

Remote Work and Its Influence on Mental Health: A Statistical Exploration

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The dataset of mental health by remote work examines the impacts of telecommuting on mental health. The variables involve age, job type, level of stress, and work-life balance, which were selected from an open source named Kaggle (Kaggle, 2024). Analysis of this data offers information on how home-based work influences mental health disorders so that organisations can develop significant care strategies for their employees.

Descriptive statistics in Figure 6 explore the significant findings from the mental health data. On average, employees are nearly 41 years old, with a standard deviation of 11.3 years, indicating age variation in analysing stress levels for work pressure. A mean stress level of 1.0 shows that employees have moderate concerns about their mental health and sleep cycle. Having many hours worked every week at 39.6 means potential work-life balance challenges. Thus, the entire statistical analysis requires enhancement for better well-being across the regions for remote work

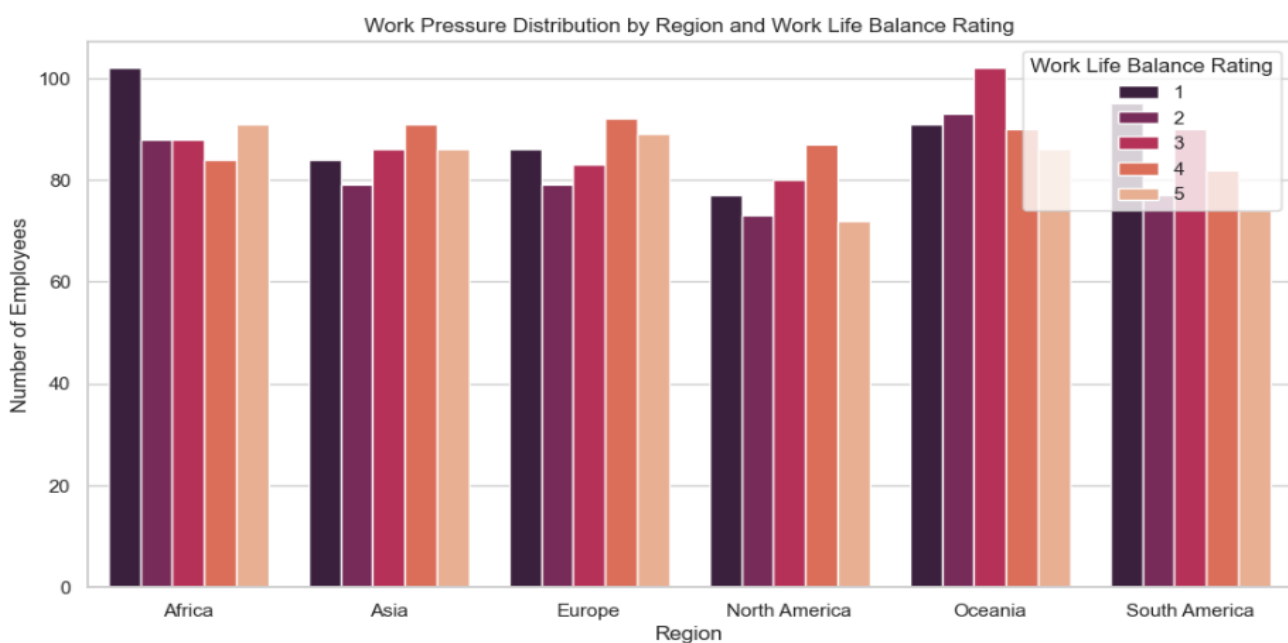


Figure 1: Bar plot of work pressure distribution over regions

The bar plot in Figure 1 effectively communicates work pressure across different regions and the work-life balance ratings to easily compare experiences. For instance, it shows that a rating of 1 is the highest for Africa and South America, indicating a hectic work pressure distribution, which might happen due to a lack of education regarding employee well-being. In contrast, Asia, Europe, and North America reflect a rating of 4, suggesting a strong balance in work pressure and life, which might happen since organisations in these regions are well aware of the importance of the mental well-being of employees and how this impacts the performance of employees. Thus, the plot explores

disparities between regions in the perceptions of work-life balance.

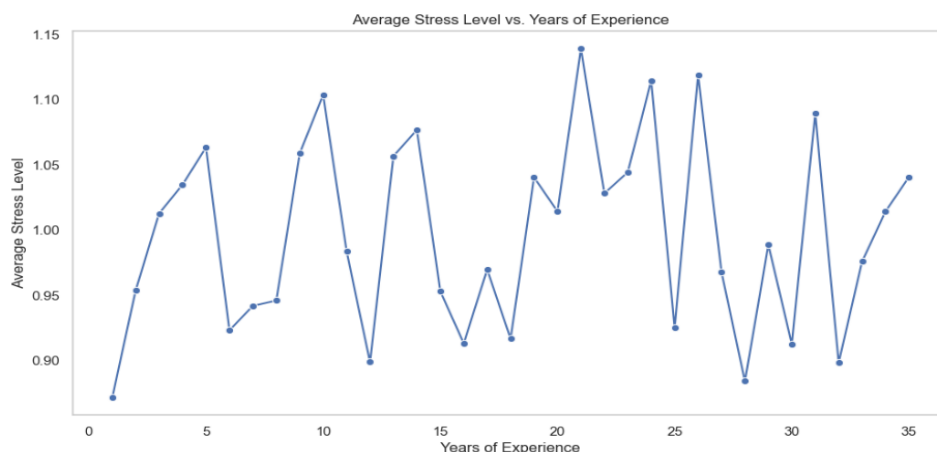


Figure 2: Line plot for average stress level by years of experience

The line plot in **Figure 2** portrays average stress levels against years of experience, making the trends very visible. Most importantly, the highest levels of stress are found to be in the 20 to 25-year

experience range, thus underlining the problems that mid-career professionals face, which is crucial for understanding mental health dynamics.

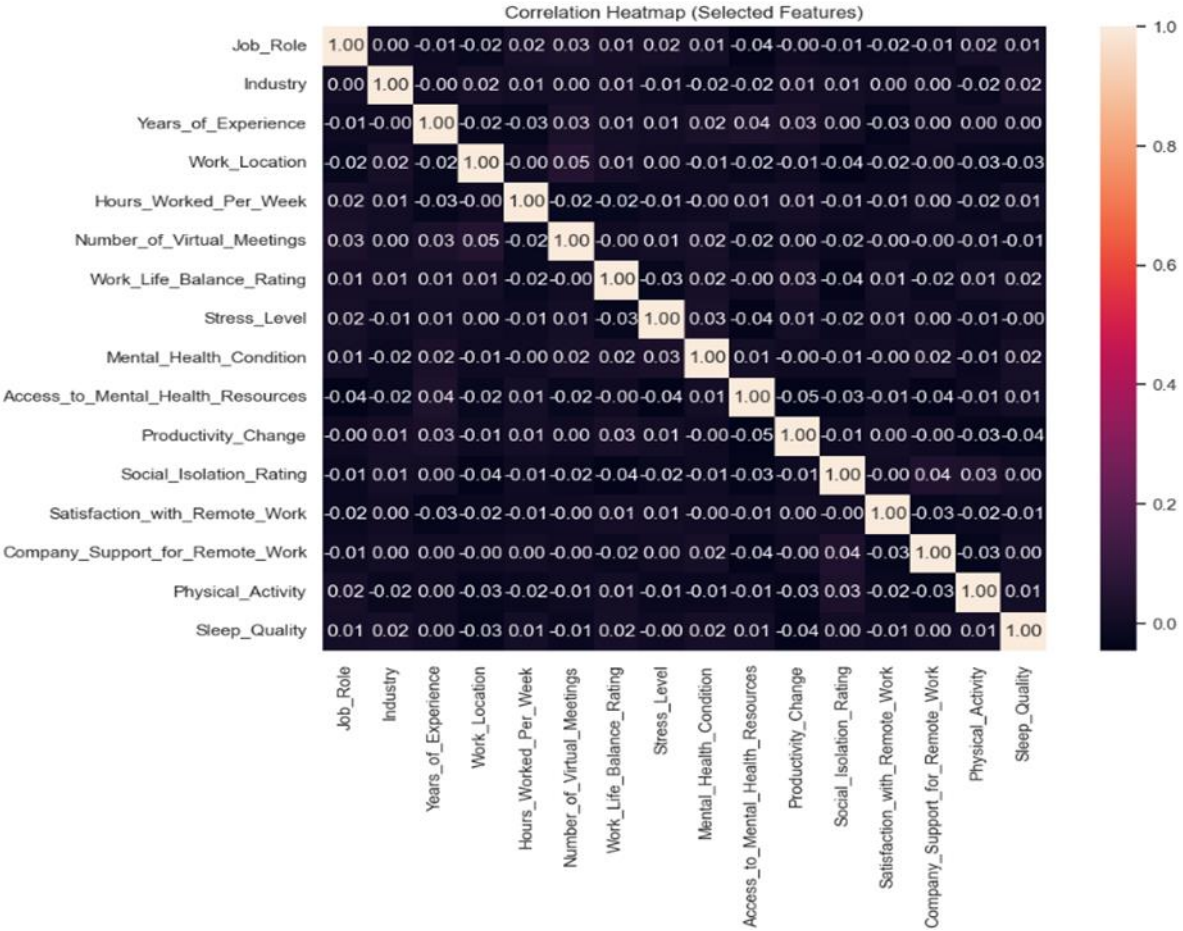


Figure 3: Correlation Heatmap

Figure 3 shows relationships among different factors that impact mental health in remote work with an effective way to visualise the correlation matrix. This allows for identifying significant associations by annotating the correlation coefficients, thus helping understand how stress levels and work-life balance interact (-0.03), essential for targeted interventions and strategies. From the correlation heatmap, it can be seen that factors like stress and work location have a negative impact on ratings related to work-life balance, showing that employees facing stress coming from far-off locations tend to provide negative ratings regarding their work-life balance, which can be improved by delivering employee benefit strategies like hybrid facility like work - from home in some days and work from office in some other days which can help in reducing stress.