Running head: Telepressure

Telepressure and Recovery Experiences Among Remote and Onsite Workers

Nicolas Gillet*

QualiPsy EE 1901, Université de Tours, Tours, France

Institut Universitaire de France (IUF)

Alexandre J.S. Morin*

Substantive-Methodological Synergy Research Laboratory, Concordia University, Montreal, Québec, Canada

Claude Fernet

LIPROM, Université du Québec à Trois-Rivières, Trois-Rivières, Québec, Canada

Stéphanie Austin

LIPROM, Université du Québec à Trois-Rivières, Trois-Rivières, Québec, Canada

Tiphaine Huyghebaert-Zouaghi

C2S EA 6291, Université de Reims Champagne-Ardenne, Reims, France

* Since the first two authors (N. G. & A. J. S. M.) contributed equally to the preparation of this article, their order was determined at random: Both should be considered first authors.

Corresponding author:
Nicolas Gillet,
Université de Tours,
Faculté Arts et Sciences Humaines,
Département de psychologie,
3 rue des Tanneurs, 37041 Tours Cedex 1, France
E-mail: nicolas.gillet@univ-tours.fr

This is the prepublication version of the following manuscript:
Gillet, N., Morin, A. J. S., Fernet, C., Austin, S., & Huyghebaert-Zouaghi, T. (in press). Telepressure and recovery experiences among remote and onsite workers. *Journal of Personnel Psychology*. Early view. https://doi.org/10.1027/1866-5888/a000303

Abstract

This study examined the associations between telepressure and work recovery experiences (i.e., psychological detachment, relaxation, control, and mastery), and tested whether these associations differ between employees working onsite (n = 158) or remotely (n = 284). Our results revealed that telepressure was negatively related to psychological detachment, relaxation, control, and mastery. Moreover, the relations between telepressure and recovery experiences were stronger among employees working onsite than among those working remotely. These results revealed that working remotely helped to buffer the negative links between telepressure and recovery experiences.

Keywords: Telepressure; recovery; moderation; remote working

Modern communication technologies can increase the speed and efficiency of work-related communications (Windeler et al., 2017), but can also blur the boundaries between the work and family domains, thus hindering employees' work recovery and well-being (Charalampous et al., 2019). Workers can stay connected to their work at any time and place and, as a result, may feel pressured to respond to work-related messages during their free time (Cambier et al., 2019). Research has shown that telepressure (i.e., the urge to respond quickly to work-related messages) was negatively related to employees' recovery from work, a critical driver of well-being (Barber & Santuzzi, 2015).

However, the associations between telepressure and work recovery experiences are likely to differ as a function of employees' work context, a possibility that prior research has failed to consider. The detrimental effects of telepressure may thus be less pronounced for employees working remotely, given their ability to put work-related pressures into perspective, or to differentially organize their work schedule, when working outside of a formal workplace. The COVID-19 pandemic has forced many onsite employees to work remotely, bringing attention to the previously mainly ignored reality of remote work contexts. However, scholars have yet to investigate how working remotely may interact with telepressure as well as their potential associations with employees' functioning. This study was designed to examine the links between telepressure and work recovery experiences (i.e., psychological detachment, relaxation, control, and mastery; Sonnentag & Fritz, 2007), and whether these associations differ between employees working remotely or onsite.

Telepressure and Work Recovery Experiences

Increasing scientific attention is now allocated to the associations between telepressure and work recovery experiences (e.g., Cambier et al., 2019). Telepressure can be conceived as a perceived job demand that contributes to deplete workers' personal resources (Hobfoll, 2011). More precisely, because they have an urge to respond quickly to work-related messages at any time and place, telepressured employees may be unable to take advantage of their recovery opportunities. For instance, it could be harder for them to have control over their recovery process (e.g., being able to choose how to spend free time), to psychologically detach from their work (e.g., not thinking about work-related problems or issues), to engage in relaxing activities (e.g., meditation, listening to music), and to accomplish out-of-work mastery tasks (e.g., learning a new language, achieving a fitness goal).

Hypothesis 1. Telepressure will be negatively related to: (a) psychological detachment, (b) relaxation, (c) control, and (d) mastery.

The Moderating Role of Working Onsite Versus Remotely

We expect that a remote work context will buffer (reduce) the negative associations between telepressure and recovery experiences. More precisely, we expect these negative associations to be reduced when work is accomplished in a setting (i.e., remote) that helps employees to distance themselves from the source of the pressure (Windeler et al., 2017). Indeed, social psychologists have long established that individuals were less likely to conform to distant sources of influence (Haslam et al., 2014). This ability to distance themselves from the negative sources of pressure associated with their work should make it easier for them to restore their resources through efficient work recovery experiences without interference from work (Sonnentag & Fritz, 2007). Likewise, telepressure, like any other type of job demands, should contribute to deplete employees' personal resources, leading them to adopt defensive strategies to protect their remaining resources (Hobfoll, 2011). In this context, working remotely should make it easier for them to adopt such coping strategies (e.g., psychological detachment), thus increasing the quality of their work recovery.

In contrast, the negative associations between telepressure and recovery experiences should be exacerbated among onsite employees who have to work in a setting that makes it harder for them to distance themselves from work-related sources of pressure (Charalampous et al., 2019). Working onsite should thus make telepressured employees more inclined to invest time and energy into their work roles beyond the temporal, physical, and behavioral boundaries of their work (knowing that they would have to face their workplace the next day), leading to worse recovery experiences (Barber & Santuzzi, 2015). Indeed, onsite employees tend to have a stronger bond with their organization, supervisor, and colleagues, which may increase their feeling of pressure and their difficulties to switch-off from work requirements (Haslam et al., 2014; Sonnentag & Fritz, 2007). As a result, telepressure should be associated with poorer recovery experiences among onsite workers.

Hypothesis 2. The negative associations between telepressure and recovery experiences will be

stronger among employees working onsite and weaker among those working remotely.

Method

Participants and Procedure

Participants were invited to complete an online questionnaire via the Prolific Academic crowdsourcing platform, after being informed of the objectives of the research, of the voluntary and confidential nature of their participation, and ensured that they could freely withdraw from the survey at any time. Participants were compensated £0.60 for completing the questionnaire (5 minutes).

Recruitment was limited to participants for whom English was the first language and who were employed by an organization (rather than self-employed). The survey included two attention checks (e.g., "It is important that you pay attention to our survey, please tick strongly disagree"), and one final question verifying "for scientific reasons", if participants really worked in an organization. Only those who completed all verifications were included in the study. The final sample includes 442 participants (56.6% females), 158 working onsite all of the time, and 284 working remotely all of the time or part of the time. Participants worked in the British Isles (81.0%) or USA (19.0%), and 94.1% held a bachelor degree. They had a mean age of 39.52 years (*SD* = 10.38) and a mean tenure in their current position of 6.89 years (*SD* = 6.03). Most participants held a permanent (95.5%) full-time (89.6%) position. Participants worked in non-market services (53.2%), market services (33.0%), industry (8.1%), construction (2.3%), agriculture (0.2%), or other sectors (3.2%).

Measures

All items were rated on a five-point scale ranging from "Strongly Disagree" to "Strongly Agree".

Telepressure. Following a common stem (i.e., "When using message-based technology for work purposes…"), six items (e.g., "I feel a strong need to respond to others immediately"; α = .94) were presented to participants (Barber and Santuzzi, 2015).

Recovery. We assessed psychological detachment (e.g., "I distance myself from my work"; α = .89), relaxation (e.g., "I do relaxing things"; α = .92), control (e.g., "I decide my own schedule"; α = .90), and mastery (e.g., "I seek out intellectual challenges"; α = .90), following a common stem ("In the evening, after work, and when I am on a weekend/vacation…") (Sonnentag & Fritz, 2007).

Analyses

We used Mplus 8.7's (Muthén & Muthén, 2021) maximum likelihood robust (MLR) estimator for all analyses. Due to the nature of our online data collection procedures, there were no missing data. First, we estimated a confirmatory factor analytic (CFA) model encompassing all multi-item constructs considered in the present study, together with observed scores reflecting participants' work context (coded 0 for onsite workers and 1 for remote workers) which were simply allowed to correlate with the other factors. In this model, all multi-item constructs were defined as latent factors from their *a priori* indicators and allowed to correlate with one another. No cross-loading or correlated uniqueness was included into this model. Second, this model was converted to a structural equation model (SEM) in which telepressure was specified as being related to psychological detachment, relaxation, control, and mastery. Due to the later testing of latent interactions involving work context (onsite versus remote), this variable was also allowed to be associated with recovery experiences.

To verify the adequacy of our CFA and SEM solutions, we relied on goodness-of-fit indices, where values > 0.90 and 0.95 on the Tucker-Lewis index (TLI) and the comparative fit index (CFI), and values lower than 0.08 and 0.06 on the root mean square error of approximation (RMSEA) were respectively taken to reflect acceptable and excellent levels of fit (Marsh et al., 2005). In addition, to test whether the associations between telepressure and the four recovery experiences differed (i.e., was moderated) between onsite and remote workers, latent interactions between work context (0: Onsite workers; 1: Remote workers) and telepressure were estimated using latent moderated SEM (LMS) and allowed to be associated with recovery experiences. Significant interactions were then plotted and interpreted using simple slope analyses. Mplus code for our main analyses is reported in the online supplements.

Results

The goodness of fit of the CFA (χ^2 = 637.450, *df* = 216; CFI = .929; TLI = .916; and RMSEA = .066 [.061; .072]) and SEM (χ^2 = 642.580, *df* = 217; CFI = .916; TLI = .928; and RMSEA = .067 [.061; .073]) solutions were satisfactory, supporting their ability to provide an accurate approximation of the data. Parameter estimates from the CFA solution are reported in Table 1 and revealed well-defined, reliable, and related but well-differentiated constructs. The parameter estimates related to the

associations specified in the SEM solution, as well as those from the subsequent model including latent interactions, indicated that telepressure was associated with lower psychological detachment, relaxation, control, and mastery (see Table 2). These results support for Hypothesis 1. On its own, the work context was not associated with relaxation, mastery, and control, but was positively related to psychological detachment. The interaction between telepressure and work context was significantly related to detachment, relaxation and control, and was in the same direction but marginal (p = .061) for mastery. Simple slope analyses revealed that the negative associations between telepressure and the four recovery experiences were stronger among onsite workers than remote workers (see the bottom of Table 3, and Figures 1 to 4). These results support Hypothesis 2.

Discussion

This study supported the presence of negative associations between telepressure and psychological detachment, relaxation, mastery, and control. The associations between telepressure and recovery experiences were also stronger among employees working onsite relative to those working remotely.

Theoretical Implications

The negative associations between telepressure and recovery experiences suggest that employees who experience high levels of telepressure tend to stay engaged in their work role at all times, which is inherently incompatible with psychological detachment and keeps them in a state of arousal that does not allow for relaxation. Telepressure also makes it harder for employees to participate in other activities during their free time (mastery) and to feel volitional about how they spend their free time (control; Sonnentag & Fritz, 2007).

However, working remotely may help employees to cope with the detrimental effects of telepressure. Indeed, remote workers are less directly connected with their work peers, with whom they do not have frequent face-to-face interactions at work, which may contribute to free them from ongoing and direct pressure to be constantly connected to the job (Haslam et al., 2014). Conversely, when telepressured employees work onsite, they perceive more direct and stronger external pressure (Charalampous et al., 2019), increasing the negative spillover of their work-related preoccupations into their personal domain in the form of poor recovery experiences (Barber & Santuzzi, 2015).

Interestingly, remote work also has the power to facilitate the segmentation between the work and family domains. Indeed, we found that employees working remotely experienced higher levels of psychological detachment than those working onsite. Working onsite may come with an array of hassles (e.g., commuting, handling household chores in a more limited timeframe) that accumulate to maintain onsite employees in a constant state of arousal, making it harder to detach from work.

Limitations and Research Perspectives

Limitations have to be considered. Although shared method biases are unlikely to play a role in our multivariate analyses (Siemsen et al., 2010), our sole reliance on self-report measures to assess telepressure and work recovery experiences increases the risk of other forms of social desirability and self-report biases. Likewise, our cross-sectional design makes it impossible to confirm the directionality of the associations between telepressure and recovery experiences. Although our measure of work context (onsite versus remote) is likely to represent an objective indicator of the work reality of the employees, it would thus be interesting for future studies to consider the incorporation of other objective measures (e.g., biological measures of psychophysiological activation) and informant ratings of employees' functioning (e.g., spouse). Furthermore, it also seems critical for future research to consider the directionality of these associations using longitudinal data. Longitudinal data also would make it possible to unpack the mechanisms (e.g., sleeping problems, work-family conflict) involved in these associations. Finally, we did not assess the reasons why employees ended up working remotely (e.g., whether it was imposed or chosen), the context in which remote work occurred (e.g., access to childcare or to a proper home office), or whether our "remote" employees worked remotely all the time or part of the time. It would be important for future research to consider whether and how these characteristics might moderate the observed associations.

Practical Implications

Modern societies tend to value heavy forms of work investment. Yet, our findings highlight the need to consider reducing telepressure to promote employees' recovery experiences. Telepressure prevention could be encouraged at the organizational level (e.g., stating clear work-home segmentation norms), but also at the individual level (e.g., counseling to develop new habits and replace old malfunctioning behaviors). Given that the associations between telepressure and recovery experiences

were stronger among employees working onsite relative to those working remotely, it might be particularly useful to decrease telepressure among employees working onsite. Managers and employees could identify realistic temporal, behavioral, and physical boundaries between their work and non-work lives and identify best practices to respect these boundaries. More generally, as recently suggested, organizations and managers should rethink work and propose different interventions to better support onsite and remote workers (Charalampous et al., 2019).

References

Barber, L.K., & Santuzzi, A.M. (2015). Please respond ASAP: Workplace telepressure and employee recovery. *Journal of Occupational Health Psychology, 20*, 172-189. https://doi.org/10.1037/a0038278

Cambier, R., Derks, D., & Vlerick, P. (2019). Detachment from work: A diary study on telepressure, smartphone use and empathy. *Psychologica Belgica*, *59*, 227-245. https://doi.org/10.5334/pb.477

Charalampous, M., Grant, C.A., Tramontano, C., & Michailidis, E. (2019). Systematically reviewing remote e-workers' well-being at work: A multidimensional approach. *European Journal of Work and Organizational Psychology, 28*, 51-73. https://doi.org/10.1080/1359432X.2018.1541886

Haslam, N., Loughnan, S., & Perry, G. (2014). Meta-Milgram: An empirical synthesis of the obedience experiments. *PLOS ONE, 9*, e93927. https://doi.org/10.1371/journal.pone.0093927

Hobfoll, S.E. (2011). Conservation of resource caravans and engaged settings. *Journal of Occupational and Organizational Psychology*, *84*, 116-122. https://doi.org/10.1111/j.2044-8325.2010.02016.x

Marsh, H.W., Hau, K.-T., & Grayson, D. (2005). Goodness of fit in structural equation models. In A. Maydeu-Olivares & J.J. McArdle (Eds.), *Contemporary psychometrics* (pp. 275-340). Erlbaum.

Muthén, L.K., & Muthén, B. (2021). *Mplus user's guide*. Muthén & Muthén.

Siemsen, E., Roth, A., & Oliveira, P. (2010). Common method bias in regression models with linear, quadratic, and interaction effects. *Organizational Research Methods, 13*, 456-476. https://doi.org/10.1177/1094428109351241

Sonnentag, S., & Fritz, C. (2007). The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work. *Journal of Occupational Health Psychology, 12*, 204-221. https://doi.org/10.1037/1076-8998.12.3.204

Windeler, J.B., Chudoba, K.M., & Sundrup, R.Z. (2017). Getting away from them all: Managing exhaustion from social interaction with telework. *Journal of Organizational Behavior, 38*, 977-995. https://doi.org/10.1002/job.2176

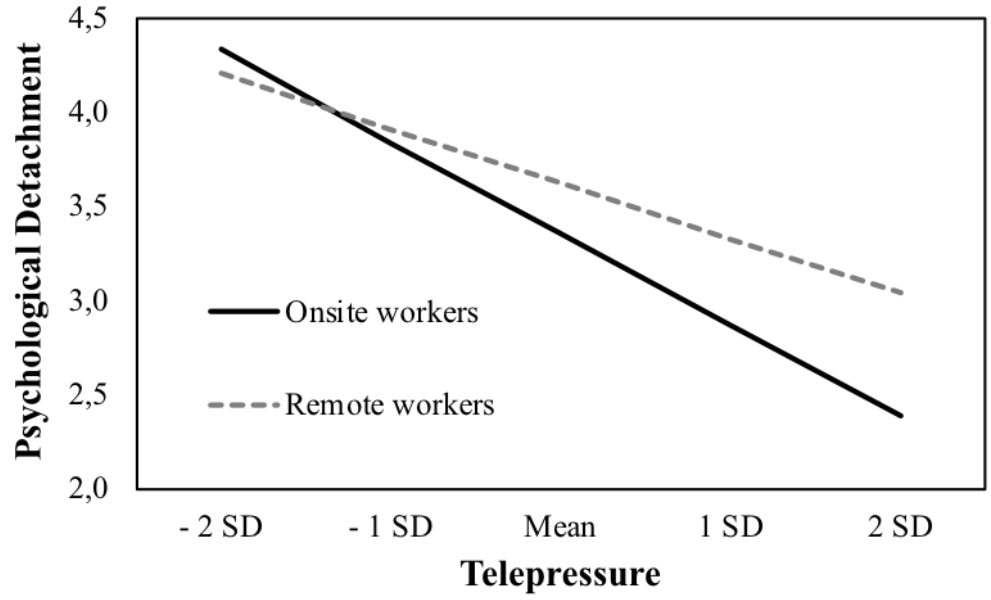

Figure 1. *Simple slope analysis of the associations between telepressure and psychological detachment among onsite and remote workers*

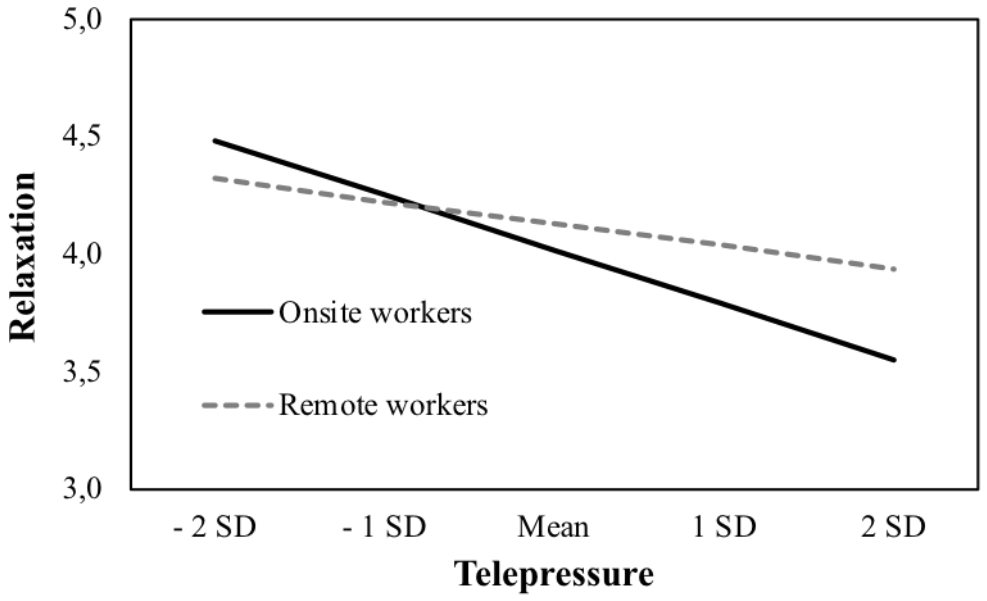

Figure 2. *Simple slope analysis of the associations between telepressure and relaxation among onsite and remote workers*

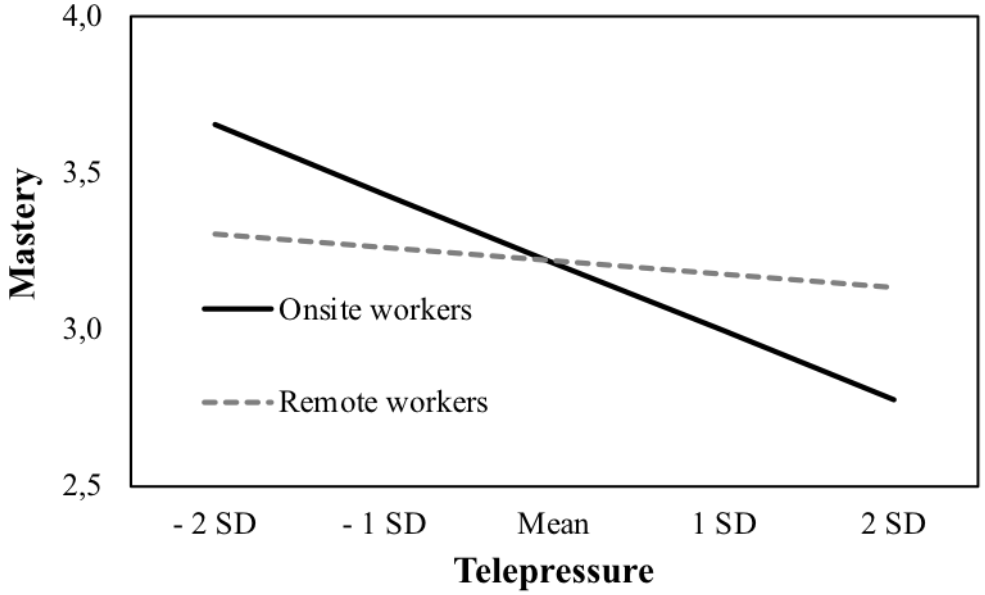

Figure 3. *Simple slope analysis of the associations between telepressure and mastery among onsite and remote workers*

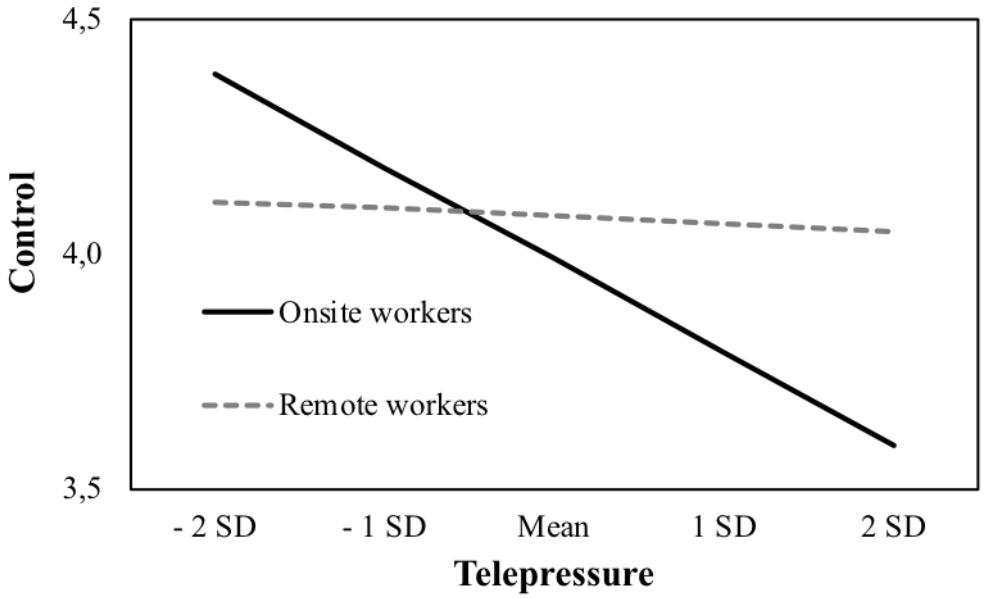

Figure 4. *Simple slope analysis of the associations between telepressure and control among onsite and remote workers*

Table 1

Standardized Factor Loadings (λ), Uniquenesses (δ), and Correlations from the Measurement Model

Items	Telepressure λ	Detachment λ	Relaxation λ	Mastery λ	Control λ	δ
Telepressure						
Item 1	.753					.434
Item 2	.757					.427
Item 3	.830					.311
Item 4	.894					.201
Item 5	.907					.177
Item 6	.889					.210
ω						
Detachment						
Item 1		.879				.227
Item 2		.882				.223
Item 3		.797				.365
Item 4		.706				.502
ω						
Relaxation						
Item 1			.794			.369
Item 2			.929			.137
Item 3			.944			.108
Item 4			.797			.365
ω						
Mastery						
Item 1				.779		.394
Item 2				.848		.281
Item 3				.874		.237
Item 4				.850		.278
ω						
Control						
Item 1					.811	.342
Item 2					.872	.239
Item 3					.873	.238
Item 4					.795	.367
ω						
Latent Correlations						
Telepressure	-					
Detachment	-.392	-				
Relaxation	-.215	.521	-			
Mastery	-.137	*.055*	.255	-		
Control	-.128	.388	.625	.270	-	
Onsite vs. remote	.116	*.088*	*.049*	*-.015*	*.043*	

Note. λ: Factor loading; δ: Item uniqueness; ω: Omega coefficient of model-based composite reliability; most parameters are statistically significant ($p \leq .05$), save for those marked in italics.

Table 2

Model Results

	Detachment		Relaxation		Mastery		Control	
	b (s.e.)	β	b (s.e.)	β	b (s.e.)	β	b (s.e.)	β
Basic Model								
Telepressure	-.448 (.063)**	-.405	-.229 (.052)**	-.223	-.138 (.057)*	-.136	-.136 (.057)*	-.134
Work context	.305 (.105)**	.132	.157 (.104)	.073	-.001 (.104)	.000	.121 (.107)	.057
R^2	.181 (.040)**		.055 (.024)*		.019 (.015)		.021 (.017)	
Model with Latent Interactions								
Telepressure	-.589 (.087)**	-.532	-.350 (.081)**	-.339	-.261 (.086)**	-.258	-.292 (.096)**	-.287
Work context	.318 (.107)**	.138	.168 (.106)	.078	.010 (.105)	.005	.135 (.109)	.064
Centrality x Design	.238 (.105)*	.103	.206 (.098)*	.096	.210 (.112)	.099	.268 (.115)*	.126
R^2	.185 (.040)**		.060 (.025)*		.025 (.016)		.034 (.022)	
	a	b (s.e.)	a	b (s.e.)	a	b (s.e.)	a	b (s.e.)
Work Centrality: Simple Slope Analyses								
Onsite workers	3.354	-.486 (.067)**	4.016	-.232 (.053)**	3.211	-.220 (.072)**	3.987	-.198 (.064)**
Remote workers	3.617	-.290 (.060)**	4.127	-.095 (.041)*	3.219	-.043 (.062)	4.079	-.016 (.046)

Note. Work context: 0 = Onsite workers and 1 = Remote workers; R^2: Squared multiple correlation (reflecting the proportion of explained variance); a: Regression intercept (used in drawing the simple slope graphs); b: Unstandardized coefficient; s.e.: Standard error of the coefficient; β: Standardized coefficient; * $p \leq .05$, ** $p \leq .01$.

Online Supplements for:

Telepressure and Recovery Experiences Among Remote and Onsite Workers

MPLUS Syntax for the Main Models Estimated in this Study

```
TITLE: Confirmatory Factor Analysis
DATA: FILE = DATA.dat;
VARIABLE:
NAMES ARE ID Context
TEL1 TEL2 TEL3 TEL4 TEL5 TEL6
DET1 DET2 DET3 DET4
REL1 REL2 REL3 REL4
MAS1 MAS2 MAS3 MAS4
CON1 CON2 CON3 CON4;

USEVARIABLES ARE Context
TEL1 TEL2 TEL3 TEL4 TEL5 TEL6
DET1 DET2 DET3 DET4
REL1 REL2 REL3 REL4
MAS1 MAS2 MAS3 MAS4
CON1 CON2 CON3 CON4;

IDVAR = ID;

ANALYSIS:
ESTIMATOR = MLR;

MODEL:
TEL BY TEL1*
TEL2 TEL3 TEL4 TEL5 TEL6;
TEL@1;
DET BY DET1*
DET2 DET3 DET4;
DET@1;
REL BY REL1*
REL2 REL3 REL4;
REL@1;
MAS BY MAS1*
MAS2 MAS3 MAS4;
MAS@1;
CON BY CON1*
CON2 CON3 CON4;
CON@1;

OUTPUT: STDYX TECH1 SAMPSTAT SVALUES;
```

TITLE: Structural Equation Model

```
DATA: FILE = DATA.dat;
VARIABLE:
NAMES ARE ID Context
TEL1 TEL2 TEL3 TEL4 TEL5 TEL6
DET1 DET2 DET3 DET4
REL1 REL2 REL3 REL4
MAS1 MAS2 MAS3 MAS4
CON1 CON2 CON3 CON4;

USEVARIABLES ARE Context
TEL1 TEL2 TEL3 TEL4 TEL5 TEL6
DET1 DET2 DET3 DET4
REL1 REL2 REL3 REL4
MAS1 MAS2 MAS3 MAS4
CON1 CON2 CON3 CON4;

IDVAR = ID;

ANALYSIS:
ESTIMATOR = MLR;

MODEL:
TEL BY TEL1*
TEL2 TEL3 TEL4 TEL5 TEL6;
TEL@1;
DET BY DET1*
DET2 DET3 DET4;
DET@1;
REL BY REL1*
REL2 REL3 REL4;
REL@1;
MAS BY MAS1*
MAS2 MAS3 MAS4;
MAS@1;
CON BY CON1*
CON2 CON3 CON4;
CON@1;

DET REL MAS CON on TEL Context;

OUTPUT: STDYX TECH1 SAMPSTAT SVALUES;
```

TITLE: Latent Moderated Structural Equation Model

```
DATA: FILE = DATA.dat;
VARIABLE:
NAMES ARE ID Context
TEL1 TEL2 TEL3 TEL4 TEL5 TEL6
DET1 DET2 DET3 DET4
REL1 REL2 REL3 REL4
MAS1 MAS2 MAS3 MAS4
CON1 CON2 CON3 CON4;

USEVARIABLES ARE Context
TEL1 TEL2 TEL3 TEL4 TEL5 TEL6
DET1 DET2 DET3 DET4
REL1 REL2 REL3 REL4
MAS1 MAS2 MAS3 MAS4
CON1 CON2 CON3 CON4;

IDVAR = ID;

ANALYSIS:
ESTIMATOR = MLR;
TYPE = RANDOM;
ALGO = INTEGRATION;

MODEL:
TEL BY TEL1*
TEL2 TEL3 TEL4 TEL5 TEL6;
TEL@1;
DET BY DET1*
DET2 DET3 DET4;
DET@1;
REL BY REL1*
REL2 REL3 REL4;
REL@1;
MAS BY MAS1*
MAS2 MAS3 MAS4;
MAS@1;
CON BY CON1*
CON2 CON3 CON4;
CON@1;

TEL_Context | TEL XWITH Context;

DET REL MAS CON on TEL Context TEL_Context;

OUTPUT: STDYX TECH1 SAMPSTAT SVALUES;
```