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Unlocking Positive Affect in Public Institutions: How Daily Recovery and Micro-Interruptions Shape Adaptive Performance in the Workplace

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ABSTRACT

Based on the conservation of resources theory and the affective events theory, we have developed a framework to analyze how daily recovery enhances daily adaptive behaviors (adaptive performance), and how that improves daily positive affect. Moreover, we develop theoretical arguments for daily micro-interruptions as a boundary condition that buffers this relation and argue that the work context (i.e., telework, or at the office) can function as a protective factor. Using a diary design, our aim was to (1) explore the within-person effects of daily recovery on positive affect via adaptive performance, and (2) test the three-way interaction between daily micro-interruptions and the work context in the mediated relationship. We conducted a multilevel study in which 238 managers from public institutions participated. They filled out questionnaires at the end of the day for five consecutive working days ($N = 238 \times 5 = 1190$). The results revealed that daily recovery positively influences employees' daily positive affect through their daily adaptive performance, but only on days with fewer daily micro-interruptions. They also showed that the employees' work context attenuates this interaction. Practical implications: this study provides insights into the role of daily micro-interruptions and their combined effect with the regimen of work practiced on that day. The findings deepen knowledge concerning how and when telework may be optimized, suggesting that telework is not always beneficial, nor detrimental, for performance: partially, it depends on the individuals' recovery and their daily micro-interruptions. We critically discuss the findings considering management practices that may allow employees to manage their daily life at work better, in particular, their recovery process and daily micro-interruptions.

1 | Introduction

Research has acknowledged the importance of workers recovering their resources to enhance their performance (Chawla et al. 2020). Recovery is a dynamic process through which individuals reestablish their personal resources (e.g., energy) enabling them to invest efforts in performing their tasks (Sonnetag et al. 2017). Recovery processes include experiences of relaxation, mastery, control, and psychological detachment

from work (Sonnetag and Fritz 2007). These experiences are dynamic because they vary from day to day, leading thereby to important consequences for workers' behaviors (performance).

Theoretically, the conservation of resources theory (COR; Hobfoll 2001) helps to understand the importance of recovery processes for individuals; it states that individuals struggle to protect their resources, prevent their loss, and devote efforts to acquiring new ones (Hobfoll 2001). A considerable amount of

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research has emphasized the importance of recovery for adaptive performance and reduction of stress (e.g., Sonnentag and Fritz 2007). Based on the COR theory, we argue that recovery not only replenishes resources to accomplish individuals' work goals (and achieve higher adaptive performance), but also serves personal purposes, such as making individuals feel better. Therefore, we propose that daily recovery experiences will make individuals feel better by enhancing their daily adaptive performance.

The relationship between daily recovery and daily adaptive performance might be dynamic and vary according to situational (e.g., daily interruptions) and contextual factors (e.g., telework or face-to-face work). Since the COVID-19 pandemic crisis began, organizations have increased the use of flexible work arrangements, such as telework, involving the use of digital technologies to bring people together (e.g., Junça-Silva and Silva 2022). While working individuals are often interrupted (Sonnentag et al. 2018), either to work with colleagues or to communicate with each other (Richardson and Taylor 2012). Daily interruptions were conceived as frequent affective micro-events that involve changes to individuals' time use (Feldman and Greenway 2021), and therefore condition their performance. The affective events theory (AET; Weiss and Cropanzano 1996) supports this evidence, as it argues that daily affective events (micro-events) influence individuals' behaviors (adaptive performance) and affect (positive affect). Some studies have shown that interruptions are more frequent in telework than in face-to-face work (Chong and Siino 2006).

Despite the growing scholarly interest in daily recovery experiences and adaptive performance, empirical evidence on how these processes unfold in employees' day-to-day work remains limited (Steed et al. 2021). In particular, only a few studies have adopted an event-based perspective capable of capturing short-term fluctuations in affect and behavior (Kujanpää and Olafsen 2024). Furthermore, research has rarely examined how contextual factors—such as telework versus office-based work—shape the recovery–adaptation link, especially within the public administration context. This gap is particularly salient given the ongoing debates on the effective implementation and management of telework in the public sector, where understaffing, bureaucratic constraints, and digital transformation challenges often limit the potential benefits of flexible work arrangements (Mele et al. 2023; Ortiz-Lozano et al. 2022).

To address these gaps, and drawing on the conservation of resources theory (Hobfoll 2001) and the affective events theory (Weiss and Cropanzano 1996), we developed a framework to

analyze and explain how daily recovery fosters adaptive performance (i.e., daily adaptive behaviors) and, in turn, enhances daily positive affect. Additionally, we propose that daily micro-interruptions act as a boundary condition that buffers this relationship, while the work context (i.e., telework versus office) operates as a protective factor shaping the dynamics among these variables (see Figure 1).

2 | Theoretical Framework

2.1 | The Relationship Between Recovery From Work, Performance, and Positive Affect

Work inherently requires individuals to expend personal and psychological resources; however, these resources can be replenished through specific psychological mechanisms known as recovery experiences. Such experiences are crucial for both employees and organizations, as they enable the restoration of energy and well-being necessary for sustained performance (Sonnentag and Fritz 2007). Recovery is typically defined as a set of psychological processes that include psychological detachment from work (i.e., mentally disengaging from work-related thoughts and demands), relaxation (engaging in restful or leisure activities), mastery (pursuing activities that promote learning or skill development), and control (experiencing autonomy in planning and choosing how to spend one's nonwork time) (Sonnentag and Natter 2004). Through these mechanisms, individuals restore depleted personal resources—such as energy or cognitive capacity—allowing the psychophysiological system to return to a baseline state of equilibrium (Sonnentag and Zijlstra 2006).

Recovery can occur at two levels: internal and external. Internal recovery refers to short, within-day periods in which individuals momentarily shift their attention away from work demands—such as by taking a brief coffee break or engaging in light relaxation—which allows partial replenishment of resources needed for ongoing task performance (Sonnentag and Fritz 2007). In contrast, external recovery takes place outside working hours, such as after work or during weekends, and serves to restore resources for the upcoming workday or week (Sonnentag and Fritz 2007).

The COR theory (Hobfoll 1989, 2001) and the effort–recovery (*E–R*) model (Meijman and Mulder 1998) offer complementary frameworks for understanding the role of recovery processes in employees' functioning and well-being. The central premise of the COR theory is that individuals strive to maintain, protect,

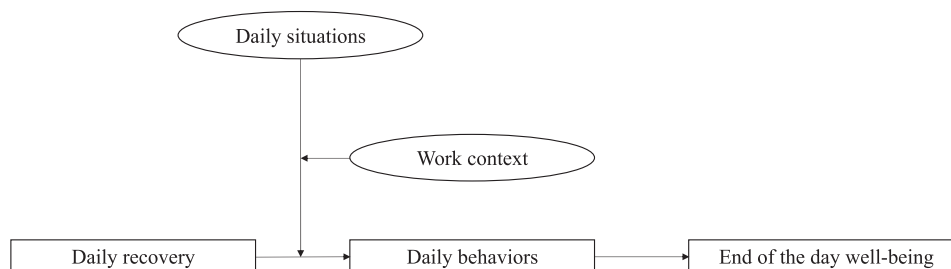


FIGURE 1 | The framework proposed and the theoretical assumptions of the model.

and build personal resources, particularly those essential for survival, self-esteem, and well-being (Hobfoll and Freedy 2017). Among these, energy is one of the most critical resources for recovery (Chawla et al. 2020). When individuals perceive a loss or depletion of resources, they actively engage in behaviors aimed at resource replenishment—such as relaxation, psychological detachment, or exercising control over leisure time. Once resources are restored and energy levels return to baseline, individuals not only regain their ability to perform effectively (Chawla et al. 2020) but also experience enhanced well-being (Rau and Triemer 2004).

According to COR theory, individuals must perceive themselves as resourceful to function optimally and experience positive affective states (Hobfoll and Freedy 2017). Hence, when recovery is successful, the likelihood of experiencing positive affective outcomes—such as enthusiasm, satisfaction, and joy—increases (Junça-Silva 2022a, 2022b). Conversely, insufficient recovery prevents full restoration of resources and may result in health impairments, including distress, emotional exhaustion, and fatigue (Sonnetag 2001). These assumptions are consistent with the effort–recovery model (Meijman and Mulder 1998), which posits that daily work demands require sustained physical and psychological effort, thereby depleting finite resources. Effective recovery allows individuals to regain those resources, enabling them to meet subsequent work demands more efficiently and maintain optimal functioning across time.

Taken together, both theoretical perspectives conceptualize recovery as a dynamic and cyclical process through which mental and physiological resources consumed during work are replenished (Hobfoll 1989; Zijlstra and Sonnetag 2006). When recovery is incomplete, however, individuals may enter a fatigue–strain spiral, resulting in cumulative exhaustion, reduced performance (Chawla et al. 2020; Steed et al. 2021), and long-term health problems such as cardiovascular disease (Kivimäki et al. 2006) or sleep disturbances (Cropley et al. 2006; Nylén et al. 2007).

Although substantial evidence supports the benefits of recovery for performance outcomes (e.g., Fritz and Sonnetag 2005; Hoang et al. 2024; Volman et al. 2013), fewer studies have examined its effects on positive indicators of well-being (Rhee et al. 2024). When explored, well-being has often been operationalized merely as the absence of stress (Volman et al. 2013), yet not being stressed does not necessarily imply being happy. More recent scholarship has called for research that examines recovery in relation to positive psychological states, such as positive affect— affective responses to events or contexts shaped by individual interpretations and appraisals (Diener et al. 2020; Kujanpää and Olafsen 2024). Indeed, individuals may feel fatigued from work without being distressed and still require recovery to restore depleted personal resources (Junça-Silva 2025a, 2025b). Recovery, therefore, not only mitigates strain, but also enables energy restoration and emotional vitality (Chawla et al. 2020; Sonnetag et al. 2023).

Building on COR theory, we propose that recovery facilitates positive affect by enhancing adaptive work behaviors—that is, employees' ability to adjust to changing conditions, contexts,

or task demands (Griffin et al. 2010; Park and Park 2019). The COVID-19 pandemic, for instance, compelled workers to adapt rapidly to new working modalities such as telework, as well as altered social norms including physical distancing (Junça-Silva and Silva 2022; Taşkan et al. 2022, 2024). In today's work environments—marked by constant technological, structural, and interpersonal change—adaptive performance has become a critical competence for organizational success (Jundt et al. 2015; Wang et al. 2020). From this perspective, recovery serves as a resource-restorative mechanism that enhances employees' readiness and motivation to adapt, ultimately contributing to improved affective experiences and well-being.

Accordingly, we tested the following hypothesis:

H1. *Daily recovery will positively predict positive affect via adaptive performance, at the daily level.*

2.2 | The Moderating Role of Daily Micro-Interruptions and Telework

The COVID-19 pandemic compelled many organizations to adopt flexible work arrangements, such as telework, as a means of mitigating the spread of the virus (e.g., Junça-Silva and Silva 2022). Telework is defined as a flexible work arrangement in which employees perform their tasks outside the organization's premises, relying on digital technologies to communicate and execute work-related activities (Niles 1994). However, working from home often exposes employees to a higher frequency of daily interruptions than working in the office (Kazekami 2020). This increase in interruptions has been attributed to heavier workloads, extended working hours, and the constant online availability now expected by supervisors and coworkers in digitally mediated environments (Wöhrmann and Ebner 2021). Moreover, the extensive use of communication technologies and the collaborative nature of remote work (Richardson and Taylor 2012) create conditions in which workers can be interrupted at virtually any moment during the workday (Bravo-Duarte et al. 2025).

Interruptions can be conceptualized as affective micro-events that punctuate daily work life, disrupting employees' attention and shaping both performance and emotional experiences (Feldman and Greenway 2021). These micro-interruptions—such as phone calls, instant messages, or unscheduled virtual meetings—are highly frequent (Feldman and Greenway 2021; Krediet 1994) and are often interpersonal in nature (Addas and Pinsonneault 2018). The AET (Weiss and Cropanzano 1996) provides a useful framework to understand how such daily micro-events influence employees' affective experiences and, consequently, their work attitudes and behaviors (e.g., Good et al. 2022; Junça-Silva et al. 2021). In line with this theory, interruptions are not merely operational disturbances but emotionally charged events that can shape daily work experiences in meaningful ways.

From a temporal and cognitive perspective, micro-interruptions interfere with employees' workflow and consume valuable time resources (Kim et al. 2019), delaying task completion and affecting emotional regulation (Puranik et al. 2019). The cognitive

appraisal theory (Lazarus 1999) further explains that individuals' evaluations of these interruptions—rather than the interruptions themselves—determine their emotional and behavioral responses (Fletcher et al. 2018). Empirical research consistently associates frequent micro-interruptions with lower performance (Puranik et al. 2019), reduced cooperation (Miner et al. 2005), and diminished proactivity (Galluch et al. 2015).

Moreover, their effects can extend beyond the workday, influencing evening recovery (Sonnentag et al. 2018) and, when persistent, contributing to time famine (Perlow 1999), increased workload, fatigue, and eventual exhaustion (Lin et al. 2013).

According to AET, the work context plays a crucial role in shaping the frequency, nature, and impact of these affective events (Taşkan et al. 2024, 2025). Working from home differs significantly from working in an office environment, not only in the types of interruptions experienced but also in how individuals manage them (Mele et al. 2023). For instance, while in-office requests often demand immediate attention, remote workers may exercise greater control by postponing responses until a more convenient time (Ficapal-Cusí et al. 2024; Ortiz-Lozano et al. 2022), thereby mitigating the disruptive impact of interruptions.

Drawing on the AET and cognitive appraisal theory, the present study proposes that the effects of daily recovery on positive affect—via adaptive performance—are contingent upon both situational factors (daily micro-interruptions) and contextual factors (telework versus office work). Specifically, we argue that micro-interruptions act as a boundary condition that moderates the indirect relationship between recovery and positive affect, while the work context serves as a protective factor that influences the strength and direction of these effects. Accordingly, we formulated the following hypotheses:

H2. *Daily micro-interruptions moderate the positive relationship between daily recovery and positive affect via adaptive performance, such that the relationship becomes weaker when daily micro-interruptions are high.*

H3. *The work context moderates the moderated mediation model proposed in such a way that the moderating effect of daily micro-interruptions on the daily indirect effect of recovery on positive affect via adaptive performance becomes weaker when employees are working from home (versus at the office).*

3 | Methods

3.1 | Procedure and Participants

We contacted workers with managerial functions in the public sector, and according to a snowball procedure, they indicated other workers, with similar functions. Then, we asked them to participate in a 5-day diary study. Those who replied received an email with the informed consent to sign and were clarified about the aims of the study, the data collection procedure, and the anonymous and confidential nature of the data. Then, we sent a hyperlink for the general survey (including sociodemographics). In the following week, we sent the participants a daily

reminder with the survey hyperlink, every day and at the end of the day. From the 250 emails sent, 238 were valid responses (response rate = 95.2%). In total, we obtained 1190 answers.

Of the 238 participants, 51% were female, and the mean age was 31.49 years (SD = 12.11). The mean organizational tenure was 9.77 years (SD = 11.14). Most participants had completed university graduation (65.2%) and the remaining 34.8% held a master's degree.

3.2 | Measures

3.2.1 | Daily Recovery

We used the Recovery Experience Questionnaire (Sonnetag and Fritz 2007). It included eight items covering the four dimensions: psychological detachment (e.g., “During my leisure time tonight, I forgot about work”), control (e.g., “Tonight, I defined how I would enjoy my time”), mastery (e.g., “Tonight, I learned new things”), relaxation (e.g., “Tonight, I took time for leisure”). Participants answered on a five-point Likert scale (1—*not true at all*; 5—*very true*). Multilevel reliability indices were good ($\alpha_{\text{between}} = 0.80$, $\omega_{\text{between}} = 0.82$; $\alpha_{\text{within}} = 0.85$, $\omega_{\text{within}} = 0.86$).

3.2.2 | Daily Adaptive Performance

We used four items from Griffin et al. (2007) (e.g., “Today, I adapted well to changes in core tasks”). Items were rated on a five-point scale ranging from 1 (*very little*) to 5 (*a great deal*). Multilevel reliability indices were good ($\alpha_{\text{between}} = 0.80$, $\omega_{\text{between}} = 0.79$; $\alpha_{\text{within}} = 0.85$, $\omega_{\text{within}} = 0.84$).

3.2.3 | Daily Positive Affect

We used the eight-item multi-affect indicator (Warr et al. 2014), to assess the frequency of daily positive emotions (e.g., “enthusiastic”). Participants answered on a five-point scale (1—*never*; 5—*always*). Multilevel reliability tests estimated through the alpha and the omega index showed an acceptable reliability ($\alpha_{\text{between}} = 0.85$, $\omega_{\text{between}} = 0.85$; $\alpha_{\text{within}} = 0.80$, $\omega_{\text{within}} = 0.78$).

3.2.4 | Work Context

We asked participants whether, during that day, they had been teleworking or had gone to the office. Responses were dichotomic (0—*office*, 1—*telework*).

3.2.5 | Daily Micro-Interruptions

We used four items from the measure of interruptions (Fonner and Roloff 2010). An example item was “To what extent did your colleagues' conversations with you generate anxiety, given the work that you needed to get done.” The items were answered on a five-point Likert scale (1—*not at all*; 5—*a great deal*). Multilevel indices were good ($\alpha_{\text{between}} = 0.85$, $\omega_{\text{between}} = 0.85$; $\alpha_{\text{within}} = 0.80$, $\omega_{\text{within}} = 0.78$).

3.2.6 | Control Variables

We controlled for gender, age (between-person level), and day of data collection (from Monday to Friday: within-person level) because there is evidence of these variables influencing affective and behavioral outcomes (Dello Russo et al. 2021).

3.3 | Data Analyses

We used multilevel analyses with nested data to test the model. First, the ICC results demonstrated a significant variation both at the within and between-person levels in daily recovery ($ICC=0.85$), daily adaptive performance ($ICC=0.85$), daily positive affect ($ICC=0.80$), and daily micro-interruptions ($ICC=0.77$). Therefore, we proceeded with the multilevel analysis.

We tested the model with the macro–Multilevel Mediation (MLMed) in SPSS (Rockwood and Hayes 2017). This macro shows similar results, in the estimation of model parameters, to what other software alternatives do (e.g., *Mplus*). The model fit was identified by analyzing the reduction in model deviance from data ($-2LL$) from model to model (Snijder and Bosker 1999).

4 | Results

4.1 | Multilevel Confirmatory Factor Analysis

To test for common method bias, we performed multilevel confirmatory factor analyses. The results showed that the four-factor model (daily positive affect, daily recovery, daily adaptive performance, and daily micro-interruptions) fitted the data well (at both the within and between-person levels: $RMSEA=0.07$, $CFI=0.90$, $TLI=0.91$, $SRMR_{within}=0.05$, $SRMR_{between}=0.07$). On the other hand, the single-factor model showed an

unacceptable fit to the data ($RMSEA=0.13$, $CFI=0.60$, $TLI=0.57$, $SRMR_{within}=0.10$, $SRMR_{between}=0.11$).

4.2 | Descriptive Statistics and Correlations

Table 1 shows the descriptive statistics and correlations.

4.3 | Hypotheses Testing

Hypothesis 1 suggested a mediation effect at the within-person level wherein daily recovery would be indirectly associated with the end-of-the-day positive affect through daily adaptive performance. The fit of the model was: $-2LL=3032.60$, $AIC=3040.60$; $BIC=3062.24$. The direct effect of daily recovery on positive affect was significant at the within-person level ($\gamma=0.13$, $p=0.001$, 95% CI [0.06, 0.20]), but nonsignificant at the between-person level ($\gamma=0.06$, $p=0.17$, 95% CI [−0.02, 0.15]). Further, the indirect effect of the daily adaptive performance was significant at both the within ($\beta=0.05$, $p=0.001$, 95% CI [0.03, 0.08]) and between-person levels ($\gamma=0.13$, $p=0.001$, 95% CI [0.08, 0.18]), lending support for the first hypothesis. Thus, daily recovery had a positive indirect effect on the end-of-the-day positive affect, through daily adaptive performance.

Hypothesis 2 proposed that daily micro-interruptions would moderate the indirect effect of daily recovery on positive affect via adaptive performance. The fit of the model was: $-2LL=2929.83$, $AIC=2937.83$; $BIC=2959.45$. The random slope of the daily recovery×daily micro-interruptions interaction, and adaptive performance was significant ($\gamma=-0.08$, $p=0.02$, 95% CI [−0.16, −0.01]). To analyze this within-person interaction, we plotted the relationship at conditional values of daily micro-interruptions (± 1 SD; Cohen et al. 2003). Figure 2 shows that only on days when daily micro-interruptions were lower than an individual's mean was there a significant positive relation between daily

TABLE 1 | Means, standard deviations, and between- and within-person level correlations.

Variables	M	SD	1	2	3	4	5	6	7	8
1. Daily recovery	3.46	0.78	—	0.24***	0.15**	0.10**	−0.08**	0.00	−0.11**	0.11**
2. Daily adap perf	3.64	0.69	0.07	—	0.43***	−0.10**	−0.09**	−0.05	0.03	−0.22**
3. Daily pos affect	3.35	0.74	0.05	0.31***	—	−0.07*	−0.06	−0.12**	0.11**	−0.08*
4. Micro-interrupt	2.74	0.95	0.09*	−0.22***	0.01	—	0.11**	−0.05	−0.02	0.04
5. Work context	0.29	0.72	−0.27***	0.09**	0.07*	0.01	—	0.04	−0.04	0.05
6. Sex	—	—	0.00	−0.00	−0.19**	−0.05	−0.05	—	−0.02	0.03
7. Age	34.18	12.21	−0.10**	−0.10**	0.08*	−0.01	−0.01	−0.02	—	0.10**
8. Time	—	—	0.11*	−0.06	−0.02	0.04	0.04	0.03	0.03	—

Note: Correlations below the diagonal are between-person level. Correlations above the diagonal are within-person level. $N_{(observations)}=1190$; $n_{(participants)}=238$. Work context: 0—office, 1—telework.

*** $p<0.001$, ** $p<0.01$, * $p<0.05$.

recovery and daily adaptive performance. Moreover, supporting Hypothesis 2, the 95% CI of the indirect effect from daily recovery on positive affect via adaptive performance on days with few daily micro-interruptions was significant ($\gamma=0.32$, $p=0.001$), whereas the indirect effect was no longer significant on days with high levels of daily micro-interruptions ($\gamma=0.12$, $p=0.08$). The difference between these conditional indirect effects was also significant ($\gamma=0.20$, $p=0.02$).

Hypothesis 3 suggested that the work context acts as a moderator of the daily recovery $\times$ daily micro-interruptions interaction. Accordingly, we expected that the moderated mediation via daily adaptive performance would be weaker when employees were teleworking. The fit of the model was: $-2LL=2912.99$, $AIC=2920.99$; $BIC=2942.61$, showing an increment compared to the previous one. Moreover, this hypothesis was also supported once the indexes of the moderated moderation mediation were significant at both the within (-0.01 , 95% CI $[-0.02, -0.005]$), and between-person levels (-0.01 , 95% CI $[-0.02, -0.00]$). See Figure 3, for the full model results. Moreover, the interaction effect explained significant variance in the path between daily recovery and daily adaptive performance, both at the within- ($\gamma=-0.04$, $p=0.001$, 95% CI $[-0.06, -0.02]$) and

between-person level ($\gamma=-0.03$, $p=0.04$, 95% CI $[-0.05, -0.01]$) (see Figure 4 for the interaction pattern). Thus, daily micro-interruptions, combined with working from home/office buffered the positive relationship between daily recovery and daily adaptive performance.

5 | Discussion

Many studies have shown that recovery is needed because it helps a person regain energy and resources (Hoang et al. 2024; Sonnentag et al. 2018). However, most of these studies have been conducted in the field of stress research, and so far, studies exploring how and when daily recovery promotes behavioral and positive affect are scarce (Chawla et al. 2020; Rhee et al. 2024). With the constant volatility and uncertainty that organizations are facing nowadays (Taşkan et al. 2022, 2025), adaptive performance appears to be crucial (Park and Park 2019), both for job-related outcomes, such as productivity and for individual ones (e.g., well-being). As such, this study analyzes the conditions through which daily recovery is more beneficial for the organization (adaptive performance) and the individual (positive affect).

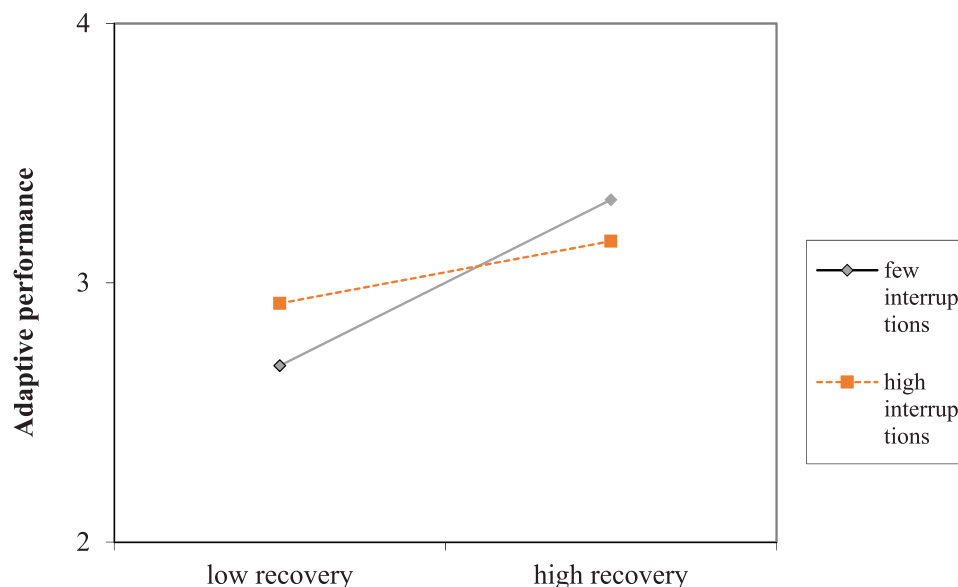


FIGURE 2 | The effect of within-person interaction of daily recovery and daily micro-interruptions on daily adaptive performance.

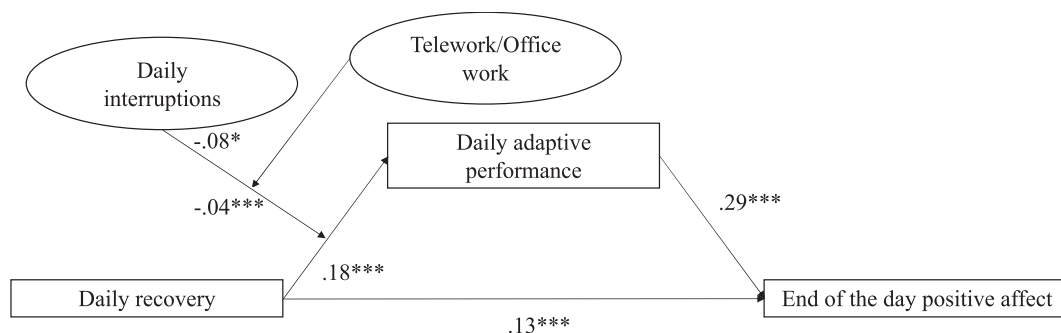


FIGURE 3 | Random slopes model showing within-person level effects for daily adaptive performance mediating the indirect effect of daily recovery on the end-of-the-day positive affect as a function of daily micro-interruptions and telework/office work. $*p < 0.05$, $**p < 0.01$, $***p < 0.001$.

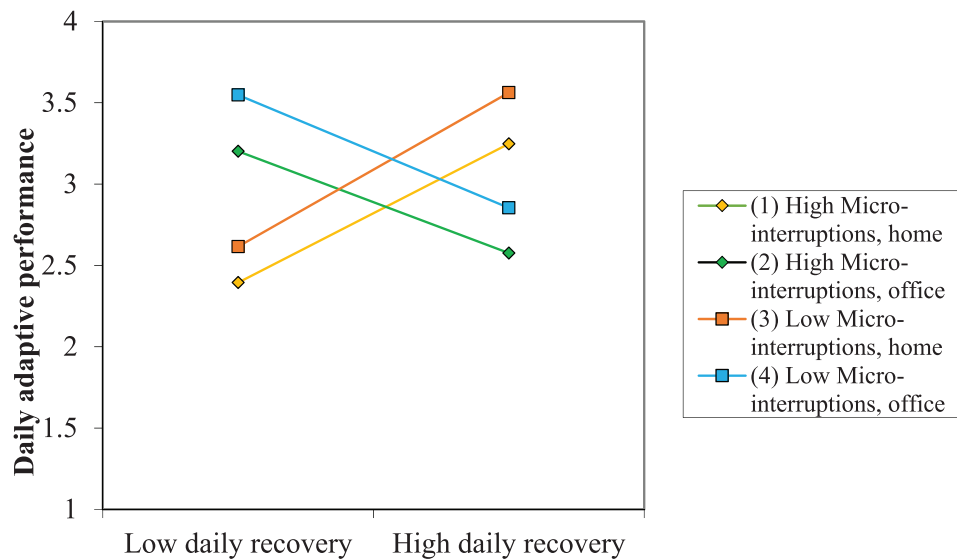


FIGURE 4 | Daily micro-interruptions and telework/office work as moderators of the relationship between daily recovery and daily adaptive performance.

5.1 | Theoretical Implications

These findings make important theoretical contributions both to the literature on recovery at work (e.g., Sonnentag et al. 2018) and to ongoing debates on telework in public administration (e.g., Mele et al. 2023; Ortiz-Lozano et al. 2022), particularly regarding how telework versus face-to-face work conditions shape the impact of recovery on affective and behavioral outcomes (e.g., Junça Silva, Almeida, and Rebelo 2024).

First, our results demonstrate that daily recovery, via its influence on adaptive performance, positively affects workers' end-of-day positive affect, supporting our first hypothesis. Specifically, when individuals achieve full recovery and restore their energy and resources, they are better able to adapt their behaviors at work, which in turn enhances their positive emotional experiences. These findings align with prior theoretical assumptions, including the COR theory and the *E-R* model, as well as empirical evidence linking recovery to reduced stress, positive affect, and enhanced work behaviors (e.g., Steed et al. 2021; Sonnentag et al. 2017; Volman et al. 2013).

According to COR theory, employees respond to perceived resource loss by engaging in behaviors that restore their resources, such as relaxation or detachment activities (Hobfoll et al. 2018). By replenishing their personal resources, individuals achieve a state of optimal functioning, which supports both adaptive performance and well-being (Hobfoll 2011). Conversely, the *E-R* model posits that incomplete recovery leaves employees vulnerable to performance impairments (Cropley et al. 2006), accumulated fatigue, and adverse health outcomes (Chawla et al. 2020; Kivimäki et al. 2006; Nylén et al. 2007), highlighting the critical role of recovery in sustaining daily work functioning (Steed et al. 2021). Collectively, these findings also contribute to understanding the conditions under which telework may enhance or hinder recovery-related outcomes, offering theoretical insight into the ongoing

discussion about its effectiveness in public administration contexts (Mele et al. 2023).

While our findings are consistent with existing theoretical frameworks, they extend current understanding by demonstrating that recovery is not merely a mechanism for restoring energy to sustain productivity (Hoang et al. 2024), but also a critical determinant of employees' affective well-being at the close of the workday (Steed et al. 2021). Recovery thus functions as a dynamic, dual-faceted process, simultaneously supporting adaptive work behaviors and promoting positive emotional states (Rhee et al. 2024). Importantly, insufficient daily recovery may compromise performance, which can subsequently erode well-being (Kujanpää and Olafsen 2024).

Considering the happy-productive worker thesis—which posits that the happiest workers are the most productive (Cropanzano and Wright 2001)—our findings offer a complementary perspective. Rather than focusing solely on the influence of happiness on productivity, the results show that, at the daily level, employees' perceptions of their own performance can enhance (or diminish) their well-being. Specifically, on days when employees perceive themselves as performing adaptively and effectively, they report higher positive affect and experience greater recovery. This suggests that performance-related experiences themselves may serve as a source of well-being, highlighting the importance of considering daily fluctuations in both affective and behavioral outcomes. In this context, a recovered worker—one who successfully restores personal resources after work demands—may also be a productive worker, which in turn can contribute to enhanced daily happiness. These results nuance the traditional “happy-productive” thesis by demonstrating that perceived performance can be a key factor shaping well-being at the micro level. Thus, this study underscores the interdependent nature of behavioral and affective processes, offering a nuanced perspective that advances the discourse on daily recovery, work performance, and the micro-foundations of the happy-productive worker thesis.

In addition, this study contributes to ongoing debates regarding the use and effectiveness of telework in public administration (e.g., Mele et al. 2023; Ortiz-Lozano et al. 2022). Our findings support the initial hypotheses and clarify the conditions under which the indirect relationship between daily recovery and positive affect via adaptive performance occurs. Specifically, this indirect effect is conditional upon both situational factors (i.e., daily micro-interruptions) and contextual factors (telework versus office work). That is, the work context moderates the mediated effect of micro-interruptions on the relationship between daily recovery and positive affect through adaptive performance. Moreover, the extent of recovery—full versus incomplete—produces different outcomes depending on both the work context and the frequency of micro-interruptions experienced on a given day.

When individuals achieve full recovery, reestablishing their key resources, they exhibit higher adaptive performance while working from home, which in turn enhances their end-of-day well-being. This relationship is further strengthened on days with fewer micro-interruptions. Fully recovered employees appear better equipped to manage micro-interruptions in a home-based context, potentially because they do not rely on others to validate or reinforce their affective state (Steed et al. 2021). In such cases, telework may be particularly conducive to both performance and well-being (Mele et al. 2023), as employees can focus on tasks with minimal social distractions and actively manage or avoid micro-interruptions (Junça-Silva and Lourenço 2025), thereby enhancing adaptive performance and positive affect (Bravo-Duarte et al. 2025). Conversely, when fully recovered employees are in the office, micro-interruptions may function as time-consuming distractions that reduce adaptive performance and positive affect, as spontaneous social interactions can sometimes divert attention from task-related activities (Junça Silva, Neves, and Caetano 2024).

When recovery is incomplete, however, the patterns reverse. Employees working from home may struggle to manage micro-interruptions, impairing both adaptive performance and well-being. In contrast, incomplete recovery in the office context appears less detrimental, as the social and interactive nature of the office provides external stimuli that can help replenish energy and reinforce performance. Office-based micro-interruptions often involve interpersonal interactions that serve as sources of personal reinforcement, supporting self-esteem and self-concept (Ficapal-Cusí et al. 2024; Keller et al. 2020). Thus, employees who have not fully recovered may benefit from face-to-face social interactions that help recognize and validate their emotions, a form of support that is less available in telework settings (Yu et al. 2020). These findings are consistent with the notion that interpersonal interactions fulfill a fundamental human need for relatedness (Baumeister and Leary 2017; Myers 2000), as emphasized by self-determination theory (Ryan and Deci 2000). Empirically, Hudson et al. (2020) also showed that individuals experience higher positive affect and well-being when in the company of others, particularly when feeling depleted or down.

From this perspective, micro-interruptions, while often seen as distractions, may also provide social support that helps

individuals cope with their workday and satisfy their need for relatedness (Ryan and Deci 2001). When recovery is insufficient, employees may seek social recognition and engage in social comparison processes through daily micro-interruptions to complete their (un)recovery and enhance their sense of well-being (Schachter 1959). Schachter proposed that individuals under stress or other negative conditions seek out others for self-evaluation and self-validation, a tendency that intensifies under uncertainty or negative emotional states (Buunk and Schaufeli 1993). Empirical evidence supports this notion: social interactions are positively linked to recovery experiences (Sonnetag and Zijlstra 2006; Sonnetag 2012), and experience-sampling studies have shown that socializing during work breaks increases positive emotions, reduces negative emotions, enhances energy levels, and mitigates perceived job demands (Troughakos et al. 2008, 2014). Accordingly, in office contexts where recovery is incomplete, micro-interruptions may serve an instrumental role, helping employees cope with depleted personal resources.

While much prior research has used a variable-centered approach to examine recovery effects, the present study adopts a person-centered perspective, which offers a more nuanced understanding of how recovery influences outcomes (Wang and Hanges 2011). Variable-centered approaches examine recovery events in isolation, ignoring the simultaneous influence of multiple recovery experiences (e.g., relaxing while psychologically distancing from work), which may yield incomplete or biased conclusions. In contrast, the person-centered approach considers the combined effects of co-occurring recovery activities, providing a more holistic view. This approach is particularly valuable in daily diary designs, which allow for the examination of within-person variations in recovery processes across time.

5.2 | Practical Implications

These results are relevant for practice, as we demonstrate that telework is suitable to improve individual adaptive behaviors and well-being under certain conditions. As such, managers might consider it useful to implement flexible work arrangements, such as telework, following a hybrid model (i.e., some days working from home, other days working at the office). In particular, they could design flexible hybrid arrangements to combine telework days with office days, and according to an accountability culture, allowing some autonomy to the workers to adjust the mix as they appraise their level of recovery. From a human-centered management perspective, the results suggest the need for a hybrid and flexible work arrangement, highlighting that individuals are capable of self-evaluating how and where they are more productive and happier. This could be achieved by improving existing communication channels, in which open and bidirectional communication is supported. Thereafter, organizational trust and open communication would facilitate talking openly with supervisors to say when and if recovery is complete.

In addition, daily micro-interruptions are affective events that create the conditions for workers to be distracted from work and lower their well-being. As such, managers may consider it

relevant to analyze such kinds of micro-interruptions to minimize them. For instance, creating conditions for employees to manage their short breaks because self-managed short breaks along the day may minimize their number and also reduce daily micro-interruptions.

5.3 | Limitations and Future Directions

Despite the positive features of this study, several limitations warrant consideration. First, the self-reported nature of the data may raise concerns about common method bias (Podsakoff et al. 2023), although multilevel confirmatory factor analyses support construct validity, mitigating this issue to some extent. Nevertheless, self-reports remain appropriate for capturing internal states and events such as micro-interruptions, positive affect, and daily recovery (Conway and Lance 2010). Second, only daily positive affect was examined; future studies should also include negative affect to capture the full spectrum of employees' affective experiences. Third, because adaptive performance was self-assessed, future research could incorporate more objective indicators (e.g., supervisor ratings or behavioral measures) to strengthen the robustness of these findings.

Future studies should further investigate how the appraisal and meaning of daily micro-interruptions shape their effects on recovery and affect, recognizing that not all interruptions are detrimental (Feldman and Greenway 2021). Moreover, testing the AET with recovery as a boundary condition would enhance understanding of how employees regulate affective responses to work events. Beyond this, adopting longitudinal or experimental designs could establish causal links among daily recovery, adaptive performance, and affective outcomes. It would also be valuable to examine specific forms of daily recovery, such as brief pauses to interact with companion animals (Junça-Silva 2025a, 2025b), to determine whether these natural recovery strategies yield similar adaptive and affective benefits. Finally, extending this research across different work contexts (e.g., hybrid or high-demand environments) and cultural settings could clarify when and for whom daily recovery most effectively fosters adaptive performance and well-being.

6 | Conclusions

To sum up, our study shows that a recovered worker is a productive worker, and thereby a happier one. However, this depends on the level of daily micro-interruptions and whether individuals are at the office or working from home. If the recovery is full, then individuals manage micro-interruptions better at home, directing their resources to work, which improves adaptive performance, and at the end of the day translates into positive affect. When the recovery is insufficient, individuals need to socialize to replenish their resources to work; thus they are more adaptive and experience more positive affect at the office as it is there that they are more easily involved in social activities.

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Ethics Statement

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The ethics committee from the researchers' university approved the study prior to its development.

Consent

Informed consent was obtained from all individual participants involved in the study.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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