

# Understanding the Effects of Remote Work on Employee Well-being and Organizational Outcomes: A Multimethod Approach in the Context of COVID-19

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**Abstract:**

In the context of the COVID-19 pandemic, where remote work has become widely adopted, this study aims to understand the effects of remote work on employee well-being and organizational outcomes. This study employs a multimethod approach to examine the relationships between technostress, work recovery, overall well-being, and organizational consequences among remote workers. A quantitative survey was administered to remote workers, and the data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Additionally, qualitative interviews were conducted with human resource managers to gain in-depth insights into remote work experiences and practices during and after the pandemic. This study contributes to understanding the relationships between remote work, employee well-being, and organizational outcomes in the context of the COVID-19 pandemic. The findings emphasize the importance of managing technostress, promoting work recovery, and fostering interpersonal and intrapersonal well-being to enhance engagement and organizational resilience.

**Keywords:** *Remote work; Telework; Well-being; Technostress; Covid-19*

**Introduction:**

The COVID-19 pandemic has revolutionized the way we work, with telework becoming a necessity for organizations and employees worldwide. As social distancing measures became crucial to curb the spread of the virus, businesses had to rapidly adapt to telecommuting to ensure continuity and maintain productivity. Telework, also known as remote work or telecommuting, refers to the practice of employees working from locations outside the traditional office setting, often from their homes.

While telework has been studied extensively for several years, the COVID-19 era has presented unique challenges and opportunities for both employees and organizations. This research paper aims to provide a comprehensive understanding of the effects of telework on employee well-being during the pandemic by conducting a mixed-methods study.

The literature review explores various constructs related to telework and their impact on employee well-being. These constructs include technostress, job recovery, inter-well-being, intra-well-being, burnout, sleep quality, engagement, and resilience. Technostress refers to the stress and anxiety experienced by individuals when dealing with new information and communication technologies (ICTs). The constant connectivity and information overload associated with ICTs can lead to a loss of control over time and space, resulting in stress. On the other hand, job recovery encompasses factors like psychological detachment and relaxation, crucial for unwinding from work stress and enhancing well-being.

To examine these constructs' effects on employee well-being during the COVID-19 era, the research adopts a mixed-methods approach, combining quantitative and qualitative methods. The quantitative aspect involves distributing questionnaires to employees, assessing their experiences with telework, well-being, and related factors. The qualitative aspect involves conducting interviews with practitioners, including human resource managers, to gain deeper insights into the challenges and best practices associated with telework implementation.

By integrating the results of both quantitative and qualitative analyses and comparing them with existing literature, this research paper provides valuable insights for organizations and policymakers seeking to optimize employee well-being in the context of telework. The findings contribute to the ongoing discussion on the future of work and how organizations can create supportive, resilient, and engaged remote workforces. Ultimately, this study aims to shed light

on the impact of telework on employee well-being and promote strategies that foster a positive work environment, even in the face of unprecedented challenges. Consequently, the research question guiding this study is as follows: *How does telework impact employee well-being during the COVID-19 pandemic, and what strategies can enhance positive outcomes for both employees and organizations?*

### **Literature Review:**

The COVID-19 pandemic has necessitated the widespread adoption of telework as organizations and employees strive to maintain productivity while adhering to social distancing measures. Telework, which has been studied for several years, presents both beneficial and detrimental outcomes in terms of employee well-being. This literature review explores various constructs related to telework, including technostress, job recovery, inter-well-being, intra-well-being, burnout, sleep quality, engagement, and resilience. By examining existing research, this review aims to provide comprehensive insights into the effects of telework on employee well-being during the COVID-19 era.

Technostress is a significant construct within the context of telework. It refers to the stress and anxiety experienced by individuals when dealing with new information and communication technologies (ICTs) and the challenges they pose (Brod, 1984; Weil & Rosen, 1997). The constant connectivity and information overload associated with ICTs can lead to a sense of being constantly on call and a loss of control over time and space, resulting in stress (Tarafdar et al., 2007). Teleworkers may struggle with the blurring of boundaries between work and personal life, as well as the pressure to adapt to rapidly evolving ICTs.

In contrast to technostress, work engagement is a positive state of mind characterized by vigor, dedication, and absorption (Schaufeli et al., 2002). Engaged employees feel energized and effective in their work, perceiving themselves as capable of dealing well with job demands (Schaufeli et al., 2006). Work engagement has been associated with improved job performance, job satisfaction, and overall well-being (Headrick et al., 2022). Factors such as psychological detachment, relaxation, mastery experiences, and control experiences have been found to positively predict work engagement and well-being (ten Brummelhuis & Bakker, 2012; Sonnentag and Fritz, 2007).

Recovery experiences during off-work time have gained recognition as crucial for unwinding from work stress and enhancing well-being (Sonnentag et al., 2017). Psychological detachment and relaxation involve the ability to disconnect mentally from work, enabling individuals to recharge and replenish their internal resources (Ragsdale & Beehr, 2016). Mastery experiences and control experiences contribute to personal resource enhancement, reducing exhaustion and enhancing work engagement (Hahn et al., 2011; Kinnunen & Feldt, 2013). Engaging in recovery activities during non-work time, such as engaging in hobbies or spending time with loved ones, promotes well-being and fosters a positive work-life balance.

The implementation of telework in the COVID-19 era has introduced new challenges to work-life balance. Teleworkers often face difficulties in distinguishing between work and personal life due to the blurred boundaries between work and home spaces (Hill et al., 2003). The ability to maintain a healthy work-life balance is crucial for well-being. Effective boundary management, establishing clear boundaries between work and personal life, can contribute to reduced work-life interference and increased satisfaction in both domains.

To fully understand the impact of telework on employee well-being, it is essential to consider the dimensions of interpersonal and intrapersonal well-being. The interpersonal dimension of workplace well-being captures the impact of social interactions within the workplace that contribute to an individual's ability to achieve psychosocial flourishing (Bradbury & Lichtenstein, 2000; Diener et al., 2010). This dimension goes beyond the provisions of social support and recognizes the external components of optimal functioning (Keyes, 1998). It encompasses two components of social context theory—social acceptance and social integration—and two components of psychological well-being—self-acceptance and positive relations with others (Bartels et al., 2019).

On the other hand, the intrapersonal dimension of workplace well-being reflects internal feelings of value and meaningfulness within the workplace through the actual work itself or one's personal development as a worker (Lewis et al., 2014). It acknowledges the employee's desire for self-control, purpose, and making a difference in society through their work (White, 2015). The intrapersonal dimension draws on four components of social context theory—social coherence, social contribution, social actualization, and social coherence—and four components of psychological well-being—purpose in life, autonomy, environmental mastery, and personal growth (Bartels et al., 2019). Each of these components focuses inward on the energy and value that individuals derive from the workplace.

In addition, telework can increase the risk of burnout, characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 2001). The lack of physical separation between work and personal life, coupled with the constant connectivity and high workload associated with telework, can contribute to burnout among teleworkers. Burnout has been linked to negative outcomes such as decreased job satisfaction, impaired performance, and reduced overall well-being. Organizations and individuals need to prioritize strategies that promote self-care, stress management, and the establishment of clear boundaries to prevent burnout and foster well-being.

Sleep quality is another important construct related to telework and well-being. Adequate sleep is crucial for maintaining cognitive performance, emotional regulation, and overall health (Grandner et al., 2010). However, telework can disrupt sleep patterns due to increased flexibility, the blurring of work and personal life, and the potential for increased work hours. Ensuring good sleep hygiene and adopting practices that promote quality sleep, such as maintaining consistent sleep schedules and creating a conducive sleep environment, are essential for the well-being of teleworkers.

Resilience plays a vital role in mitigating the negative effects of telework challenges on well-being. Resilience refers to the ability to bounce back from adversity and adapt to change (Masten et al., 2004). Telework can bring about various stressors and uncertainties, such as technological difficulties, social isolation, and increased job demands. Building resilience through strategies such as cultivating a positive mindset, seeking social support, and practicing self-care can help teleworkers effectively cope with these challenges and maintain their well-being.

### **Conceptual model:**

The conceptual model presented in this study aims to explore the relationships between telework, well-being, and related constructs, based on the reviewed literature. The model takes into account the influence of technostress and job recovery on various dimensions of well-being, including burnout, sleep quality, inter-well-being, intra-well-being, engagement, and resilience. These relationships are supported by the existing literature, providing a strong justification for their inclusion in the conceptual model.

Technostress has been identified as a significant construct within the context of telework (Brod, 1984; Weil & Rosen, 1997). The literature review indicates that technostress can lead to negative outcomes such as burnout (Maslach et al., 2001) and poor sleep quality (Grandner et al., 2010) among teleworkers. Therefore, the inclusion of technostress as an independent variable in the model is justified by its relevance to the telework context and its impact on employee well-being.

Job recovery, which encompasses factors such as psychological detachment, relaxation, mastery experiences, and control experiences, has been found to be crucial for unwinding from work stress and enhancing well-being (Sonnentag et al., 2017; Hahn et al., 2011; Kinnunen & Feldt, 2013). The literature review supports the positive association between job recovery and inter-well-being, which encompasses social acceptance, social integration, self-acceptance, and positive relations with others (Bradbury & Lichtenstein, 2000; Diener et al., 2010; Keyes, 1998; Bartels et al., 2019). Similarly, job recovery is expected to positively affect intra-well-being, which includes dimensions such as social coherence, social contribution, social actualization, environmental mastery, purpose in life, autonomy, and personal growth (Lewis et al., 2014; White, 2015; Bartels et al., 2019). These findings justify the inclusion of job recovery as an independent variable in the model and the inclusion of inter-well-being and intra-well-being as mediating variables.

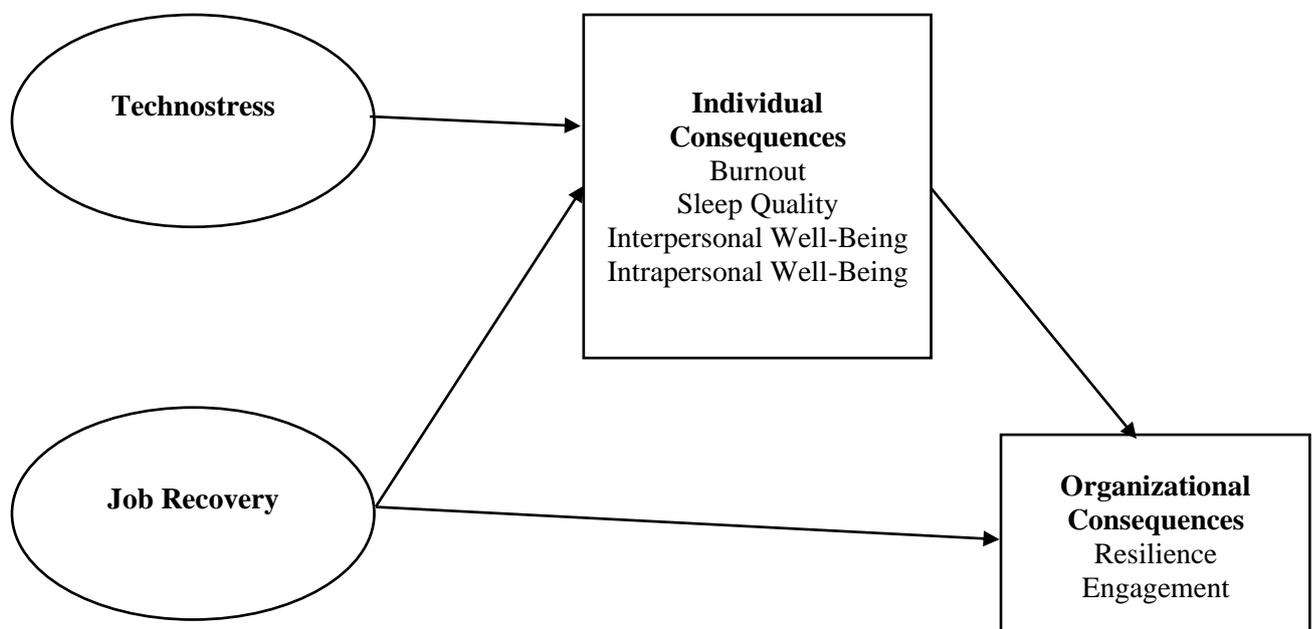
The literature review also highlights the importance of resilience in mitigating the negative effects of telework challenges on well-being (Masten et al., 2004). Resilience is proposed as a dependent variable in the conceptual model, mediated by both inter-well-being and intra-well-being. The inclusion of these mediating variables is justified by their relevance to the well-being outcomes associated with telework and their alignment with the dimensions of well-being proposed in the literature.

Furthermore, the model suggests that intra-well-being also mediates the relationship between job recovery and engagement. Engagement, characterized by vigor, dedication, and absorption, has been linked to improved job performance, satisfaction, and overall well-being (Schaufeli et al., 2002; Headrick et al., 2022). Intra-well-being, with its emphasis on personal growth, purpose in life, and autonomy, is proposed as a mediating variable that contributes to enhanced engagement among teleworkers.

By incorporating these relationships, the conceptual model provides a comprehensive framework for understanding the effects of telework on employee well-being during the COVID-19 era. The inclusion of technostress and job recovery as independent variables is supported by the literature, which highlights their significance in the telework context. The proposed mediating variables, inter-well-being and intra-well-being, provide a theoretical basis for understanding the mechanisms through which job recovery influences resilience and engagement.

In the development of measurement instruments for each construct, it is essential to consider the practical aspects of data collection. One pragmatic consideration is to include a minimal number of items to measure each construct effectively. This approach aims to minimize respondent burden and potential attrition due to lengthy questionnaires.

Including an excessive number of items for each construct can lead to respondent fatigue and reduced data quality. Respondents may become overwhelmed by a lengthy questionnaire, resulting in rushed responses or even dropout from the study. By carefully selecting a limited number of items that adequately capture the essence of each construct, researchers can strike a balance between comprehensive measurement and participant engagement.



Based on the conceptual model presented in this study, we have developed a set of hypotheses to explore the relationships between telework, well-being, and related constructs. The model

takes into account the influence of technostress and job recovery on various dimensions of well-being, including burnout, sleep quality, inter-well-being, intra-well-being, engagement, and resilience. The following hypotheses are derived from the literature review and aim to test the proposed relationships within the model.

**H1: Technostress has a significant impact on burnout among teleworkers.**

**H2: Technostress has a significant impact on teleworkers' sleep quality.**

The first set of hypotheses focuses on the influence of technostress, a critical construct within the context of telework, on burnout and sleep quality. Previous research suggests that technostress can lead to negative outcomes, such as burnout and poor sleep quality, among teleworkers. Therefore, we expect that higher levels of technostress will be associated with increased burnout and reduced sleep quality.

**H3: Job recovery has a significant impact on individual consequences.**

*H3a: Job recovery has a significant impact on burnout.*

*H3b: Job recovery has a significant impact on sleep quality.*

*H3c: Job recovery has a significant impact on interpersonal well-being.*

*H3d: Job recovery has a significant impact on intrapersonal well-being.*

The next set of hypotheses explores the influence of job recovery on various dimensions of individual well-being. Job recovery encompasses factors such as psychological detachment, relaxation, mastery experiences, and control experiences, which are crucial for unwinding from work stress and enhancing well-being. We hypothesize that effective job recovery strategies will be associated with reduced burnout, improved sleep quality, and enhanced interpersonal and intrapersonal well-being among teleworkers.

**H4: Job recovery has a significant impact on organizational consequences.**

*H4a: Job recovery has a significant impact on resilience.*

*H4b: Job recovery has a significant impact on engagement.*

The third set of hypotheses examines the impact of job recovery on organizational outcomes. Effective job recovery is expected to not only benefit individual well-being but also contribute to positive organizational consequences. We propose that employees who experience better job

recovery will exhibit higher levels of organizational resilience and engagement, fostering a more resilient and engaged workforce.

**H5: Interpersonal well-being mediates the relationship between job recovery and organizational consequences.**

*H5a: Interpersonal well-being mediates the relationship between job recovery and resilience.*

**H6: Intrapersonal well-being mediates the relationship between job recovery and organizational consequences.**

*H6a: Intrapersonal well-being mediates the relationship between job recovery and resilience.*

*H6b: Intrapersonal well-being mediates the relationship between job recovery and engagement.*

The final set of hypotheses explores the mediating roles of interpersonal and intrapersonal well-being in the relationship between job recovery and organizational consequences. We propose that both dimensions of well-being act as mediators, facilitating the positive impact of job recovery on organizational outcomes, including resilience and employee engagement.

### **Methods and Data Collection:**

The methodology of this study was designed to obtain a comprehensive and nuanced understanding of the relationships between the different variables in our model. To achieve this, we adopted a mixed-methods approach that combines quantitative and qualitative methods. This mixed-methods approach allows us to leverage the advantages of each method and complement quantitative data with richer qualitative information.

For the collection of quantitative data, in constructing the questionnaire, we drew upon established scales and items from previous research to ensure the validity and reliability of our measurements. The Recovery Experience Questionnaire (Sonnentag & Fritz, 2007) was used to assess recovery experiences. Technostress was measured using the Technostress scale developed by Nimrod (2018). Overall well-being was captured with reference to Bartels et al. (2019). Work engagement was measured using the Utrecht Work Engagement Scale. These references provided a solid foundation for assessing the constructs in our study and selecting appropriate items and scales for our questionnaire.

We initially sent out 416 questionnaires to potential participants representing various industries and hierarchical levels. These questionnaires were distributed through online platforms and

email invitations. Ultimately, we received 380 completed responses, resulting in a response rate of approximately 91%. After carefully reviewing the responses, we found that seven questionnaires had missing information or incomplete data. Therefore, we included a total of 373 questionnaires in our final analysis.

The questionnaire was designed to capture relevant information related to telework and employee well-being. It included items measuring technostress, work engagement, recovery experiences, interpersonal and intrapersonal well-being, burnout, sleep quality, and resilience. Participants were asked to rate their experiences and perceptions on a Likert scale, allowing for quantitative measurement of the variables.

Concurrently, we conducted 17 semi-structured interviews with practitioners, including human resource managers, to gather additional qualitative insights. The interviews were conducted in a conversational style, allowing participants to share their perspectives and experiences related to telework and employee well-being. The interview questions were designed to explore various aspects such as the challenges faced by employees in the telework environment, the strategies employed by organizations to support employee well-being, and the perceptions of managers regarding the impact of telework on individual and organizational outcomes.

### **Data Analysis:**

Regarding data analysis, we utilized XLSTAT software, incorporating Principal Component Analysis (PCA) to identify patterns and reduce the dimensionality of the data. This initial analysis helped us gain insights into the underlying structure of the dataset. By applying PCA, we were able to identify key variables and enhance the interpretability of the results, which served as a solid foundation for further analysis.

In the next stage of our data analysis, we employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the reliability and validity of our measurement model. PLS-SEM allowed us to examine complex relationships among the variables in our model and estimate both the measurement and structural models simultaneously. This statistical technique is particularly suitable for exploratory studies and research with a relatively small sample size, making it an ideal choice for our study.

Within the PLS-SEM framework, we rigorously evaluated the internal consistency of the measures by assessing the reliability of the observed variables using measures such as

Cronbach's alpha. We also examined convergent validity by assessing the factor loadings and average variance extracted (AVE) for each construct. To ensure discriminant validity, we compared the AVE values with the squared correlations between constructs. These rigorous criteria guided us in the selection of 49 reliable items from the original questionnaire, ensuring the robustness and accuracy of our findings.

To further test the stability and robustness of our results, we employed bootstrapping techniques on PLS-SEM. Bootstrapping is a resampling method that allowed us to generate multiple subsamples from the original dataset. By doing so, we obtained robust estimates of the model parameters and assessed the statistical significance of the relationships. This additional step added further confidence to our findings and strengthened the validity of our conclusions.

For the qualitative data analysis, we conducted a meticulous manual analysis of the interviews by transcribing them verbatim and engaging in thematic analysis. This involved organizing and categorizing the data to identify common themes, patterns, and emerging trends. We familiarized ourselves with the data by immersing in the transcripts and generating initial codes to label meaningful units of information. By searching for patterns and connections among the codes, we identified overarching themes that captured important aspects of the participants' experiences. The analysis followed a bottom-up approach, allowing the themes to emerge organically from the data.

To ensure rigor and validity, we undertook an iterative process of reviewing and refining the identified themes. We constantly compared them with the raw data to enhance the trustworthiness of our findings. Through ongoing discussions and reflections within the research team, we finalized the themes to accurately represent the richness and complexity of the qualitative data. This qualitative analysis provided valuable insights into the subjective experiences and challenges faced by teleworkers, complementing the quantitative findings and deepening our understanding of the research phenomenon.

The integration of quantitative and qualitative findings was done through a process of triangulation. This involved comparing and contrasting the results from both methods to gain a deeper understanding of the relationships between telework and employee well-being. By combining the strengths of quantitative data (such as statistical significance) and qualitative data (such as rich descriptions and contextual insights), we were able to provide a comprehensive and robust analysis of the research questions.

Overall, the methodology employed in this study allowed us to explore the complex dynamics between telework and employee well-being from multiple perspectives. The combination of quantitative and qualitative methods provided a holistic understanding of the phenomena under investigation, enhancing the validity and reliability of the findings. The findings from this study contribute to the existing literature on telework and provide valuable insights for organizations and policymakers seeking to promote employee well-being in the context of telework.

## **Results and Discussion**

### **Measurement Model:**

we evaluated the research model's constructs using three criteria: internal consistency reliability, convergent validity, and discriminant validity (Chin, 1998). The assessment of internal consistency reliability included measures such as Cronbach's alpha, Rho\_A, and composite reliability, as presented in Table 1. Additionally, we examined convergent validity, which involved assessing the average variance extracted (AVE), providing further insights into the robustness of our measurement model. The results for convergent validity are also available in Table 1.

To ensure discriminant validity in Structural Equation Modeling (SEM), we employed various techniques, including the Fornell-Larcker criterion (Fornell and Larcker, 1981), Heterotrait-monotrait (HTMT) ratio (Henseler et al., 2015), and cross-loadings (Hair et al., 2011). The Fornell-Larcker criterion results can be found in Table 2, HTMT values in Table 3, and cross-loadings in Table 4. The thorough evaluation of these criteria confirms that our research model exhibits strong internal consistency reliability, convergent validity, and discriminant validity, enhancing the credibility and soundness of our findings.

**Table 1 Internal consistency reliability and convergent validity**

	Cronbach's Alpha	Rho_A	Composite Reliability	AVE
Burnout	0.883	0.888	0.907	0.551
Engagement	0.941	0.944	0.955	0.810
Inter Well Being	0.910	0.919	0.936	0.786
Intra Well Being	0.893	0.899	0.926	0.758
Job Recovery	0.905	0.913	0.921	0.566
Resilience	0.902	0.911	0.922	0.630
Sleep Quality	0.500	0.503	0.800	0.666
Techno Stress	0.904	0.908	0.920	0.538

**Table 2 Discriminant validity; Fornell-Larcker criterion**

	BO	Eng	InterWB	IntraWB	JR	Res	SQ	TS
BO	<b>0.742</b>							
Eng	-0.057	<b>0.900</b>						
InterWB	0.065	0.160	<b>0.886</b>					
IntraWB	-0.007	0.656	0.358	<b>0.871</b>				
JR	-0.080	0.374	0.258	0.449	<b>0.752</b>			
Res	-0.013	0.699	0.323	0.657	0.456	<b>0.794</b>		
SQ	-0.255	-0.012	-0.079	-0.066	0.046	-0.080	<b>0.816</b>	
TS	0.227	-0.078	0.113	-0.029	-0.067	0.019	-0.371	<b>0.733</b>

**Table 3 Discriminant validity: HTMT**

	BO	Eng	InterWB	IntraWB	JR	Res	SQ
BO							
Eng	0.150						
InterWB	0.112	0.171					
IntraWB	0.192	0.713	0.400				
JR	0.141	0.394	0.269	0.483			
Res	0.182	0.756	0.348	0.720	0.486		
SQ	0.373	0.093	0.117	0.108	0.080	0.125	
TS	0.242	0.132	0.128	0.120	0.116	0.118	0.549

**Table 4 Discriminant validity: Cross-Loadings**

	BO	Eng	InterWB	IntraWB	JR	Res	SQ	TS
Burnout2	<b>0.652</b>	-0.175	0.019	-0.216	-0.161	-0.164	-0.058	0.109
Burnout3	<b>0.756</b>	-0.020	0.016	-0.048	-0.089	-0.012	-0.135	0.114
Burnout4	<b>0.685</b>	-0.160	-0.039	-0.168	-0.129	-0.187	-0.166	0.178
Burnout5	<b>0.769</b>	-0.078	0.105	-0.039	-0.071	0.022	-0.216	0.183
Burnout6	<b>0.769</b>	0.080	0.066	0.140	0.002	0.095	-0.154	0.170
Burnout7	<b>0.708</b>	-0.134	-0.065	-0.062	-0.148	-0.125	-0.247	0.129
Burnout8	<b>0.742</b>	0.114	0.168	0.235	0.087	0.203	-0.241	0.210
Burnout9	<b>0.841</b>	0.032	0.101	0.099	0.010	0.079	-0.257	0.218
Dedic1	-0.065	<b>0.898</b>	0.183	0.587	0.347	0.633	0.006	-0.095
Dedic2	0.010	<b>0.858</b>	0.103	0.530	0.310	0.606	-0.046	-0.006
Dedic3	-0.033	<b>0.929</b>	0.136	0.636	0.337	0.631	0.012	-0.093
Insecurity	0.226	0.082	0.144	0.096	0.015	0.193	-0.264	<b>0.649</b>
InterWB1	0.062	0.165	<b>0.894</b>	0.341	0.239	0.349	-0.082	0.113
InterWB2	0.050	0.137	<b>0.901</b>	0.313	0.229	0.274	-0.079	0.091
InterWB3	0.045	0.126	<b>0.880</b>	0.309	0.239	0.266	-0.054	0.109
InterWB4	0.076	0.135	<b>0.871</b>	0.302	0.203	0.239	-0.063	0.085
IntraWB1	0.026	0.501	0.379	<b>0.789</b>	0.343	0.516	-0.115	0.038
IntraWB2	-0.018	0.568	0.314	<b>0.891</b>	0.407	0.544	-0.048	-0.009
IntraWB3	-0.048	0.607	0.241	<b>0.900</b>	0.384	0.576	-0.002	-0.079
IntraWB4	0.019	0.602	0.324	<b>0.898</b>	0.426	0.645	-0.072	-0.040
Invasion1	0.121	-0.120	0.078	-0.096	-0.124	-0.052	-0.248	<b>0.742</b>
Invasion2	0.187	-0.051	0.052	0.017	-0.062	0.037	-0.274	<b>0.771</b>
Invasion3	0.195	-0.009	0.059	0.038	0.011	0.052	-0.262	<b>0.790</b>
Invasion4	0.107	-0.159	0.046	-0.146	-0.049	-0.099	-0.265	<b>0.740</b>
Invasion5	0.211	-0.086	0.052	-0.035	-0.005	-0.037	-0.229	<b>0.742</b>
Invasion6	0.235	-0.054	-0.000	-0.048	-0.037	-0.045	-0.306	<b>0.815</b>

Mastery1	-0.079	0.325	0.182	0.350	<b>0.797</b>	0.340	0.045	-0.062
Mastery2	-0.079	0.270	0.234	0.341	<b>0.733</b>	0.361	0.029	-0.094
Mastery3	-0.114	0.312	0.189	0.362	<b>0.776</b>	0.369	0.030	-0.072
Mastery4	-0.109	0.353	0.279	0.416	<b>0.817</b>	0.433	0.083	-0.057
Mastery5	0.008	0.289	0.241	0.415	<b>0.687</b>	0.382	0.080	-0.050
Privacy1	0.141	0.047	0.209	0.092	-0.032	0.133	-0.255	<b>0.707</b>
Privacy2	0.137	-0.095	0.134	-0.044	-0.107	0.000	-0.327	<b>0.712</b>
Relax1	-0.043	0.223	0.127	0.266	<b>0.718</b>	0.281	0.010	-0.041
Relax2	0.007	0.262	0.171	0.283	<b>0.746</b>	0.295	-0.012	-0.055
Relax3	-0.029	0.230	0.104	0.278	<b>0.740</b>	0.284	-0.004	-0.029
Relax4	-0.082	0.204	0.138	0.241	<b>0.747</b>	0.258	0.001	0.038
Resil1	-0.054	0.580	0.360	0.624	0.418	<b>0.825</b>	-0.071	0.037
Resil10	0.068	0.488	0.257	0.399	0.289	<b>0.727</b>	-0.049	0.005
Resil2	0.012	0.571	0.227	0.540	0.364	<b>0.811</b>	-0.106	0.041
Resil4	0.015	0.535	0.186	0.463	0.355	<b>0.775</b>	-0.065	-0.023
Resil5	-0.112	0.475	0.252	0.433	0.358	<b>0.757</b>	-0.035	0.074
Resil6	-0.009	0.629	0.218	0.596	0.411	<b>0.861</b>	-0.054	-0.015
Resil9	0.021	0.586	0.277	0.541	0.315	<b>0.794</b>	-0.056	-0.013
SleepQ2	-0.187	0.044	-0.080	-0.041	0.010	-0.032	<b>0.798</b>	-0.290
SleepQ3	-0.228	-0.059	-0.050	-0.066	0.062	-0.095	<b>0.834</b>	-0.314
Uncertainty	0.053	-0.168	0.069	-0.122	-0.130	-0.077	-0.274	<b>0.646</b>
Vigor2	-0.080	<b>0.884</b>	0.178	0.595	0.344	0.642	-0.016	-0.052
Vigor3	-0.086	<b>0.931</b>	0.119	0.598	0.345	0.637	-0.014	-0.097

### Results of the Structural Model Analysis

The results of our study revealed significant insights into the relationships within our research model. Notably, technostress exhibited a significant positive effect on burnout, indicating that higher levels of technostress are associated with an increased risk of professional exhaustion. Additionally, technostress had a significant negative effect on sleep quality, suggesting that elevated levels of technostress are linked to a reduction in sleep quality, potentially impacting overall well-being.

Job recovery emerged as a significant predictor, demonstrating positive effects on both interpersonal and intrapersonal well-being. This finding highlights the importance of effective job recovery strategies in promoting well-being among employees. Moreover, job recovery was associated with increased levels of resilience and engagement, indicating its potential to foster positive organizational outcomes as well.

Interpersonal well-being was found to be significantly associated with higher levels of organizational resilience. This underscores the significance of fostering positive social interactions and support within the workplace to enhance an organization's capacity to effectively navigate challenges and uncertainties. Similarly, intrapersonal well-being exhibited significant positive effects on engagement and organizational resilience. This suggests that individuals who experience a sense of personal growth, autonomy, and purpose in their work are more likely to be engaged and contribute to the organization's resilience.

Furthermore, our analysis revealed interesting indirect effects that shed light on the underlying mechanisms through which job recovery influences engagement and organizational resilience. Specifically, we found that intrapersonal well-being played a crucial mediating role in the relationship between job recovery and both engagement and organizational resilience. This suggests that the positive impact of job recovery on employee engagement and the organization's ability to withstand challenges is, in part, facilitated by the enhancement of intrapersonal well-being.

Similarly, our analysis indicated that interpersonal well-being acted as a mediator in the relationship between job recovery and organizational resilience. Interpersonal well-being encompasses positive social interactions and support within the workplace, fostering a sense of social acceptance, integration, and positive relations with others. Effective job recovery may facilitate positive interactions between colleagues and strengthen social support networks, creating a cohesive and resilient workforce.

However, it is important to acknowledge that the relationships between job recovery and burnout, as well as job recovery and sleep quality, did not reach statistical significance in our sample. This suggests that the influence of job recovery on these specific aspects of well-being may be less pronounced or contingent on other factors not accounted for in our model.



H5a	JR → InterWB → Res	0.020	0.050	Accepted
H6a	JR → IntraWB → Res	0.244	0.000	Accepted
H6b	JR → IntraWB → Eng	0.275	0.000	Accepted

### Results of the Qualitative Analysis

The qualitative analysis conducted in this study provided valuable and in-depth insights into various aspects of telework, shedding light on both positive practices and potential pitfalls that organizations should consider when implementing a telework environment.

One of the key themes that emerged from the interviews was the paramount importance of transparent and regular communication. Participants stressed that open and honest communication is vital for the successful implementation of telework. Clear communication helps to set expectations, define objectives, and establish policies related to telework arrangements. By doing so, organizations can reduce ambiguity and uncertainty among employees, which, in turn, fosters a climate of trust and collaboration. Moreover, participants emphasized that management practices should adapt to the dynamics of telework. This entails adopting a more flexible approach to accommodate the diverse needs and preferences of employees regarding their work location and schedule. Additionally, providing individualized support to teleworking employees is essential to ensure they have the necessary resources and tools to carry out their tasks effectively.

In the realm of employee well-being, the findings underscored the critical role of creating a conducive and supportive telework environment. Participants highlighted the need for employees to have a suitable home workspace that promotes comfort and productivity. Striking a balance between professional responsibilities and personal life was identified as a significant aspect of employee well-being in the context of telework. Employers are encouraged to be mindful of the potential challenges that employees may face in managing their work and personal commitments while teleworking. To support employee well-being, organizations were advised to encourage regular breaks to prevent burnout and fatigue. Additionally, providing access to psychological support resources can help employees navigate the unique challenges associated with telework and maintain their mental well-being.

On the other hand, the interviews also shed light on potential pitfalls that organizations should be cautious of in the telework environment. A major concern highlighted by participants was the lack of regular communication. When communication channels are not adequately

established or utilized, misunderstandings can arise, leading to reduced collaboration and motivation among team members. Addressing this issue calls for a proactive and intentional approach to ensure that communication flows freely between remote and in-office employees. Regular virtual meetings, check-ins, and sharing updates through appropriate platforms can help bridge communication gaps and keep all employees well-informed.

Moreover, the lack of adequate support and resources for remote employees emerged as a significant challenge in the telework setting. Participants emphasized the need for organizations to provide remote workers with the tools, technology, and equipment they need to perform their tasks efficiently. Adequate support mechanisms should also be in place to address any challenges or barriers that teleworkers may encounter, promoting a positive teleworking experience and enhancing overall productivity.

Finally, participants emphasized the importance of promoting collaboration and engagement in a telework environment. Leveraging collaborative work tools and platforms can facilitate seamless communication and information sharing among team members, regardless of their physical location. Encouraging informal interactions among colleagues, whether through virtual coffee breaks or team-building activities, can also foster a sense of camaraderie and belonging within the teleworking workforce.

## **Discussion**

The results of the qualitative analysis shed light on several important aspects of hybrid work. The conducted interviews provided valuable insights into best practices to follow and pitfalls to avoid in implementing a hybrid work environment. On one hand, participants emphasized the importance of transparent and regular communication. They highlighted the need to clarify expectations, objectives, and policies related to hybrid work to reduce uncertainty and foster a climate of trust. Management practices should also adapt to this reality by adopting a more flexible approach and providing individual support to ensure employees have the necessary resources. Additionally, the results also underscored the significance of employee well-being. Participants emphasized the need to ensure employees have a suitable home workspace, focusing on achieving work-life balance. They also recommended encouraging regular breaks and providing psychological support resources if necessary. Regarding the pitfalls to avoid, participants highlighted the lack of regular communication as a major issue. Insufficient communication can lead to misunderstandings, frustrations, and decreased motivation. Furthermore, the lack of adequate support and resources was identified as a barrier to

productivity and employee well-being. Participants also emphasized the importance of promoting collaboration and engagement. The use of collaborative work tools, informal interactions among team members, and maintaining a sense of belonging were identified as beneficial practices.

When comparing these qualitative results with the quantitative results and existing literature, several points of convergence and divergence can be observed. The quantitative study provided evidence supporting the significant effects of technostress and job recovery on various dimensions of well-being, including burnout, sleep quality, interpersonal well-being, intrapersonal well-being, resilience, and engagement. These findings align with the qualitative results that highlight the importance of transparent communication, adaptability in management practices, and employee well-being.

The qualitative results also underscore the importance of effective communication, support and adequate resources, as well as collaboration and engagement in fostering a successful hybrid work environment. These results complement the quantitative findings by providing rich contextual information and practical recommendations based on the experiences and perceptions of the participants. However, it is important to note that there may be some divergences between the qualitative and quantitative results. For example, the qualitative analysis highlighted the importance of providing psychological support resources, while the quantitative study may not have directly measured this aspect. These divergences can be attributed to the different methodologies used in the two studies and the nuances of individual experiences and perceptions.

Overall, by integrating the results of the quantitative and qualitative studies and comparing them with the existing literature, a more comprehensive understanding of the complex dynamics of hybrid work, employee well-being, and organizational consequences can be obtained. This holistic approach allows for a more nuanced interpretation of the results and provides valuable insights to organizations seeking to optimize the well-being and performance of their hybrid workforce.

## Conclusion and Recommendations

This research paper aimed to explore the effects of telework on employee well-being during the COVID-19 era through a comprehensive literature review and a mixed-methods study. The findings from both the quantitative and qualitative analyses provide valuable insights into the complexities of telework and its impact on various aspects of well-being, including burnout, sleep quality, engagement, and resilience.

The literature review highlighted the significance of technostress and job recovery in influencing employee well-being in a telework context. Technostress was found to be associated with increased burnout and reduced sleep quality among teleworkers, emphasizing the importance of managing technology-related challenges. On the other hand, effective job recovery strategies, such as psychological detachment, relaxation, mastery experiences, and control experiences, positively impacted both interpersonal and intrapersonal well-being, contributing to higher levels of resilience and engagement.

The mixed-methods study provided valuable qualitative insights into the best practices and potential pitfalls of implementing a hybrid work environment. Transparent and regular communication, adaptability in management practices, and a focus on employee well-being emerged as essential factors in promoting a successful hybrid work environment. Adequate support and resources, including psychological support, were identified as crucial in ensuring employees' productivity and well-being in a telework setting. Additionally, fostering collaboration and engagement through the use of collaborative work tools and creating a sense of belonging among employees were emphasized as key elements for a cohesive and resilient hybrid workforce.

Based on the findings of this research, organizations and policymakers can take several steps to optimize employee well-being in the context of telework. Foster transparent communication to set clear expectations, define objectives, and establish policies related to telework, which can reduce uncertainty and build trust among the workforce. Encourage effective job recovery strategies, such as providing opportunities for psychological detachment, relaxation, mastery experiences, and control experiences, to enhance well-being and promote a positive work environment. Support employees in achieving a healthy work-life balance by encouraging regular breaks and providing access to resources that promote well-being, including psychological support if needed. Ensure teleworking employees have the necessary tools,

technology, and equipment to perform their tasks efficiently, with adequate support mechanisms in place to address any challenges teleworkers may encounter. Leverage collaborative work tools and platforms to facilitate communication and information sharing among team members, regardless of their physical location, and encourage informal interactions to maintain a sense of camaraderie and belonging. Promote resilience among teleworkers by offering resources and programs that help employees cope with challenges and uncertainties effectively. Regularly evaluate the effectiveness of telework policies and practices, seeking feedback from employees to identify areas for improvement, and be willing to adapt and modify approaches to meet the evolving needs of the hybrid workforce.

Despite the valuable insights provided by this research, several limitations should be acknowledged. The study's sample may not represent all industries or geographical regions, limiting the generalizability of the findings. The reliance on self-reported data may introduce response biases, such as social desirability or memory recall issues, and employing objective measures or multiple data sources could enhance the accuracy of the findings. The research focused on the COVID-19 era and the rapid transition to remote work, and further research is needed to explore the long-term effects of hybrid work on employee well-being. Additionally, the qualitative analysis involved a relatively small number of interviews, and the findings may not capture the full range of experiences across different organizations or industries.

Despite these limitations, this research contributes to the understanding of telework and employee well-being, providing valuable insights for organizations and policymakers seeking to optimize the hybrid work environment. By considering the recommendations and addressing the limitations, organizations can cultivate a resilient, engaged, and well-supported hybrid workforce in the ever-changing world of work.

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