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# MSC. DISSERTATION: IMPACT OF REMOTE WORK ON MENTAL HEALTH

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### **Introduction**

The emerging trend for remote working has reshaped workspaces and has brought benefits, along with problems. One of the central concerns for remote workers is the psychological impact, with particular reference to feelings of isolation and decreased work-life balance. The abrupt transition towards remote working in the context of the COVID-19 pandemic has drawn a great deal of interest among scholars; yet there has been little research on investigating how these factors unfold to influence mental health under long-term remote working conditions.

### **Research Questions**

- What is the relationship between work location (remote, hybrid, onsite) and mental health outcomes such as stress and social isolation?
- How does access to mental health resources impact productivity and satisfaction levels in remote workers?
- Are certain job roles or industries more susceptible to mental health challenges in remote settings?
- Which factors (e.g., hours worked, work-life balance, physical activity) most strongly correlate with stress levels in remote workers?

### **Objectives**

This research aims to investigate how different aspects of remote work, such as work-life balance, hours worked, and virtual interactions, impact mental health outcomes, including stress levels, mental health conditions (like depression and anxiety), and social isolation. Understanding these relationships can guide employers and policymakers in creating healthier work environments.

- Identify key factors influencing mental health among remote workers.
- Assess the role of company support and access to mental health resources on employee productivity.
- Investigate demographic and job-specific differences in mental health responses to remote work.

# **Literature Review**

## **Introduction**

This expanded literature review delves deeper into existing research to contextualize the benefits, challenges, and underexplored areas of remote work's impact on mental health.

The rise of remote work, particularly in the post-pandemic era has transformed the modern workforce, bringing both opportunities and challenges. While it provides flexibility and eliminates commuting time, there are also other psychological effects related to isolation, burnout, and work-life balance that remote work has been linked to, making understanding the same an essentiality.

This review synthesizes current findings, identifies gaps in the literature, and explores theoretical frameworks relevant to the psychological effects, contributing factors, and potential interventions in understanding the interplay between remote work and mental health.

## **Psychological Effects of Remote Work**

### **Isolation and Loneliness**

Multiple studies highlight the increased risk of social isolation among remote working colleagues and the workplace. According to (Becker, 2022), employees working remotely report feeling disconnected from colleagues, leading to loneliness and reduced job satisfaction and emotional exhaustion, minor counterproductive work behaviours, among other negative effects. Remote employees often miss the casual social interactions found in office environments, which contribute to a sense of belonging and professional advancement opportunities.

### **Burnout and Work-Life Balance**

Burnout is the riskiest factor for remote workers. The blurring of boundaries between professional and personal life increases stress levels, with workers often struggling to "switch off" after working hours. Without clear separation between workspaces and personal spaces, many remote workers report working longer hours than they would in a traditional office setting. For example, a systematic review by (Shaholli, Manai, Iantorno, Di Giampaolo, & Nieto, 2024) showed that the bridging of personal and working life because of teleworking can result in increased stress and burnout.

### **Productivity and Job Satisfaction**

While some studies suggest that working from home can enrich productivity, others stress the challenges regarding motivation and keeping workers engaged. The level of managerial support is an important factor in how the variation in the impact on job

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satisfaction and mental well-being is moderated. A systematic review by (Guidarini, 2023) noted that telecommuting is associated with higher levels of job satisfaction, but the relationship is moderated by factors such as autonomy and support.

## **Contributing Factors to Mental Health Challenges in Remote Work**

### **Digital Communication Overload**

Continuous exposure to digital communication tools can result in cognitive overload and stress. The "always-on" culture associated with remote work is adding to the rising expectations of immediate responses, making it hard for employees to detach themselves from work-related activities. According to a study by (Hall, 2023), excessive use of communication technology is related to increased stress and reduced well-being.

### **Home Environment and Workspace Design**

The home environment is a determinant of working effectiveness from home. Individuals who have home offices tend to have less stress than others whose workspace is shared or setup in non-ergonomic ways. Poor workstations lead to physical strains and mental exhaustion. A study by (Felstead & Reuschke, 2020) indicated that the quality of the home workspace is one of the strongest predictors of job satisfaction for remote workers.

### **Managerial and Organizational Support**

Management, therefore, plays a vital role in mitigating mental health challenges. Conversely, frequent virtual check-ins, mental health resources, and clear performance expectations within an organization lead to reduced stress among remote workers. The supportive leadership and policies, such as flexible scheduling and mental health days, will go a long way in contributing to the overall well-being of individuals. A cross-referenced study by (Philips, 2020) established that organizational support is integral in mitigating the negative impacts of telework on mental health.

## **Potential Interventions and Solutions**

### **Technology-Based Wellness Solutions**

Recent studies have shown that digital mental health platforms support remote workers in maintaining good mental health. The integration of technology into corporate wellness programs has so far helped reduce feelings of loneliness. A 2025 study by (Carraro Elisabetta, 2025) indicated that ***“social networks play a crucial role in promoting mental health, suggesting that strong and meaningful relationships can serve as a buffer against anxiety and depression”*** which would include remote delivery of psychotherapy, including telephone, video, and online modalities, that is found to be just as effective as face-to-face therapy in treating anxiety and

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depression. These methods offer accessibility and convenience, making them suitable alternatives for those unable to access in-person care.

### **Work-Life Balance Strategies**

Encouragement of structured work schedules and "right to disconnect" policies helps alleviate burnout. Countries like France and Ireland have created legal requirements ensuring that workers are not compelled to participate in work communications during periods outside of work. Therefore, such initiatives will go a long way toward assuring better mental health outcomes for remote employees. A report by (Carvalho VS, 2021) suggests that by integrating an overall inter-role valuation of congruity between work and family domains contributes to reducing burnout and increasing flourishing.

### **Hybrid Work Models**

Various studies also praise hybrid models of work as a balance between flexibility and face-to-face interactions. Employees who split their time between working from home and in the office tend to be more satisfied with their jobs and have less stress compared to those who work fully at home. Hybrid models allow them to collaborate with others in person and maintain some of the autonomy of working remotely. A study by (Ashish Sarangi MD, 2022) establish that telecommuting is related positively to job satisfaction, especially when combined with periodic work at the office.

## **Methodology**

### **Secondary Research Data & Design**

#### **Data Source**

This secondary research sought to analyze the relationship between mental health and telecommuting by using quantitative secondary data analysis. An available public dataset scraped from **Kaggle** titled "**Remote\_Work\_on\_Mental\_Health.csv**" was utilized. It contains extensive information regarding employees from various sectors and regions, such as their job location, balance between personal and professional life, stress, loneliness, and availability of mental health resources. Using previously collected data sets for this study makes sense because it is possible to identify trends on a larger scale without the complications that come with collecting primary data. As the dataset is organized, it enables comparison with primary survey data that was gathered first-hand, hence cross checking and expanding the meaning of the results is easier.

#### **Secondary Data Collection**

The secondary dataset consists of 5000 entries of from employees regarding telework and mental health outcomes. It includes demographic data (e.g., gender, age, industry, job title, and years of experience), work variables (e.g., work arrangement, number of hours worked weekly, and number of virtual meetings), and psychological variables (e.g., level of stress, productivity change, social isolation rating, and remote work satisfaction). The data collection spans a diversity of industries, such as healthcare, IT, finance, education, and consultancy, with workers' feedback selected from a variety of different countries such as North America, Europe, and Asia. The information was originally compiled for an autonomous study that had quantified the impact of home working on wellness and work effectiveness, and so it is extremely pertinent to this dissertation's research objectives.

Since the dataset was publicly available, ethical guidelines were taken into account to fulfil research needs. The data was anonymized, with no identifiable information except for general demographic categories. The application of different employees from diverse professional backgrounds also increases the generalizability of the findings.

#### **Data Preprocessing**

Before performing any statistical analysis, rigorous preprocessing and cleaning of data were carried out in order to arrange the dataset properly for analysis. This included various important steps:

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### **Handling Missing Values:**

Missing values were found in several variables, including Mental Health Condition, Company Remote Work Support, and Physical Activity. In order to preserve data integrity, categorical missing values were filled with mode, while numerical missing values were filled in with the median to prevent the data from becoming biased. Entries with an excessive number of missing values (i.e., missing more than three critical attributes) were dropped in order to make the dataset more reliable.

### **Encoding Categorical Variables:**

For convenience of statistical analysis, categorical variables were translated into numbers:

- ***Binary Encoding:***
  - Mental Health Resources Access was encoded as 1 (Yes) and 0 (No).
  - Productivity Change was assigned -1 (Decrease), 0 (No Change), and 1 (Increase) to maintain ordinal relationships.
- ***Ordinal Encoding:***
  - Work Location was encoded as 1 (Remote), 2 (Hybrid), and 3 (Onsite).
  - Stress Level was recoded to 1 (Low), 2 (Medium), and 3 (High).
  - Job Satisfaction with Remote Work was measured on a scale of 1 (Unsatisfied), 2 (Neutral), and 3 (Satisfied).
- ***One-Hot Encoding:***
  - Variables such as Job Role, Industry, Region, and Mental Health Condition were re-coded to dummy variables in order to facilitate independent categorical contrasts.

### **Standardizing Numerical Data:**

For consistency in numeric variables, all the work-life balance scores, stress ratings, and social isolation measurements were formatted accordingly. Continuous variables such as work hours per week and virtual meetings held were not changed from their original numerical format to ensure employee work conditions accuracy.

### **Identification of Outliers and Handling Them:**

Outliers for age, years of experience, working hours per week, work/life balance rating, stress levels and social isolation ratings were examined with the use of the Interquartile Range (IQR) method. Variables such as **'Age'**, **'Hours\_of\_Experience'** and **'Hours\_Worked\_Per\_Week'** were found to have outliers beyond 2.5 times the IQR and were removed in order to prevent skewing in the subsequent statistical examination.



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