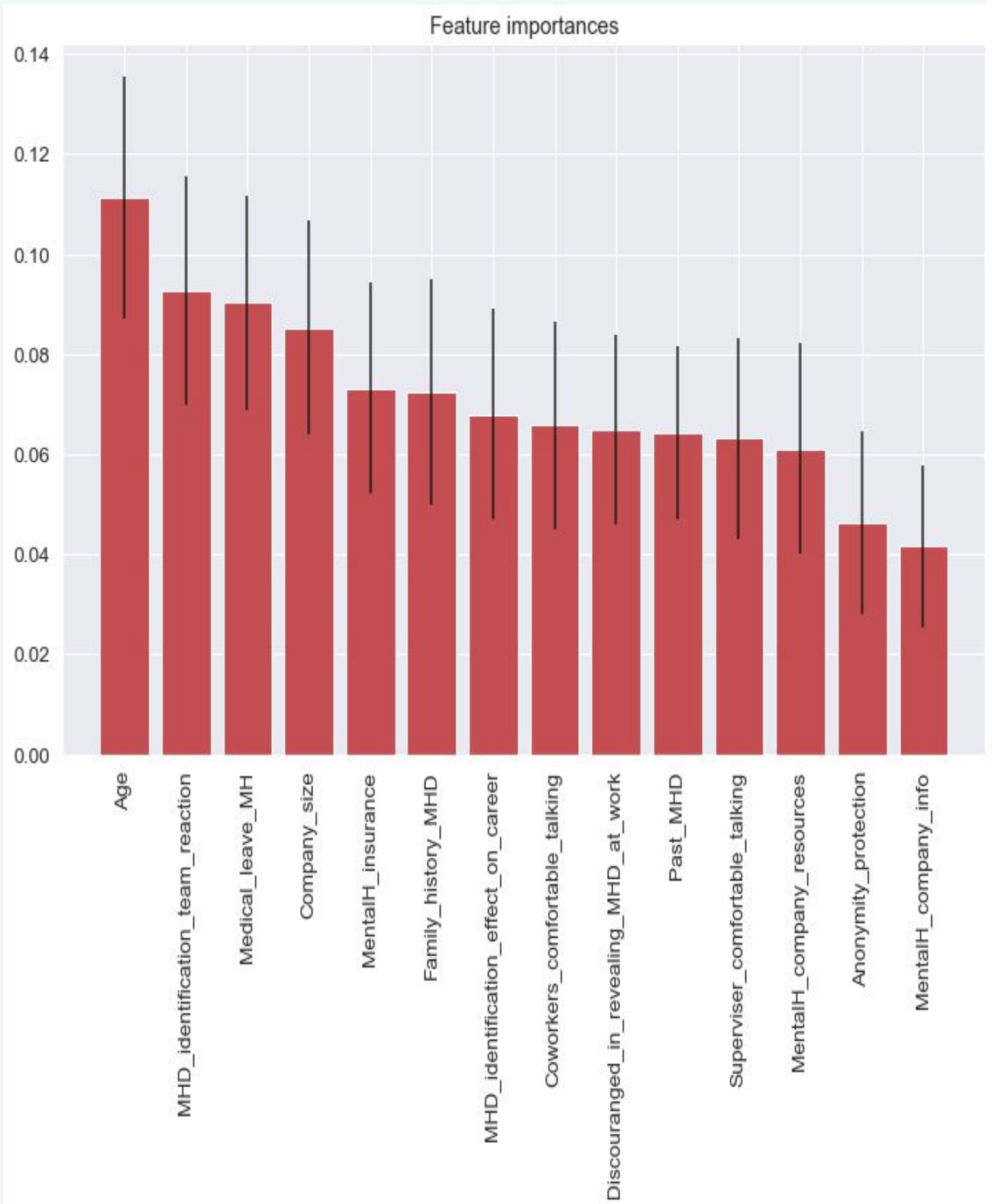
**Random Forest** was used to assess relative importance of the factors in the dataset. In addition, **Logistic Regression** and **SVM** models were also trained for comparison. This was combined with analysis on employees’ self-rating of productivity and interference of MHDs with work life.

## Results

- The Random Forest provides the best prediction on the data
- Age is the most preferred by the model, with people in the 30's being most likely to search for a MH treatment.



- The team reaction to the MHD and the medical leave are also important features for the model.
- The stability of the models was tested on 1000 experiments. All models have large variations, due to the lack of statistics and the weak discrimination power of the features.



- The model results could be improved with expanding the surveys to more tech companies, while adding more precision to the answers.

