# INFM 600 – Summary and Distribution of Effort

Note: This is also included at the end of the final project report.

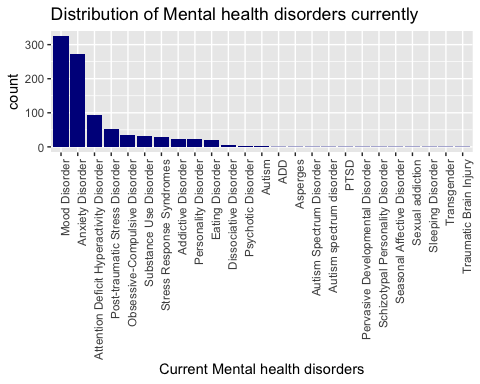
# Summary

According to the 2010 U.S. National Comorbidity Survey, about 18 percent of employed adults have had symptoms of a mental health disorder in the previous month (Harvard Medical School, 2010, para. 1). However, mental health stigma can inhibit people’s willingness to seek help (Harvard Medical School, 2010, para. 2). Research on employee resource programs in the workplace targeting mental health/substance abuse issues indicates that conducting outreach to workers on mental health as well as expanding benefits may result in more seeking help for mental health and/or substance abuse issues (Lindrooth, et al, 2005, pp. 1092, 1102; Lo Sasso, et al, 2006, pp. 366, 370; Deitz, et al, 2005, p. 313). Benefits could include improved employee mood/health, increased productivity, and lower absenteeism in the workplace (Harvard Medical School, 2010, para. 28-29; Lo Sasso, Rost, & Beck, 2006, p. 352).

Our target audience are Human Resources professionals who work for technology companies (or employ technology-focused workers) who are interested in learning more about mental illness in the workplace and are considering expanding wellness programs. For our analysis, we used the Open Sourcing Mental Illness dataset. The dataset is a 2016 voluntary survey done on mental health in the technology industry (Open Sourcing Mental Illness, LTD, 2016b). This dataset allows us to learn more about what mental health disorders are common, what other companies are doing, and how workers view mental health in the workplace. For our analysis we only included those who worked for a company (i.e., not self-employed). Out of 1,433 total entries, 1,146 were included. We cleaned the dataset by standardizing data, as well as correcting typos and formatting errors. During our analysis, we shortened some of the labels to make it easier to fit on visualizations and tables.

One plot we used in our analysis is the Distribution of Mental health disorders that respondents to the survey had. The visualization and the description of results can also be found in the “Distribution of Mental health disorders” subheading of Section 1.

p+xlab("Current Mental health disorders")+ggtitle("Distribution of Mental health disorders currently")



As indicated above, mood disorder and anxiety disorder are the most common in our analysis. Furthermore, it is clear that a significant number of people who responded to the survey have at least one mental health disorder. This analysis makes it clear that Human Resource professionals who are interested in expanding outreach need to review their policies regarding requesting leave and protection of employee anonymity when they are handling a mental health issue. Furthermore, the analysis shows that there is unease among many employees regarding the impact of disclosing a mental health disorder on their career. Therefore, it is likely necessary to provide training to employees and supervisors with the goal of reducing stigma around mental health.

# Who did what in the project

Monalisa - In the initial stage, I collaborated with the team to do prelimnary research in the area of mental health and create the work plan. I came up with about 9 research questions that we could analyze using the dataset. (We all did some brainstorming with all suggested questions and shortlisted 15 questions for the analysis). For the data cleaning phase, I examined and cleaned 10 variables. For the R Script, I collaborated with the team to understand what kind of tests we can run with the variables and what questions can be answered by doing so. I was assigned 5 questions that helped gain insights into the number of employers in the dataset who provided mental health benefits to the employees, if they formally discussed these policies and questions that answered employee perception of negative consequences of discussing mental health at previous and current workplace. I did statistical tests (Chi-squared and Crammer’s V) to conclude that a relationship exists between the two variables. As all my variables were categorical, I used barplots, ggplots and Chi-squared tests to perform visualizations and to test relationships respectively. For the presentation, I again collaborated with the team and created slides for my part of the analysis. Lastly, I cleaned my part of the code based on the feedback received.

Laura - For the work plan, I worked with the group to draft the sections on dataset used, audience, and research questions. I also reviewed a list of studies on mental health in the workplace and drafted summaries that can be used as a reference by the group. For the data cleaning documentation, I examined nine variables and noted if there were any issues. I worked with other group members to determine how to handle the variables. For the R Script, I did frequency tables related to my analyses and the variables I examined for data cleaning. For the R Plot Draft, I created visualizations and interpretations for my analyses (in section 3, the portions on anonymity policies, ease of taking leave, comfort discussing with coworkers and supervisors). For the presentation, I created a template for the presentation that included what was needed and placeholder slides for the analyses the group did. I also did slides related to my analysis (anonymity policies, ease of taking leave, comfort discussing with coworkers and supervisors) and used the findings to draft some recommendations.For the final package, I did the first draft of the summary as well as revised and cleaned up the analyses that I worked on.

Shruti - Collaborated with the team members to decide upon work plan and the tasks. For data cleaning, I examined nine variables for any issues. Worked on the age variable where I replaced the meaningless ages like 3, 110 with the average age. I exmained all the answers to the gender variable as they were subjective responses and divided them into Male, Female and others accordingly. For the descriptive analysis, I worked with the nine variables using summary and tables. For the visualization and plotting, I worked on the distribution of mental disorder. I analysed the responses to come up with a way to split it. For instance, the responses were of the format - Anxiety Disorder (Generalized, Social, Phobia, etc)|Mood Disorder (Depression, Bipolar Disorder, etc), I split them and separated them using R code to just the higher categories like anxiety Disorder, Mood Disorder to visualise it. For ease of visualisations using age, I created age groups (17-37, 37-57 etc). I visualised the distribution of mental illness across gender and age. I also did the visualisation and interpretations on negative consequences on discussing physical vs mental disorders. I documented my parts in the R markdown file. I worked on my parts for the presentation. For final package, I cleaned up the analaysis and visualizations that I worked on as well.

# Works Cited

Deitz, D., Cook, R., & Hersch, R. (2005). Workplace Health Promotion and Utilization of Health Services: Follow-up Data Findings. The Journal of Behavioral Health Services & Research, 32(3), 306-319. Retrieved October 21, 2018 from <https://doi-org.proxy-um.researchport.umd.edu/10.1007/BF02291830>

Harvard Medical School (2010). Mental health problems in the workplace [Newsletter]. Retrieved December 8, 2018, from <https://www.health.harvard.edu/newsletter_article/mental-health-problems-in-the-workplace>.

Lo Sasso, A. T., Lindrooth, R. C., Lurie, I. Z., & Lyons, J. S. (2006). Expanded Mental Health Benefits and Outpatient Depression Treatment Intensity. Medical Care, 44(4), 366-372. Retrieved October 21, 2018 from <https://doi-org.proxy-um.researchport.umd.edu/10.1097/01.mlr.0000204083.55544.f8>

Lindrooth, R. C., Lo Sasso, A. T., & Lurie, I. Z. (2005). The Effect of Expanded Mental Health Benefits on Treatment Initiation and Specialist Utilization. Health Services Research, 40(4), 1092-1107. Retrieved October 21, 2018 from <https://doi-org.proxy-um.researchport.umd.edu/10.1111/j.1475-6773.2005.00406.x>

Lo Sasso, A. T., Rost, K., & Beck, A. (2006). Modeling the Impact of Enhanced Depression Treatment on Workplace Functioning and Costs: A Cost-Benefit Approach. Medical Care, 44(4), 352-358. Retrieved October 21, 2018 from <https://doi-org.proxy-um.researchport.umd.edu/10.1097/01.mlr.0000204049.30620.1e>

Milne, S. H., Blum, T. C., & Roman, P. M. (1994). Factors Influencing Employees Propensity to Use an Employee Assistance Program. Personnel Psychology, 47(1), 123-145. Retrieved October 24, 2018 from <http://search.ebscohost.com.proxy-um.researchport.umd.edu/login.aspx?direct=true&db=bth&AN=9411113184&site=ehost-live>

Open Sourcing mental Illness, LTD (2016a). OSMI (Version 1) [Data file]. Retrieved September 7, 2018, from <https://osmihelp.org/research>

Open Sourcing Mental Illness, LTD (2016b). osmi-survey-2016\_1479139902 [Metadata File]. Retrieved September 19, 2018, from <https://osmihelp.org/research>.

Townsley, E.R. (2002). Some limitations of chi-square. Retrieved December 6, 2018 from <https://www.mtholyoke.edu/courses/etownsle/qr/Chi%20square%20limitations.htm>.