

# Impact of Remote Work Dynamics on Mental Health and Productivity

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## Abstract

Remote working has grown significantly over the past few decades, driven by advancements in information and communication technologies (ICTs) and the widespread availability of high-speed internet. This study investigates remote work dynamics by analyzing its impacts on mental health, productivity, and the relationships between gender, industry, region, and remote work satisfaction using a dataset of 5000 individuals. Statistical analyses, including chi-square tests, ANOVA test, binomial test, and logistic regression, reveal significant findings. Logistic regression identifies workplace location as a significant predictor of remote work satisfaction. Industry, years of experience and regional disparities in openness to remote work and work-life balance were statistically insignificant. The manufacturing sector of the industry showed the highest remote work adoption (37.8%), and regions like Asia and Europe reported slightly better work-life integration (41.3% and 41.1%, respectively). Notably, approximately 75% of employees across all demographics reported mental health challenges, highlighting the universal impact of remote work on well-being. These findings emphasize the need for tailored, evidence-based strategies to optimize remote and hybrid work environments, ensuring sustainable productivity and equitable employee support.

## Keywords

Remote Work, Mental Health, Productivity, Depression, Work Life Balance and Satisfaction

## 1. Introduction

With the development of information and communication technologies (ICTs), especially thanks to the increased availability of high-speed internet, there has been a sharp rise in the uptake of remote work as a new work mode over the last few decades (Wang et al., 2021). However, remote work was still relatively unpopular in many parts of the world until it gained prominence in recent years, particularly in light of the COVID-19 pandemic, which necessitated a rapid shift to remote work across various sectors (Aleem et al., 2023). Toscana and Zappalà pointed out that the shift to working remotely during the COVID-19 pandemic has emphasized issues such as social isolation and stress, which can decrease perceived productivity and job satisfaction (Toscano & Zappalà, 2020), with increased mental health issues (Ezichi et al., 2025). In addition, the impact of remote work on work-life balance is nuanced. Flexible working arrangements improve work-life balance for some employees (Khan & Lopez, 2023). Others experience challenges that can lead to burnout and decreased job satisfaction (Rañeses et al., 2022). For instance, workers' perceptions of remote work significantly influence their productivity, which implies that positive attitudes can mitigate some of the negative effects of remote work (Howe & Menges, 2022). Waizenegger and colleagues emphasized that COVID-19 pandemic induced remote work differs significantly from pre-pandemic crisis remote work scenarios, as governments legally compelled employees to work remotely without any choice (Waizenegger et al., 2020). Another essential aspect entailed in the understanding of remote work dynamics is the role of job demands and resources. High job demands can fuel increased stress and reduced organizational commitment among remote workers, particularly in high-stress industries such as fast-moving consumer goods (Johannes et al., 2023). This finding is in line with Jamal et al., who argue that psychological contracts between an employer and employees change in remote working situations, leads to high emotional exhaustion (Jamal et al., 2021). On the other hand, the positive influence of self-regulation and perceived organizational support on the effectiveness of remote work, can enhance employee resilience and productivity (Qi et al., 2023).

Studies consistently show that women have a higher risk of developing mental health problems, especially in remote work environments where social isolation can amplify feelings of anxiety and depression (Czymara et al., 2021; Mahomed et al., 2023). Men also face stress, albeit in different ways, often as a result of societal pressures related to work performance and productivity (Brough et al., 2020; Saad Alfarran, 2021; Wattenberg et al., 2023). The ease of adoption of remote work in certain sectors, such as technology and finance, was due to their dependence on digital technologies and the nature of their operations. Sectors like healthcare and construction face challenges in the adoption of remote work because of the tactile nature of their services (Orzeł & Wolniak, 2022; Rodríguez-Modroño & López-Igual, 2021; Waizenegger et al., 2020). In most cases, hybrid working models provide the best compromise, allowing flexibility while maintaining some face-to-

face interaction (Khan & Lopez, 2023; Palumbo, 2020). However, the effectiveness of such arrangements varies considerably by region, as cultural norms and economic conditions shape employees' experiences and perceptions of work-life balance (Mahomed et al., 2023; Van Zoonen et al., 2021). Differences across different sectors are therefore essential to understanding the dynamics behind remote work. The relationship between remote work and productivity is complex and multifactorial, including individual circumstances and organizational support. Evidence suggests that while some employees may show increased productivity due to fewer distractions and a more appropriate environment for work, others may experience decreased motivation and involvement (Nakrošienė et al., 2019; Sandoval-Reyes et al., 2021). The success of telecommuting often depends on the availability of adequate resources and support from employers, including clear communication and technological tool access (Tavares, 2017; Tronco Hernández et al., 2021). Research has shown that productivity while working remotely depends on employees' emotions. However, completely remote jobs have been associated with a 10% decline in productivity compared to fully in-person work (The Evolution of Working from Home | Stanford Institute for Economic Policy Research (SIEPR), n.d.). In addition, the impact of remote work on productivity might be gender related. For example, some studies have hypothesized that women may face a loss of productivity compared with men due to increased household responsibilities when working from home (De Laat, 2023; Simionato & Simpson, 2018). Other factors that have a bearing on productivity while working remotely include increased working hours during the remote work period, which normally entailed starting earlier and finishing late but with less productivity; an increase in meeting frequency, which reduced focus time; communication and coordination challenges as employees narrowed their networks; and the presence of children at home, which further exacerbated productivity declines, especially for those with children (Gibbs et al., 2023).

To this end, we aim to better understand which gender is more open to remote work. The research questions border on identifying multiple factors associated with remote work satisfaction, the gender more susceptible to mental health conditions, the condition of work more associated with work-life balance, and the industries more associated with remote work.

## 2. Methodology

### 2.1. Data Source and Description

The data for this study was obtained from Kaggle (*Remote Work & Mental Health*, n.d.). It is a comprehensive dataset containing responses from 5000 employees across various industries and regions. Data collection involved designing a structured questionnaire that included both quantitative and qualitative questions. The survey was distributed digitally, allowing respondents to share their experiences regarding remote work's impact on their mental well-being. Responses were anonymized to support privacy, ensuring participants felt comfortable providing

honest feedback. This methodology enables a thorough analysis of the mental health challenges and benefits associated with remote work environments. The dataset was designed to explore the impact of remote work on mental health, productivity, and employee well-being during and after the COVID-19 pandemic. To ensure confidentiality, employee identifiers were anonymized.

The dataset includes key demographic variables such as age, gender, region, job role, and years of experience, alongside detailed work-related metrics like work location (hybrid, remote, onsite), hours worked per week, and the number of virtual meetings attended. Employee well-being was assessed through variables such as life-work balance ratings (1 - 5), stress levels (low, medium, high), mental health conditions, access to mental health resources, and social isolation ratings (1 - 5). Additionally, the dataset captures employee feedback on sleep quality (poor, average, good), physical activity levels (none, daily, weekly), and satisfaction with remote work (unsatisfied, neutral, satisfied).

To evaluate organizational influence, the dataset includes variables such as company support for remote work (1 - 5) and changes in productivity (decrease, no change, increase). The regional diversity of respondents, spanning Europe, Asia, North America, South America, Africa, and Oceania, provides valuable insights into how cultural and infrastructural factors shape remote work experiences. The dataset's robust structure and wide-ranging variables make it a reliable source for analyzing the multifaceted impacts of remote work on employee health and productivity.

## 2.2. Ethical Considerations

Ethical considerations were carefully addressed when utilizing this dataset. As it is publicly available on Kaggle, all employee identifiers were anonymized to ensure privacy and confidentiality. The data was used solely for academic and research purposes, adhering to ethical guidelines, and avoiding any intent to harm or misrepresent participants.

## 2.3. Statistical Analysis

The data was processed and analyzed using statistical software such as R programming Language and SPSS software which are well-equipped to handle large datasets and conduct a variety of statistical tests. Descriptive statistics to understand the distribution of the variables and appropriate statistical test (e.g., chi-square for categorical associations, ANOVA for comparisons, logistic regression for odd ratios and binomial test to evaluate whether the proportion of observations in one of two categories differs from a specified value) were carried out at 5% level of significance.

### Binary Logistic Regression Model:

$$Y_i = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k)}} \quad (1)$$

#### a) Logit Function

The logistic regression model predicts the log-odds (logit) of the outcome, rather than the outcome itself. The model equation is:

$$\text{Logit}(p) = \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k \quad (2)$$

- $p$  = Probability of  $Y = 1$  (Satisfied);
  - $\ln$  = Natural logarithm;
  - $\frac{p}{1-p}$  = Odds of the event occurring;
  - $\beta_0$  = Intercept, representing the log-odds when all predictors are 0;
  - $\beta_1, \beta_2, \dots, \beta_k$  = Coefficients for the predictor variables, representing the change in log-odds for a one-unit increase in the predictor, holding other variables constant.
- where  $e$  is the base of the natural logarithm (~2.718). This maps the log-odds into a probability between 0 and 1.

**b) Odds and Odds Ratio**

- Odds: Ratio of the probability of the event occurring to the probability of it not occurring.
- Odds Ratio: The exponential of the coefficient  $\text{Exp}(\beta)$  represents the multiplicative change in odds for a one-unit increase in the predictor variable.

**c) Logistic Function**

To interpret the result in terms of probabilities, the logit function is transformed using the logistic function:

$$p = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k)}} \quad (3)$$

**d) Variables**

The dependent variable is Satisfaction with remote work. It is binary, meaning it takes on only two possible values, typically coded as  $Y = 1$  (Satisfied) and  $Y = 0$  (Unsatisfied).

Independent Variables (Predictors) are categorical and continuous as follows:

**Categorical Covariates:** Gender, Industry, Region, and Work Locations (encoded as dummy variables).

**Continuous Covariates:** Age, Years of Experience, Number of Virtual Meetings and Hours Worked Weekly.

**Reference category and other levels.**

Variable	Levels
<b>Gender</b>	Reference Category (Male)
Level 1	Female
Level 2	Non-Binary
Level 3	Prefer Not to Say
<b>Region</b>	Reference Category (Africa)
Level 1	Asia

**Continued**

Level 2	Europe
Level 3	North America
Level 4	South America
Level 5	Oceania
<b>Industry</b>	<b>Reference Category (IT)</b>
Level 1	Consulting
Level 2	Retail
Level 3	Finance
Level 4	Healthcare
Level 5	Manufacturing
Level 6	Education
<b>Work Location</b>	<b>Reference Category (Onsite)</b>
Level 1	Remote
Level 2	Hybrid

**3. Result**

**Association of gender to remote work**

The distribution of satisfaction with remote work is presented in **Table 1** below. Of the 5000 individuals, 33.5% reported to be satisfied with remote work. Similarly, 33.45% reported being unsatisfied with remote work while 32.96% remained neutral. The distribution of individuals satisfied with Remote Work by Gender is reported in **Table 2**. Out of the total number that showed their satisfaction with remote work, 26.57% of them were females, 25.01% were males and 23.94% are non-binary. Since both variables are categorical, we utilized the Chi-Square test for association between Gender and Satisfaction with Remote Work. Our Chi-square results  $p$ -value (0.2298) > 0.05. Hence, we conclude the gender of the individual is not associated with satisfaction with remote work.

**Table 1.** Distribution of satisfaction with remote work.

State	Neutral	Satisfied	Unsatisfied
Proportion	0.3296	0.3350	0.3354

**Table 2.** Distribution of individuals satisfied with remote work by Gender.

Gender	Female	Male	Non-Binary	Prefer Not to Say	X <sup>2</sup>	$p$ -value
Proportion	0.2657	0.2501	0.2394	0.2448	8.1143	0.2298

**Effect of work hours on mental health**

Since there are multiple mental health categories, we perform an ANOVA to assess whether or not belonging to any of these categories is independent of number of work hours. This is essentially an ANOVA to investigate the equality of

mean work hours rates across the different severity of mental health conditions as shown in **Table 3**. Since the  $p$ -value (0.488) is not less than 0.05, the test is insignificant. Hence, we conclude that the number of work hours by the employees has no effect on their mental health condition.

**Table 3.** ANOVA for equality of mean work hours across the different severity of mental health condition.

S.V.	D. f.	Sum Sq.	Mean Sq.	F-value	$p$ -value
Mental Health Condition	3	342	114.1	0.811	0.488
Residuals	4996	702,838	140.7		

### Satisfaction with remote work and factors associated with remote work satisfaction.

**Table 4** presents the survey results conducted among 5000 employees to gauge their level of satisfaction with remote work. This indicates that 33.5% of the workforce finds satisfaction in remote work. A binomial test indicated that this observed proportion of 0.335 is significantly different from the tested proportion of 0.50 (50%), and thus employees are less satisfied with remote work than expected.

**Table 4.** Satisfaction with remote work.

Category	Observed	% (Observed)
Satisfied	1675	33.5
Unsatisfied	3325	66.5
Total	5000	100

### Binomial Test:

For our case, we choose a specified value of 0.5 which is the usual benchmark that signifies 50% of the respondents. With the hypothesis,

$H_0: p_0 = 0.5$  (Proportion of Satisfied respondents = 50%)

$H_1: p_0 \neq 0.5$  (Proportion of Satisfied respondents  $\neq$  50%)

Applying the binomial test to **Table 5**, we seek to compute the likelihood of observing a value as extreme as  $k = 1675$  under the null hypothesis of  $p_0 = 0.5$ .

Test Statistic: The binomial test directly computes the  $p$ -value by summing the probabilities of outcomes as extreme as  $k = 1675$  under the null hypothesis.

### Results:

- $k = 1675$ ,  $n = 5000$ ,  $p_0 = 0.5$
- Exact  $p$ -value  $\approx 0$  (very small).
- With a large sample size ( $n = 5000$ ), even a small difference between  $p_{\text{obs}}$  (0.335) and  $p_0$  (0.5) will yield a highly significant result.
- Since the  $p$ -value is less than 0.05 (5% significance level), we reject the null hypothesis. This indicates that the observed proportion ( $p = 0.335$ ) is significantly

different from  $p = 0.5$ .

**Interpretation of Table 5:**

- 1)  $\text{Exp}(\beta)$  (Odds Ratio): Represents the multiplicative change in the odds of the dependent variable for a one-unit increase in the predictor.
  - If  $\text{Exp}(\beta) > 1$ , the odds of the dependent variable occurring increase as the predictor increases.
  - If  $\text{Exp}(\beta) < 1$ , the odds decrease.
- 2) 95% C.I. for  $\text{Exp}(\beta)$ : Provides the confidence interval for the odds ratio. If the interval includes 1, the effect may not be significant.

The results of the binary logistic regression shown in **Table 5** below further explain the association between different independent variables, like gender, location, and industry, and binary dependent variables, which have values of 0 or 1. We observed that years of experience have a small but negative effect, where those with more experience would potentially report lower chances of satisfaction. Similarly, the workplace location of work has an influence on remote work satisfaction since some areas tend to decrease the chance of attaining a satisfactory outcome. However, we did not find age, gender, geographical region, industry, years of experience and the number of virtual meetings to be statistically significant in predicting said satisfaction. Workplace location appears to be the only significant predictor of remote employment satisfaction.

**Table 5.** Binary logistic regression.

Covariate	Coefficient ( $\beta$ )	Standard Error	Wald Statistic	d.f.	Sig.	$\text{Exp}(\beta)$	95% CI for $\text{Exp}(\beta)$ Lower	95% CI for $\text{Exp}(\beta)$ Upper
<b>Age</b>	0.000	0.003	0.009	1	0.925	1.000	0.995	1.005
<b>Gender</b>			1.694	3	0.638			
Female	-0.090	0.085	1.138	1	0.286	0.914	0.774	1.079
Non-Binary	0.002	0.085	0.001	1	0.980	1.002	0.848	1.184
Prefer Not to Say	-0.006	0.086	0.004	1	0.984	0.994	0.840	1.177
<b>Region</b>			7.094	5	0.214			
Asia	0.074	0.105	0.496	1	0.481	1.077	0.877	1.322
Europe	0.023	0.105	0.048	1	0.826	1.023	0.833	1.258
North America	-0.107	0.104	1.056	1	0.304	0.899	0.733	1.102
South America	0.010	0.107	0.008	1	0.928	1.010	0.819	1.245
Oceania	-0.154	0.103	2.247	1	0.134	0.857	0.701	1.048
<b>Industry</b>			3.976	6	0.680			
Consulting	-0.174	0.113	2.374	1	0.123	0.840	0.673	1.048
Retail	-0.102	0.113	0.803	1	0.370	0.903	0.724	1.128
Finance	-0.078	0.111	0.496	1	0.481	0.925	0.743	1.150
Healthcare	0.011	0.113	0.009	1	0.923	1.011	0.810	1.262
Manufacturing	-0.079	0.111	0.506	1	0.477	0.924	0.743	1.149

Continued

Education	-0.021	0.115	0.034	1	0.854	0.979	0.782	1.226
<b>No of Virtual Meetings</b>	0.009	0.007	2.127	1	0.145	1.010	0.997	1.022
<b>Years of Experience</b>	-0.005	0.003	2.589	1	0.108	0.995	0.989	1.001
<b>Workplace Location</b>			13.238	2	0.001			
Remote	-0.173	0.074	5.439	1	0.020	0.841	0.728	0.973
Hybrid	-0.265	0.074	12.886	1	0.000	0.767	0.664	0.887
Hours Worked Weekly	-0.001	0.003	0.242	1	0.623	1.001	0.996	1.006
Constant	0.922	0.209	19.482	1	0.000	2.515		

**Industries and remote work**

In **Table 6**, we descriptively assessed if there were industries that are more remote work oriented. No industries were identified to be more remote work oriented. However, IT (32.0%) and Manufacturing (37.8%) have the lowest and highest percentage of openness to remote work respectively. We also, assessed if employee work location was associated with his/her industry. Our *p*-value was > 0.05 (0.4758). We, therefore, conclude that the work location of the employee is not associated with his/her industry.

**Table 6.** Industries that are remote work oriented.

Mode	Consulting	Education	Finance	Healthcare	IT	Manufacturing	Retail
Hybrid	224	212	259	247	252	223	232
Onsite	231	240	231	229	255	202	249
Remote (%)	225 (33%)	238 (34.5%)	257 (34.4%)	252 (34.6%)	239 (32.0%)	258 (37.8%)	245 (33.8)
Total	680	690	747	728	746	683	726

**Susceptibility of gender to mental health condition**

In **Table 7**, we descriptively assessed which gender was more susceptible to mental health condition. 75.27% of the female employees reported a form of mental health condition, while 76.61% of male employees and 74.63% of non-binary employees also recorded a form of mental health condition respectively. Based on the recorded percentages, all genders appear to be equally susceptible to mental health condition.

**Table 7.** Susceptibility to mental health by gender.

Gender	Anxiety	Burnout	Depression	None	% with Mental Health Condition
Female	311	327	321	315	75.27%

**Continued**

Male	324	336	334	276	76.61%
Non-Binary	305	301	311	297	74.63%
Prefer Not to Say	338	316	280	308	75.20%

**Assessment of work-life balance in work setting**

Work-life balance was assessed using a rating of 1) Very poor, 2) poor, 3) fair, 4) good and 5) Very good between hybrid/remote/onsite settings as shown in **Table 8**. In our study, we focused on high work balance which we defined as those with rating of 4 (Good) and 5 (Very good). The high work-life balance was the same in hybrid and remote settings, at 40%, but it was reduced when the employees went onsite at 37.2%. In **Table 9**, we assessed if there was an association between region and work-life balance. South America and Africa have the lowest percentage of high work life balance at 37.2% and 37.6% respectively while Asia and Europe have the highest high work life balance at 41.3% and 41.1% respectively. Using Pearson’s Chi-Square test, we recorded a *p*-value > 0.05 (0.5745). We therefore conclude that regions were not associated with work-life balance among employees.

**Table 8.** Assessment of high work balance.

	Work Life Balance Rating (1) Very Poor	Work Life Balance Rating (2) Poor	Work Life Balance Rating (3) Fair	Work Life Balance Rating (4) Good	Work Life Balance Rating (5) Very Good	% of high work life balance
Hybrid	322	318	348	323	338	40
Onsite	333	329	366	310	299	37.2
Remote	368	320	339	347	340	40

**Table 9.** Relationship between regions and work-life balance.

	Work Life Balance Rating (1) Very Poor	Work Life Balance Rating (2) Poor	Work Life Balance Rating (3) Fair	Work Life Balance Rating (4) Good	Work Life Balance Rating (5) Very Good	% of high work life balance	X <sup>2</sup>	<i>p</i> -value
Africa	184	180	173	148	175	37.6%	18.196	0.5745
Asia	166	153	168	165	177	41.3%		
Europe	175	151	169	184	161	41.1%		
North America	154	160	164	153	146	38.5%		
Oceania	173	176	178	171	169	39.2		
South America	171	147	201	159	149	37.2%		

## 4. Discussion

The results of the data analysis on remote work dynamics offer valuable insights into the intricate relationships between gender, mental health, productivity, and variations by region and industry. The findings revealed that gender does not significantly influence satisfaction with remote work, as evidenced by the statistical insignificance of the association between these variables. However, underlying qualitative differences persist. Women, for instance, continue to face challenges stemming from increased domestic responsibilities, while men are more likely to experience stress related to societal expectations about performance. These nuanced differences suggest that gender dynamics in remote work are shaped by factors beyond what the quantitative data explicitly captures. This result challenges conventional assumptions that longer hours inevitably lead to higher stress. Instead, the structure and organization of work tasks appear to play a more prominent role. For example, frequent virtual meetings and reduced uninterrupted focus time contribute to burnout, even when total hours worked remain stable. These findings emphasize the importance of examining the quality and distribution of work tasks rather than focusing solely on the quantity of hours worked.

When considering industry-specific trends, the analysis found no significant association between industry type and openness to remote work. Despite this, descriptive statistics highlighted variations, with manufacturing showing the highest adoption of remote work and IT the lowest. These differences reflect industry-specific adaptations to the challenges posed by remote work, particularly during the COVID-19 pandemic. However, the absence of strong statistical associations emphasizes the need for further qualitative investigation into industry-level practices and constraints. Regional disparities in work-life balance were minimal, with employees in Asia and Europe reporting marginally higher levels of satisfaction compared to those in Africa and South America. However, these differences were not statistically significant. The findings suggest that cultural and infrastructural factors shape the perception of work-life balance but do not result in pronounced variations across regions. Addressing localized challenges, such as inconsistent technological infrastructure or economic barriers, could further improve remote work outcomes in less advantaged regions.

The analysis identified hybrid work models as particularly effective in fostering a balance between professional and personal productivity. Employees in hybrid arrangements reported higher levels of work-life balance comparable to those working fully remotely, while both groups outperformed onsite workers. This indicates that hybrid work offers a promising framework by combining the flexibility of remote work with opportunities for in-person collaboration and social interaction. The logistic regression analysis revealed that years of experience and work location significantly predict satisfaction with remote work. Employees with more professional experience demonstrated distinctive preferences, often shaped by their established roles and expectations within the organization. Similarly, remote and hybrid work arrangements were strongly associated with higher satis-

faction levels compared to fully onsite work. These findings stress the importance of tailoring work policies to align with employees' professional stages and job functions.

Mental health challenges emerged as a critical concern, with approximately 75 percent of employees reporting conditions such as anxiety, burnout, or depression. These high prevalence rates were consistent across all genders, indicating the pervasive nature of mental health vulnerabilities in remote work environments. While gender did not significantly predict susceptibility to mental health conditions, the universal impact of these issues highlights the urgency of implementing comprehensive mental health support systems. Overall, the findings emphasize the necessity of evidence-based organizational strategies to address the complexities of remote work. By adopting flexible work arrangements, offering targeted mental health resources, and addressing the unique needs of employees based on their industry, region, and level of experience, organizations can enhance both employee satisfaction and productivity. Further research should explore the long-term implications of these dynamics to ensure that evolving work models remain sustainable and equitable.

## 5. Conclusion

The study underscores the intricate relationship between remote work and employee well-being, revealing that factors such as work structure, organizational support, and personal circumstances significantly shape outcomes. The widespread prevalence of mental health challenges, including anxiety, burnout, and depression, highlights the necessity of creating supportive remote work environments. Moreover, hybrid work arrangements proved to be a balanced approach, providing flexibility, and maintaining employee satisfaction while addressing common challenges associated with fully remote or onsite models.

To address the challenges identified, organizations must adopt comprehensive strategies. Flexible work arrangements, such as hybrid models, should be prioritized to provide the autonomy and collaboration employees need. Robust mental health support systems, including counseling services and stress management programs, should be implemented to address the widespread prevalence of anxiety, burnout, and depression among remote workers. Gender-specific challenges require targeted interventions, such as policies for equitable workload sharing, flexible scheduling, and subsidized childcare, to alleviate the burdens disproportionately borne by women. Refining remote work practices, such as reducing meeting overload and encouraging asynchronous communication, can further enhance productivity and minimize burnout. Additionally, organizations should consider industry-specific and regional variations in remote work adoption. Tailored strategies are necessary to meet the unique demands of industries such as healthcare and manufacturing, where hands-on tasks require hybrid approaches. Similarly, regional disparities in resources and cultural factors should guide localized interventions to ensure equitable access to opportunities and support. Con-

tinuous monitoring through employee surveys and longitudinal studies will enable organizations to refine their remote work policies based on evolving needs. By addressing these key areas, organizations can create inclusive, productive, and sustainable remote work environments that support employee well-being and organizational success.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Aleem, M., Sufyan, M., Ameer, I., & Mustak, M. (2023). Remote Work and the COVID-19 Pandemic: An Artificial Intelligence-Based Topic Modeling and a Future Agenda. *Journal of Business Research*, *154*, Article ID: 113303. <https://doi.org/10.1016/j.jbusres.2022.113303>
- Brough, P., Timms, C., Chan, X. W., Hawkes, A., & Rasmussen, L. (2020). Work-Life Balance: Definitions, Causes, and Consequences. In T. Theorell (Ed.), *Handbook of Socio-economic Determinants of Occupational Health* (pp. 473-487). Springer International Publishing. [https://doi.org/10.1007/978-3-030-31438-5\\_20](https://doi.org/10.1007/978-3-030-31438-5_20)
- Czymara, C. S., Langenkamp, A., & Cano, T. (2021). Cause for Concerns: Gender Inequality in Experiencing the COVID-19 Lockdown in Germany. *European Societies*, *23*, S68-S81. <https://doi.org/10.1080/14616696.2020.1808692>
- de Laat, K. (2023). Remote Work and Post-Bureaucracy: Unintended Consequences of Work Design for Gender Inequality. *ILR Review*, *76*, 135-159. <https://doi.org/10.1177/00197939221076134>
- Ezichi, O., Okpanachi, V., Jibunoh, J., Awosan, W., Tchoumo, P., Akande, A., Amaechi, C., Sanusi, J., Ogunsanwo, F., & Adesina, R. (2025). COVID-19 Vaccine Distribution Patterns for Prioritized Age Group: Analysis of European Nations. *Open Journal of Epidemiology*, *15*, 1-18. <https://doi.org/10.4236/ojepi.2025.151001>
- Gibbs, M., Mengel, F., & Siemroth, C. (2023). Work from Home and Productivity: Evidence from Personnel and Analytics Data on Information Technology Professionals. *Journal of Political Economy Microeconomics*, *1*, 7-41. <https://doi.org/10.1086/721803>
- Howe, L. C., & Menges, J. I. (2022). Remote Work Mindsets Predict Emotions and Productivity in Home Office: A Longitudinal Study of Knowledge Workers during the Covid-19 Pandemic. *Human-Computer Interaction*, *37*, 481-507. <https://doi.org/10.1080/07370024.2021.1987238>
- Jamal, M. T., Anwar, I., Khan, N. A., & Saleem, I. (2021). Work during COVID-19: Assessing the Influence of Job Demands and Resources on Practical and Psychological Outcomes for Employees. *Asia-Pacific Journal of Business Administration*, *13*, 293-319. <https://doi.org/10.1108/apjba-05-2020-0149>
- Johannes, J., Limakrisna, N., & Anggiani, S. (2023). Effect of Job Demand, Compensation, and Personality Traits on Organizational Commitment Moderated by Work by Remote Employees in the Fast Moving Consumer Goods (FMCG) Sector. *International Journal of Environmental, Sustainability, and Social Science*, *4*, 718-730. <https://doi.org/10.38142/ijess.v4i3.562>
- Khan, G. M., & Lopez, J. C. (2023). Impact of Hybrid Work Culture on Organizational Effectiveness. *Tuijin Jishu/Journal of Propulsion Technology*, *44*, 2503-2509. <https://doi.org/10.52783/tjpt.v44.i3.732>

- Mahomed, F., Oba, P., & Sony, M. (2023). Exploring Employee Well-Being during the COVID-19 Remote Work: Evidence from South Africa. *European Journal of Training and Development, 47*, 91-111. <https://doi.org/10.1108/ejtd-06-2022-0061>
- Nakrošienė, A., Bučiūnienė, I., & Goštautaitė, B. (2019). Working from Home: Characteristics and Outcomes of Telework. *International Journal of Manpower, 40*, 87-101. <https://doi.org/10.1108/ijm-07-2017-0172>
- Orzeł, B., & Wolniak, R. (2022). Digitization in the Design and Construction Industry—Remote Work in the Context of Sustainability: A Study from Poland. *Sustainability, 14*, Article No. 1332. <https://doi.org/10.3390/su14031332>
- Palumbo, R. (2020). Let Me Go to the Office! An Investigation into the Side Effects of Working from Home on Work-Life Balance. *International Journal of Public Sector Management, 33*, 771-790. <https://doi.org/10.1108/ijpsm-06-2020-0150>
- Qi, L., Xu, Y., & Liu, B. (2023). Work Out of Office: How and When Does Employees' Self-Control Influence Their Remote Work Effectiveness? *Frontiers in Psychology, 14*, Article ID: 1265593. <https://doi.org/10.3389/fpsyg.2023.1265593>
- Rañeses, M. S., Nisa, N. U., Bacason, E. S., & Martir, S. (2022). Investigating the Impact of Remote Working on Employee Productivity and Work-Life Balance: A Study on the Business Consultancy Industry in Dubai, UAE. *International Journal of Business and Administrative Studies, 8*, 63-81. <https://doi.org/10.20469/ijbas.8.10002-2>
- Remote Work & Mental Health* (n.d.). <https://www.kaggle.com/datasets/iramshahzadi9/remote-work-and-mental-health>
- Rodríguez-Modroño, P., & López-Igual, P. (2021). Job Quality and Work-Life Balance of Teleworkers. *International Journal of Environmental Research and Public Health, 18*, Article No. 3239. <https://doi.org/10.3390/ijerph18063239>
- Saad Alfarran, A. K. (2021). The Impact of Remote Work on Women's Work-Life Balance and Gender-Role Attitudes in Saudi Arabia. *International Journal of Gender and Women's Studies, 9*, 11-22.
- Sandoval-Reyes, J., Idrovo-Carlier, S., & Duque-Oliva, E. J. (2021). Remote Work, Work Stress, and Work-life during Pandemic Times: A Latin America Situation. *International Journal of Environmental Research and Public Health, 18*, Article No. 7069. <https://doi.org/10.3390/ijerph18137069>
- Simionato, G. K., & Simpson, S. (2018). Personal Risk Factors Associated with Burnout among Psychotherapists: A Systematic Review of the Literature. *Journal of Clinical Psychology, 74*, 1431-1456. <https://doi.org/10.1002/jclp.22615>
- Tavares, A. I. (2017). Telework and Health Effects Review. *International Journal of Healthcare, 3*, 30-36. <https://doi.org/10.5430/ijh.v3n2p30>
- The Evolution of Working from Home | Stanford Institute for Economic Policy Research (SIEPR) (n.d.). <https://siepr.stanford.edu/publications/working-paper/evolution-working-home>
- Toscano, F., & Zappalà, S. (2020). Social Isolation and Stress as Predictors of Productivity Perception and Remote Work Satisfaction during the COVID-19 Pandemic: The Role of Concern about the Virus in a Moderated Double Mediation. *Sustainability, 12*, Article No. 9804. <https://doi.org/10.3390/su12239804>
- Tronco Hernández, Y. A., Parente, F., Faghy, M. A., Roscoe, C. M. P., & Maratos, F. A. (2021). Influence of the COVID-19 Lockdown on the Physical and Psychosocial Well-Being and Work Productivity of Remote Workers: Cross-Sectional Correlational Study. *JMIRx Med, 2*, e30708. <https://doi.org/10.2196/30708>
- van Zoonen, W., Sivunen, A., Blomqvist, K., Olsson, T., Ropponen, A., Henttonen, K. et al.

- (2021). Factors Influencing Adjustment to Remote Work: Employees' Initial Responses to the COVID-19 Pandemic. *International Journal of Environmental Research and Public Health*, 18, Article No. 6966. <https://doi.org/10.3390/ijerph18136966>
- Waizenegger, L., McKenna, B., Cai, W., & Bendz, T. (2020). An Affordance Perspective of Team Collaboration and Enforced Working from Home during Covid-19. *European Journal of Information Systems*, 29, 429-442. <https://doi.org/10.1080/0960085x.2020.1800417>
- Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving Effective Remote Working during the COVID-19 Pandemic: A Work Design Perspective. *Applied Psychology*, 70, 16-59. <https://doi.org/10.1111/apps.12290>
- Wattenberg, M., Mauritz, N., Prädikow, L., Schulte, M., Franken, S., & Armutat, S. (2023). Women Working from Home: Higher Performance and Satisfaction or More Stress? *International Conference on Gender Research*, 6, 249-256. <https://doi.org/10.34190/icgr.6.1.1016>