ISCTE IUL
REPOSITÓRIO
INSTITUTO UNIVERSITÁRIO DE LISBOA

Repositório ISCTE-IUL

Deposited in *Repositório ISCTE-IUL*:
2024-10-30

Deposited version:
Accepted Version

Peer-review status of attached file:
Peer-reviewed

Citation for published item:
Junça Silva, A., Violante, C. & Brito, S. (2024). The role of personal and job resources for telework's affective and behavioral outcomes. Kybernetes. 53 (10), 3754-3773

Further information on publisher's website:
10.1108/K-01-2023-0147

Publisher's copyright statement:
This is the peer reviewed version of the following article: Junça Silva, A., Violante, C. & Brito, S. (2024). The role of personal and job resources for telework's affective and behavioral outcomes. Kybernetes. 53 (10), 3754-3773, which has been published in final form at https://dx.doi.org/10.1108/K-01-2023-0147. This article may be used for non-commercial purposes in accordance with the Publisher's Terms and Conditions for self-archiving.

Use policy

Creative Commons CC BY 4.0
The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a link is made to the metadata record in the Repository
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Serviços de Informação e Documentação, Instituto Universitário de Lisboa (ISCTE-IUL)
Av. das Forças Armadas, Edifício II, 1649-026 Lisboa Portugal
Phone: +(351) 217 903 024 | e-mail: administrador.repositorio@iscte-iul.pt
https://repositorio.iscte-iul.pt

The role of personal and job resources for telework's affective and behavioral outcomes

Abstract

Purpose: Recently new forms of telework emerged, such as the hybrid model; however, little is known about how and when it promotes performance. Based on the job-demands-and-resource model, we developed a conceptual framework to demonstrate that the hybrid model of telework positively influences performance via positive affect. Furthermore, we identified both personal (emotional intelligence) and job resources (autonomy) as moderators of this relationship.

Design: To test the proposed model, we collected data from teleworkers who were in a hybrid telework regime from the telecommunications industry (N=290).

Findings: The results showed that (1) telework positively influenced positive affect and, in turn, performance; (2) the indirect effect of telework on performance through positive affect was moderated by both emotional intelligence and autonomy.

Originality: These results appear to be fundamental for a better conceptual and practical understanding of how and when hybrid telework can improve performance.

Keywords: Telework; positive affect; contextual performance; job resources; personal resources; EI; autonomy.

Introduction

Long before the pandemic context emerged, former US President Barack Obama mentioned the importance of retaining more productive and happy workers through flexible workplace policies, such as telework (House, 2010). Telework - also called working from home or remote work - has been defined as the work that is performed at home using information and communication technology (Adamovic, 2022). It is not a recent phenomenon, however, with the COVID-19 pandemic crisis, new forms of telework have emerged, such as the hybrid telework regime - that is, the combination of a mixed work regime, where the individual combines the face-to-face regime and teleworking simultaneously.

Although there is a considerable body of literature on the effects of telework on positive affect – the set of positive emotions, such as joy - (e.g., Junça-Silva et al., 2022) and performance – behaviors that support the organizational goal attainment - (e.g., MacCann et al., 2019), the effect of the hybrid regime of telework in the context of a pandemic, combined with the high uncertainty resulting from it, deserves attention. In addition, understanding the moderating role of personal and job resources is important to identify the ideal conditions for implementing telework, albeit in a hybrid way.

Telework appears to make employees feel better and happier (e.g., Lunde et al., 2022) and productive as well (Crawford, 2022). However, its success depends on many factors, including the degree to which it improves the employees' positive affect and, as a result, their work-related behaviors (i.e., performance) (Junça-Silva et al., 2022; Nemteanu & Dabija, 2023). From a job-demand and resource model (JD-R) (Bakker et al., 2007) perspective, this relationship may also depend on resources, such as job and

personal ones. That is, it is possible that telework influences positive affect and performance in a different way based on the employees' available personal resources, such as emotional intelligence (EI), and job resources, such as autonomy (Junça-Silva et al., 2022).

We argue that EI will moderate the indirect relationship between telework and performance via affect because EI encompasses three emotional-related abilities: (1) perceiving emotions; (2) using emotions, enjoying them, and prioritizing those that simplify cognitive activities, such as information processing and decision making; and (3) managing emotions (Salovey & Mayer, 1990; George et al., 2022). Hence, different degrees of EI will influence how employees experience telework (i.e., triggered positive affect) and react to it (performance). Furthermore, autonomy –the degree to which employees can decide how to perform their work (Morgeson & Humphrey, 2006) – may also be a boundary condition that will influence positive affective and behavioral reactions to telework. The level of autonomy might facilitate or impair affective and behavioral reactions due to the perceived control over the job (Kim et al., 2022).

Although there are several studies that show the moderating role of EI in the relationship between job characteristics and performance (e.g., MacCann et al., 2019), few studies have addressed this role of EI in flexible work regimes such as telecommuting. Furthermore, by working from home, the teleworker is able to better control interruptions and enjoy greater flexibility and autonomy (Adamovic, 2022). Autonomy seems to be a common characteristic of telework (Harpaz, 2002), as it increases teleworkers' responsibility for the quality of their performance, and as such is a critical condition for its success regarding positive affect and performance (e.g., Junça-Silva et al., 2022).

Thus, the aim of this study is to analyze the relationship between telework and performance through positive affect and to test the moderating role of personal (EI) and job resources (autonomy). This study is relevant for two reasons. First, a key factor in anticipating and preventing a decrease in performance while teleworking is to understand the mechanisms that influence affective states and, consequently, determine their success. Second, identifying conditions that buffer or amplify the positive affective and behavioral reactions to telework will support key recommendations for practice.

Theoretical background and hypotheses development

Telework

The origin of telework in the organizational environment began in 1857 with the experience of Edgard Thompson, owner of the Penn Railroad railway company, in the United States, when he discovered that he could apply a private telegraph system, with the goal of controlling the use of remote equipment, creating decentralized operations (Kugelmass, 1995).

However, the concept of telework was identified later by Jack Nilles - creator of the concept "teleworking" - "telework" - who in the '70s was Secretary of the Investigation Committee of the Aerospace Corporation, an organization that designed space vehicles for the Department of Defense of the United States of America and for NASA. In 1973, Nilles implemented the idea of teleworking with the beginning of remote functions at the National Aeronautics and Space Administration (NASA), with the aim of responding to problems arising from the physical distance between members of the same team, enhancing the profitability of these teams. Nilles (1973) suggested this modality of work after reaching the conclusion that implementing the use of information and communication technologies (ICT) would avoid problems of traffic congestion inherent to work-home-work journeys, would reduce fuel costs, and even

reduce environmental concerns in terms of air pollution (Almeida, 2019). In other words, Nilles (1997) proposed taking the work to the worker, instead of the worker going to work. More recently, Illegems and Verbeke (2004, p.1), proposed that telework was “paid work from home, a satellite office, a telework center or any other job outside the main office, for at least one day."

The emergence of the COVID-19 pandemic spurred the implementation of new work policies, namely teleworking. In view of the pandemic context, a growing number of workers began to carry out their professional activity remotely, not only for reasons of reducing fixed costs, but also to combat the spread of the virus. In addition to the increase in telework, new forms of this regime have emerged, such as the hybrid telework regime; which is a combination of face-to-face work and telework simultaneously.

Recently, organizations started to acknowledge telework as a strategy to attract and retain talent, as it allows greater flexibility and autonomy for workers. Further, younger employees appear to value this kind of work regimen as it promotes a higher balance between work and non-work domains, decreases work-life conflict and distress, and improves well-being (Morganson et al., 2010). In sum, telework is a flexible working regime that has been demonstrated to allow workers to better manage their time and family life (Charalampous et al., 2022), improves their positive affect and satisfaction levels, which increases productivity, life quality and performance (Junça-Silva & Coelho, 2022; Vahdat, 2022).

The relationship between telework and performance

Performance is a behavioral construct, that is, an action or a set of actions performed by the individual that allow the achievement of organizational objectives

(Motowidlo et al. 1997). Performance has a multidimensional nature, due to its relationship with several psychological and interpersonal dimensions that involve a complex interaction with reality. Performance presents a variety of principles related to the action directed toward the behavior of the individual, and the action directed toward the resources present in the environment, for the task, and for the organization (Bendassolli, 2012).

In the literature, two dimensions of performance are often evidenced, task performance (e.g., completing formally assigned tasks), which refers to actions that transform materials or information into goods and/or services, and contextual performance, which refers to actions that support the core activities of the organization, unlimited behaviors that improve the effectiveness of the organization by favoring the social and organizational context of work (e.g., helping a colleague, altruism, civic spirit) (Koopmans et al., 2013). Contextual performance covers, for example, behaviors that go beyond what is formally required for the performance of functions, such as showing initiative, courtesy, civility, and assistance in occasional situations at work (Koopmans et al., 2013).

Telework prevents people from commuting to work (Parent-Lamarche, 2022); therefore, individuals can take advantage of the travel time to work more - increasing their productivity - or to do extra-work activities, such as supporting the family or taking the children to school - contributing to a greater balance between work and extra-work life and at the same time increasing their organizational commitment (Dogra & Parrey, 2022). In addition, in telework employees can have flexibility and autonomy to choose the work period in which they are most productive - circadian timing system - and can perform better with less working time (Carrier & Monk, 2000).

Recently, and with the Covid-19 pandemic, some studies have made an important contribution to understanding the implications of teleworking. For example, Hamouche and Parent-Lamarche (2022) demonstrated that telework improved performance in particular for youngers. Similarly, Nakrošiene, Buciuniene and Goštautaite (2020) showed that telework led to increased productivity and performance by reducing communication time with colleagues, and time in the absence of commuting to work. Beauregard, Basile and Canonical (2019) showed that teleworking leads to increased teleworker performance and productivity due to the lack of distracting elements, and because it provides the possibility to avoid interruptions (Thulin et al., 2019). Lippe and Lippényi (2019) highlighted that teleworking reduces the number of interruptions, which benefits productivity. The authors also mentioned that teleworkers are not conditioned by the organization's environment, with greater self-management on the part of teleworkers and more autonomy in the performance of their tasks, where they can choose the moments when they are most productive. Hence, the following hypothesis was defined.

H1. Telework is positively associated with contextual performance.

The relationship between telework and positive affect

Affect – the set of experienced emotions and humor - is an inseparable aspect of work (both face-to-face and telework). While working, employees experience a range of different emotions throughout their day, such as enthusiasm or sadness, and these represent the affect experienced that day (Junça-Silva et al., 2022). Indeed, a great part of individuals' affective experiences is experienced at work because this is an affective context (Ashkanasy & Dorris, 2017).

For Frijda (1986) affect is the emotional experience that arises in the form of a biological response to environmental stimuli, resulting in physical and psychological changes and, in the subsequent readiness for action. As such, affect is a signaling mechanism for organisms to adapt behavior to suit environmental conditions (Schwarz & Clore 1983).

A high level of positive affect indicates a prevalence of positive emotions, which may range from joy, enthusiasm, and confidence to commit to accomplishing tasks, while high levels of negative affect reveal emotions of sadness, discouragement, and worry (Snyder & Lopez, 2009).

Brief and Weiss (2002) showed that working conditions promoted the experience of affect at work and that this improved performance. Cifre and Salanova (2012) investigated the adaptation of a theoretical model of psychosocial health in the context of telework (resources-emotions; experiences-actions) and showed that telework positively influenced the affect experienced by teleworkers. Accordingly, the diverse features of work (e.g., autonomy) affected how the teleworker felt while teleworking (Cifre & Salanova, 2012). Similarly, Grant et al. (2019) showed that the positive perception of telework led to improved levels of both positive affect and productivity. Likewise, Junça-Silva et al. (2021) demonstrated that daily micro-events experienced in telework predicted the teleworkers' affect ratio (proportion of positive over negative affect) and, therefore, their performance. More recently, Junça-Silva et al. (2022) showed that telework positively influenced the affect ratio and, as a result, task and adaptive performance. Parent-Lamarche (2022) also demonstrated that teleworking promoted positive affective reactions, such as work engagement.

Based on the extant literature, the following hypothesis was defined.

H2. Telework is positively associated with positive affect.

The relationship between positive affect and performance

When employees experience positive affect at work, they are expected to have greater commitment and better performance (Cesário & Chambel, 2017; Chen & Francesco, 2003; Kaplan & Kaplan, 2018; Zefeiti & Noor, 2017).

According to the Broaden-and-Build Theory of Positive Emotions (Fredrickson, 2000), positive emotions expand the repertoire of thoughts and actions of individuals, increasing the diversity of thoughts and behaviors. For example, positive emotions, such as joy and contentment, stimulate creativity and the achievement of new limits, promoting brain evolution and fostering not only social and physical behavior, but also intellectual and artistic behavior (Fredrickson, 2004). It should be noted that, on the one hand, negative emotions prove to be adaptive by bringing direct benefits in positions that jeopardize the individual's survival, but, on the other hand, positive emotions influence individuals in discovering new lines of thought and action, resulting from the amplification of this repertoire, leading to the development of lasting and adaptive personal resources.

Complementary, Hobfoll's Conservation of Resources theory (COR; 1989, 2002) suggests that valued resources are those that bring value and benefits to the individual, or that represent a means to achieve a certain end considered important for the individual (Hobfoll et al., 2018). Resources can be personal (e.g., positive affect) or job (e.g., autonomy) characteristics (Van Steenbergen et al., 2014), and have an instrumental and symbolic value that helps individuals achieve results (Hobfoll, 1989). Individuals who have a "stronger reservoir of resources are more likely to promote and maintain their well-being and health" (Hobfoll, 2002, p. 311), "are seen by others and

see themselves more positively" (p. 319) and manage to achieve better performance levels (Hobfoll et al., 2018).

As such, relying on the broaden-and-build theory and the COR theory, we hypothesized the following.

H3. Positive affect is positively related to contextual performance.

The mediating role of positive affect

Recently, some studies have explored mechanisms that could help to explain why telework led to better personal and organizational results (e.g., Adamovic, 2022). For instance, Junça-Silva et al. (2022), showed that telework increased the positive affect ratio and this led to better performance. Similarly, Junça-Silva et al. (2021) showed that the affect ratio mediated the relationship between telework, well-being and performance.

Based on the empirical literature, it is hypothesized that telework generates more positive affect, that is, it makes people experience positive emotions while working from home (Junça-Silva et al., 2021; 2022) and, in turn, leads to better performance. Theoretically, this relationship is supported by the broaden-and-build theory (positive emotions expand the thinking capacity and lead to better behaviors, through the development of resources (Fredrickson, 2001) and by the COR (resources are essential elements for the optimal functioning of the individual and promote their performance; Hobfoll, 1998).

H4. Positive affect mediates the association between telework and contextual performance.

The moderating role of personal (emotional intelligence) and job resources (autonomy)

The relationship between the work context (i.e., working from home) and affective (i.e., positive affect) and behavioral outcomes (i.e., performance) is influenced by personal and job resources. The JD-R model explains these influences (Demerouti et al., 2001); accordingly, each job has its own factors that influence diverse work-related outcomes, such as well-being or performance. The factors can be classified into two dimensions: job demands and resources (Demerouti & Bakker, 2011). Job demands can be physical, social, psychological, or organizational (e.g., work pressure, heavy and rigid professional environment) and require a physical or psychological effort (cognitive and emotional) associated with certain physiological and psychological values (Demerouti & Bakker, 2011). On the other hand, resources have a motivational role and refer to physical, social, psychological (e.g., emotional intelligence), or organizational (e.g., autonomy) aspects used to achieve work goals, reduce the impact of job demands and their consequent psychological and physiological costs (e.g., negative affect), and as such, facilitate performance, and well-being (Bakker & Demerouti, 2006).

In 1995, Goleman defined emotional intelligence (EI) as “the ability to recognize our emotions and those of others, to motivate ourselves and to manage emotions well in ourselves and in our relationships” (p.323). Although EI was conceived as a competence that comprehended the cognitive processing of affective and emotional information, it was also defined as a competence to understand, understand

and manage emotions in various daily situations (Stys & Brown, 2004; Woycieskoski & Hutz, 2009).

Overall, EI corresponds to a set of skills that contribute to the accurate evaluation and expression of emotions in oneself and in others, the effective regulation of emotions, and the use of them to motivate, plan and perform (Salovey & Meyer, 1990). In addition to helping an individual to solve problems, EI contributes to understanding and guiding work behavior (Salovey & Meyer, 1990), and thus create conditions for improved performance (e.g., Shahhosseini et al., 2012).

As such, we argue that EI will be a personal resource that will moderate the indirect relationship between telework and performance via positive affect. First, Mayer and Salovey (1997) described EI as a resource useful for individuals to assess the expression, control, and use of their emotions in work-related problem-solving. Further, in 2007, Mayer and Salovey also emphasized that EI was a key ability to understand and solve problems because it improved effective management of emotional responses; the perception of emotions and their meanings; the evaluation of emotions to simplify reasoning; the recognition of emotions in expressions, in vocalizations, in the way of being and in other everyday situations. Thus, individuals with higher EI will have a greater understanding of their and others' emotions and consequently will better regulate it in a way that motivates their positive and adaptive behaviors (George et al., 2022).

Second, according to Rego and Fernandes (2005), EI improves (1) the ability to direct emotions to simplify cognitive processes, (2) the ability to understand and analyze emotional information to put emotional knowledge, and (3) the ability to regulate emotions and promote emotional and intellectual development and well-being.

Third, for Goleman (2001) being emotionally intelligent consists of the ability to recognize emotions, be self-motivated and persist in the face of frustrations, control impulses and postpone rewards, regulate one's state of mind and prevent discouragement from subduing the ability to think, feel empathy and hope, which is crucial to deal with daily life at work. Hence, EI may also be a crucial condition that may facilitate employee's performance even in the face of the adversity (George et al., 2022).

We were unable to locate any studies that examined the moderating role of EI in the relationship between telework and affect or performance; however, we found some studies that demonstrated the moderating role of EI in the relationship between certain job conditions and work-related outcomes, such as performance. For instance, Merida-Lopez et al. (2020) showed that EI had a moderating role in the indirect relationship between perceived organizational support and performance. Côté & Miners (2006) proposed a model in which EI had a moderating effect on the association between general intelligence and performance, demonstrating that workers with low intelligence performed well if they were emotionally intelligent. For Chiavenato (1997), EI is crucial to obtain a good professional performance, since the emotional quotient affects behavior, time management, motivation, vision, and communication skills. In addition, it amplifies the individual behavioral reactions to the context in a more adaptive way. By understating the work environment, and identifying how they are feeling, they can use that affective information to feel and perform better. Hence, we expect the following.

H5. EI moderates the relationship between telework and contextual performance via positive affect, such that the positive affect – contextual performance link will be stronger when EI is high rather than low.

As mentioned earlier, job resources may also play a moderating role in the relationship between telework, positive affect, and performance. One of the most relevant job resources is autonomy (Hackman & Oldham, 1975). This is the degree of independence that the job allows the employee to decide how to carry out their tasks (Morgeson & Humphrey, 2006). According to the job characteristics model, when employees perceive more autonomy in their work, they will tend to become more committed to the organization and to have internal positive feelings toward their work (Fried & Ferris, 1987).

Studies based on the JD-R model have shown that the relationship between the work context and performance seems to be conditional on a set of resources that amplify not only the affective process triggered by the context, but also the resulting behavioral reactions (Schaufeli & Taris, 2014). Moreover, for the COR (Hobfoll, 1998) resources can prevent a loss cycle (i.e., the so-called loss spiral), stemming workers from using defensive behaviors (e.g., decreasing their performance) even when working in a negative working environment. Accordingly, individuals try to preserve, acquire or avoid losing their resources as these allow them to face daily challenges more effectively (Hobfoll et al., 2018). Thus, from this perspective, autonomy would be a necessary resource for the person to feel more positive emotions in telework and, therefore, to perform better.

Indeed, autonomy amplifies the positive relationship between the context and the worker's attitudes and performance (Park & Searcy, 2012) since it has a positive

influence on motivation, satisfaction, performance, and creativity (Ligtenbarg, 2018). For Park and Searcy (2012) autonomy improves well-being and organizational commitment in positive work environments. Galletta et al. (2011) demonstrated that employees with high autonomy were likely to experience a sense of responsibility for the results of their work. Sia and Appu (2015) also showed that autonomy is one of the most important conditions for facilitating employees' satisfaction and performance. Further, Elsetouhi et al. (2022) showed that autonomy moderated the relationship between participative leadership and performance (measured as innovative behaviors), in a way that higher levels of autonomy made the relationship stronger. According to Belias et al. (2014), autonomy, by reducing interaction between employees, makes them more independent, improving their self-control over the organization and implementation of their tasks, which in turn improves performance. Thus, it is likely that autonomy mitigates the negative consequences of conflicts and role ambiguity in performance.

Since autonomy is considered a contextual resource that influences employees' attitudes and behaviors, it is suggested to be an essential boundary condition in the influence of positive affect on employees' performance. Further, we speculate that job autonomy will also positively moderate the indirect impact of telework performance via positive affect. In other words, if autonomy is higher, it will strengthen the relationship between positive affect and performance. Meanwhile, if autonomy is higher, it will strengthen the mediation effect of positive affect between telework and performance. Thus, the following hypothesis is proposed (see Figure 1):

H6. Autonomy moderates the relationship between telework and contextual performance via positive affect, such that the positive affect – contextual performance link will be stronger when autonomy is high rather than low.

--FIGURE 1--

Method

Procedure and participants

The hypotheses were tested with a convenience sample that comprised 290 teleworkers who were in the hybrid model of telework (75.3% women, average age = 32.08 years; *SD*= 9.17, average tenure = 5.06, *SD* =2.31), employed by Portuguese organizations in the telecommunications sector. This sector is particularly relevant for the purposes of this study because it includes one of the highest rates of teleworking in Portugal as a way to improve their employees' performance and well-being (Junça-Silva & Coelho, 2022). This investigation of how telework triggers enhanced levels of positive affect experienced, which might lead to improved performance, and how this process may be amplified by employees' personal (EI) and job resources (autonomy), has significant value in this industrial setting. Moreover, investigating a single industry sector can avoid empirical concerns about unobserved differences at the industry level that might influence employees' affective and behavioral reactions to the context (De Clercq, 2022; Lahiri et al., 2008).

In order to investigate the hypotheses presented, data were collected during the months of January to April 2022 (with January being a period of mandatory confinement decreed by the Government). The questionnaire was applied online on the Qualtrics platform and sent by email to professionals in the telecommunications industry of the personal contact network. The email briefly explained the purpose of the

study (studying the impact of telework), the anonymity and confidentiality of responses were ensured, and it was emphasized that they should only participate if they were teleworking in a hybrid regime. Further, it was explained that participation was completely voluntary, and it detailed how any data would be used (i.e., accessible only to the researchers, aggregated to reveal data patterns and no release of personal data). We also assured that there were no correct or incorrect answers and explicitly asked the respondents to answer the questions as honestly as possible and confirm that they would do so in an effort to reduce social desirability bias possibilities even further (Spector, 2006). Finally, they were also asked to sign the informed consent and return it via email. Those who sent the informed consent were sent a hyperlink to the questionnaire.

Measures

Telework

To measure telework, we used the 10-item Tele-Attitude Scale (Junça-Silva & Caetano, in press). This measured the perception of telework regarding its perceived beneficial effects. Participants indicated the degree to which they perceived telework as better than face-to-face work on 10 aspects (e.g., quality of life) using a five-point Likert scale (1 - *Much worse*; 5 - *Much better*). The Cronbach's alpha was 0.88.

Positive affect

To measure positive affect, we used eight items from The Multi-Affect Indicator (Warr et al., 2014). Participants indicated the frequency of positive affective experiences at work in the last 24 hours (e.g., excited; happy) using a five-point Likert scale (1 - *Never*; 5 - *Always*). The Cronbach's alpha was 0.83.

Performance

This was measured using five items from the Individual Work Performance Questionnaire (Koopmans et al., 2012). An example of an item was: “I start new tasks

myself when my old ones were finished". Participants responded using a five-point Likert scale (1= *very rarely*; 5= *very often*). The internal consistency was 0.88.

EI

To measure EI, we used the 10-item Brief Emotional Intelligence Scale (Davies et al., 2010). An item example is "I know why my emotions change". Participants responded using a five-point Likert-type scale (1 - *completely disagree*; 5 - c*ompletely agree*). The Cronbach's alpha was 0.89.

Autonomy

Autonomy was measured by three items from the Work Design Questionnaire (Morgeson & Humphrey, 2006). An item example is "My job allows me to decide on my own how to go about doing my work". Participants used a five-point Likert scale to answer (1 - *completely disagree*; 5 - c*ompletely agree*). The Cronbach's alpha was 0.88.

Control variables

Gender and age were used as control variables as they can influence both positive affect and performance (Diener et al., 2020).

Data analyses

Several statistical techniques were used to assess the construct validity of multiple-item measures. First, we used Cronbach's alpha (a) to test the reliability of the scales (Cronbach, 1951). A score of more than 0.7 is usually acceptable. Second, confirmatory factor analysis (CFA) is a multivariate statistical procedure that is used to confirm or reject the measurements that we employed in this study (Brown, 2006). To test the hypotheses, we used the macro-PROCESS in SPSS (model 16). We also checked for violations of normality and homoscedasticity by performing Kolmogorov-Smirnov tests and residual analyses. The results showed no violation of normality and

homoscedasticity assumptions, which demonstrated the appropriateness of the analyses in this study.

--TABLE 1--

Results

Common method bias

To avoid the common method bias, some measures were taken. First, questions from the various measurement instruments (listed above) were mixed and some random questions were used (e.g., I like pets). Second, we applied Harman's single-factor test to assess common method variance; the results showed that the single factor only accounted for 29.41% of the variance, which is clearly below the 50% standard value proposed by Podsakoff et al. (2012). Third, we conducted four confirmatory factor analyzes (CFA) using the JASP software (version 0.14.1). We used a combination of fit indices to assess the model fit and compare the hypothetical model with alternative measurement models (Bentler & Bonett, 1980), namely the comparative fit index (CFI), Tucker-Lewis index (TLI), standard mean square residual (SRMR) and mean square error of approximation (RMSEA). CFI and TLI values above 0.88 and SRMR and RMSEA values below 0.07 were assumed as a model with a good fit to the data (Hair et al., 2010).

We tested four alternative models. Model 1 was the five-factor hypothetical model comprising telework, positive affect, performance, EI, and autonomy. Model 2 was a four-factor model where EI and positive affect were combined into a single factor. Model 3 was a three-factor model combining EI and positive affect into a single factor and autonomy and telework were combined into a single factor. Model 4 was a one-factor solution in which all items were loaded onto a single factor. Table 1 shows

that the hypothetical model (model 1) provided a good fit to the data ($\chi^2_{(109)}$=192.238, p< 0.001; CFI = 0.95, TLI = 0.94, SRMR = 0.06, and RMSEA = 0.06), and all other alternative models showed a worse fit. These results, along with the reliability indices (Cronbach's alpha) evidenced the discriminant and convergent validity of the study. Therefore, the common method variance was not an issue for this study.

Hypotheses testing

Table 2 included the descriptive statistics and correlations for all variables. Telework was significantly related to performance and positive affect (r=0.23, p< 0.01 and r=0.28, p< 0.01, respectively). Positive affect was significantly related to performance (r=0.46, p< 0.001). These findings suggested that hypotheses 1, 2, and 3 were reasonable.

--TABLE 2--

We tested our hypotheses using process Macro (model 16). Table 3 shows the results. We found a positive relationship between telework and performance (b = 0.16, p < 0.01), telework and positive affect (b = 0.25, p < 0.001), and positive affect and performance (b=0.44, p<0.001), in support of H1, H2, and H3.

--TABLE 3--

H4 predicted the mediation role of positive affect in the relationship between telework and performance. The results showed that when positive affect was entered, the effect of telework on performance was no longer significant (b = 0.11, p > 0.05); suggesting that positive affect fully mediated the effect of telework on performance (Baron & Kenny,1986). We further analyzed the bootstrapping method (Edwards & Lambert, 2007); this suggested that the indirect effect of telework on performance

through positive affect (Indirect effect = 0.11, SE=.04, 95% CI [0.04, 0.19], see Table 4) was positive and significant, further supporting H4.

--TABLE 4--

To test H5 and H6 we followed the procedure recommended by Cohen et al. (2003) to test the moderation effects. The results showed that the interaction term between positive affect and EI was negatively and significantly related to performance (b = -0.22, $p < 0.01$) (see Figure 2).

--FIGURE 2--

We followed Edwards and Lambert (2007) and used 1000 bootstrapped samples to compute bias-corrected confidence intervals for significance testing. As shown in Table 4, the indirect effect of telework on performance (Indirect effect = 0.08, SE = 0.03, 95% CI [0.02, 0.15]) via positive affect was positive and significant when EI was low, but non-significant when EI was high (Indirect effect = 0.02, SE = 0.02, 95% CI [-0.02, 0.07]. Overall, the conditional indirect effect of telework at high and low levels of EI was negative and significant for performance (Indirect effect = -0.05, SE = 0.03, 95% CI [-0.10. -0.01]). Hence, H5 was supported.

Further, the results showed that the interaction term between positive affect and autonomy was positively and significantly related to performance (b = 0.16, $p < 0.001$) (see Figure 3).

--FIGURE 3--

The indirect effect of telework on performance via positive affect was positive and significant when autonomy was high (Indirect effect = 0.11, SE = 0.05, 95% CI [0.03, 0.21]), but non-significant when autonomy was low (Indirect effect = 0.05, SE =0.04, 95% CI [-0.01, 0.13]. Overall, the conditional indirect effect of telework at high

and low levels of autonomy was significant and positive for performance (Indirect effect = 0.04, SE = 0.04, 95% CI [0.01, 0.11]). Hence, H6 was also supported.

Discussion

The main goal of this study was (1) to analyze the relationship between telework and performance through positive affect, and (2) to test the moderating role of personal (IE) and job (autonomy) resources in the indirect relationship. To do so, we relied on the JD-R to support the conceptual model.

First, the results show that telework positively influences the positive affect, i.e., the more positive perception of the telework regime, the more positive affect the individual tends to experience (e.g., Brief & Weiss, 2002; Cifre & Salanova, 2012; Van Steenbergen et al., 2014). This relationship can be supported by the fact that working from home albeit in a hybrid regimen provides a greater balance between professional and extra-professional life, allowing the teleworker to experience a set of positive daily micro-events (e.g., being able to work in "their safe haven") which, therefore, triggers a set of positive emotions that, in turn, positively influence performance (Junça-Silva et al., 2021). Other studies have shown that telework, due to its characteristics, allows the individual greater autonomy, flexibility, and self-management of time and work, characteristics that are associated with higher levels of motivation, job satisfaction and positive affective experiences (e.g., Grant et al. al., 2019).

The relationship between telework and performance seems to be mediated by positive affect. That is, the positive perception of telecommuting seems to positively influence the way a person feels when working from home, predisposing them to a set of more frequent positive affective experiences, and ultimately promoting greater performance from home. Thus, it can be said that positive affect is a mechanism that explains how telecommuting positively influences performance. Other studies have

presented similar conclusions, as is the case of the study by Junça-Silva et al., in 2022, which showed that telework increased the positive affect ratio and this led to better task performance. In a similar study, in 2021, Junça-Silva et al. showed that the affect ratio mediated the relationship between telework, well-being, and performance, simultaneously. These results are in line with the broaden-and-build theory – which suggests that positive emotions expand thinking ability and lead to better behavior through the development of long-term personal resources (Fredrickson, 2001) – and with conservation theory of resources – which postulates that resources, such as positive affect, are essential elements for the individual's optimal functioning and promote their performance (Hobfoll, 1998; Hobfoll et al., 2018). Thus, it can be concluded that teleworking, by making the individual experience positive affect more often, improves their way of being in telework and promotes their performance.

Theoretical implications

The relationship between telework and performance through positive affect seems to be experienced differently between individuals, whether due to the influence of personal resources (i.e., EI) or work (i.e., autonomy). The results show that the indirect effect of telework on performance varies according to the different levels of the moderating variable, in this case, emotional intelligence and autonomy. However, not in the way that was expected in view of the EI. That is, the indirect effect becomes stronger for those with lower EI levels and does not present significant differences for teleworkers with higher EI levels. In other words, workers with lower levels of EI – that is, those who have more difficulty in recognizing, managing and using emotions (Mayer & Salovey, 1990) – need more to feel positive emotions to be able to perform better (compared to individuals with higher levels of EI). Hence, these individuals seem to be

more vulnerable to the situational and affective stimulus in order to achieve better performance.

On the other hand, in telework, emotionally intelligent workers not only have a higher level of performance (compared to less emotionally intelligent ones), but also, regardless of their affective experiences, manage them better. These employees may use their EI as a proactive resource to cope with day-to-day affective life in telework. Hence, they are able to effectively use antecedent-focused regulation strategies to produce positive affect and promote emotional and intellectual growth. In contrast, individuals with low EI ineffectively use emotion regulation strategies focused on antecedents and response and, as such, need more situational stimuli to perform better (albeit lower than individuals with higher EI) (Wong & Law, 2002). In addition, workers with higher EI can use emotional regulation mechanisms to promote positive expectations for social interactions and, thus, increase their citizenship and contextual performance behaviors (Wong & Law, 2002). Further, emotionally intelligent employees are able to identify and respond appropriately to the emotions of co-workers, customers, and superiors than workers with low EI levels (Day & Carroll, 2004), as they can easily switch from negative to positive moods (Abraham, 1999). These individuals also have a greater ability to provide the necessary support and encouragement to those who are perceived as tense or frustrated at work, are able to understand organizational norms and rules, and are more sensitive to their work environment (Carmeli & Josman, 2006). Thus, emotionally intelligent workers are more likely to exhibit altruistic, accommodating, and courteous behaviors that benefit the organization as a whole (i.e., contextual performance).

Autonomy also proved to be a work resource with a moderating role in the indirect relationship between telework and performance via positive affect; the

relationship becomes stronger for higher levels of autonomy. That is, telework promotes positive affect which, in turn, translates into greater performance, and this relationship is even stronger for those who have more autonomy (compared to those with less autonomy). This result is in line with the JD-R (Demerouti et al., 2001); according to the model, work factors can be classified into two categories (demands and resources); these resources refer to physical, social, psychological (e.g., EI) or work (e.g., autonomy) aspects, used to achieve work objectives, reduce demands and psychological and physiological costs, favoring performance (Demerouti & Baker, 2011). Thus, autonomy can be considered as a resource provided by the organization which, by allowing the individual to autonomously manage his time and work method, contributes to his becoming more frequently involved in contextual performance behaviors (such as helping a colleague when necessary). On the other hand, autonomy is an inherently motivational characteristic (Hackman & Oldham, 1980) that, when combined with a higher positive affect, increase the individual's performance.

Even so, it should be noted that the indirect effect is only significant when there is a balanced level between both resources (EI and autonomy). In other words, only when their combination involves an optimal level, which is characterized by a medium/high level of EI and low autonomy, or a low level of EI and medium or high levels of autonomy. Thus, there seems to be a need for a balance between resources as the individual does not use them simultaneously. That is, if one has high autonomy, s/he does not need to strain his/her EI to achieve a good performance and vice versa. This evidence is coherent with the COR, whose main assumption is that individuals strive to preserve, maintain, and acquire resources as a valuable source to deal with the adversities and challenges of everyday life (Hobfoll et al., 2018); as such, having a

resource available (e.g., autonomy) they preserve the other (EI) as it may be necessary for other situations.

In short, teleworkers in a hybrid regimen, when experiencing positive affect, improve their performance. The indirect effect of telework on performance through positive affect is contingent on personal (EI) and job (autonomy) resources, and there seems to be a balance in the way the individuals use and manage their resources for performance. In other words, when there is a high level of autonomy, individuals save their emotional ability using the autonomy provided by the organization, and in return, they dedicate themselves more, which contributes to performance. Thus, there also seems to be a process of social exchange (Blau, 1964) in which individuals, when feeling rewarded for working from home and with the autonomy to manage themselves, feels the duty to contribute more to the organization by improving their performance.

Practical implications

The present study elucidates the positive relationship between telework, affect, and performance. Telework is an action strategy that, when implemented effectively, provides a balance both for organizations (e.g., reduction of electricity costs) and for the worker, offering better interaction with family life and substantial improvements in terms of quality of life and affective experiences. Thus, managers should consider the adoption of teleworking in a hybrid mode, as an organizational strategy that enhances positive affect and performance.

In addition, if the promotion of autonomy is combined with teleworking, it is possible that workers will derive even more benefit from this relationship, which may, ultimately, increase its benefit for performance. The findings suggest that the hybrid regimen of telework not only promotes a positive perception of the regimen per se but also contributes to employees experiencing more positive affect and in turn, improves

their performance. Thus, managers should not only consider teleworking as an organizational strategy but also encouraging autonomy in teleworking as it can be a key condition to improve teleworkers' performance.

Limitations and Future Directions

The limitations are mainly related to the sample size (*N*= 290), presenting some disadvantages regarding the results, considering that a larger number of participants involved in the study would contribute to a better consistency of the results obtained. As such, future studies should test the model with a larger sample to analyze to what extent the results are maintained or changed. This may also be related to the period of data collection as part of the survey was applied during the mandatory confinement decreed by the Government (in January 2022).

On the other hand, another limitation is due to the use of self-report instruments in combination with having resorted to a cross-sectional study may have led to common method bias (Podsakoff, 2012). As such, to overcome this limitation, future studies should consider studies of a longitudinal nature.

Future studies should also consider measuring the role not only of resources but also of job demands at work and their interaction.

Conclusion

Overall, the hybrid regimen of telework not only promotes a positive perception of the regimen per se but also contributes to employees experiencing more positive affect and in turn, improves their performance. However, this relationship is conditional upon the levels of EI and autonomy.

References

Adamovic, M. (2022). How does employee cultural background influence the effects of telework on job stress? The roles of power distance, individualism, and beliefs about telework. *International Journal of Information Management*, *62*, 102437. https://doi.org/10.1016/j.ijinfomgt.2021.102437

Allen, T. D., Golden, T. D., & Shockley, K. M. (2015). How Effective Is Telecommuting? Assessing the Status of Our Scientific Findings. *Psychological Science in the Public Interest*, *16*(2), 40–68. https://doi.org/10.1177/1529100615593273

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309–328. https://doi.org/10.1108/02683940710733115

Baruch, Y. (2000). Teleworking: Benefits and pitfalls as perceived by professionals and managers. *New Technology, Work and Employment*, *15*(1), 34–49. https://doi.org/10.1111/1468-005X.00063

Carrier, J., & Monk, T. H. (2000). Circadian rhythms of performance: new trends. *Chronobiology international*, *17*(6), 719-732.

Crawford, J. (2022). Working from Home, Telework, and Psychological Wellbeing? A Systematic Review. *Sustainability*, *14*(19), 11874. https://doi.org/10.3390/su141911874

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika,* 16(3), 297e334.

De Clercq, D. (2022). Organizational disidentification and change-oriented citizenship behavior. *European Management Journal, 40*(1), 90-102. https://doi.org/10.1016/j.emj.2021.02.002

Dogra, P., & Parrey, A. H. (2022). Work from home amid black swan event (Covid-19): a bibliometric analysis from a social science perspective. *Kybernetes*, (ahead-of-print).

Elsetouhi, A. M., Mohamed Elbaz, A., & Soliman, M. (2022). Participative leadership and its impact on employee innovative behavior through employee voice in tourism SMEs: The moderating role of job autonomy. *Tourism and Hospitality Research,* 14673584221119371.

Fonner, K. L., & Roloff, M. E. (2010). Why Teleworkers are More Satisfied with Their Jobs than are Office-Based Workers: When Less Contact is Beneficial. *Journal of Applied Communication Research, 38(4),* 336–361. https://doi.org/10.1080/00909882.2010.513998

George, O. J., Okon, S. E., & Akaighe, G. (2022). Emotional intelligence and work engagement: a serial mediation model. *Journal of Organizational Effectiveness: People and Performance*, *9*(2), 193-211.

Golden, T. D., Veiga, J. F., & Simsek, Z. (2006). Telecommuting's differential impact on work-family conflict: Is there no place like home? *Journal of Applied Psychology, 91*, 1340–1350. https://doi.org/10.1037/0021-9010.91.6.1340

Goleman, D. (1995). Emotional intelligence, imagination, cognition and personality. *Personality and Individual Differences. Vol, 9,* 185–211.

Grant, C. A., Wallace, L. M., Spurgeon, P. C., Tramontano, C., & Charalampous, M. (2018). Construction and initial validation of the E-Work Life Scale to measure

remote e-working. *Employee Relations, 41*(1), 16–33. https://doi.org/10.1108/ER-09-2017-0229

Hamouche, S., & Parent-Lamarche, A. (2022). Teleworkers' job performance: a study examining the role of age as an important diversity component of companies' workforce. *Journal of Organizational Effectiveness: People and Performance*, (ahead-of-print).

Hobfoll, S. E. (2002). Social and Psychological Resources and Adaptation. *Review of General Psychology, 6*(4), 307–324. https://doi.org/10.1037/1089-2680.6.4.307

Hobfoll, S. E. (2002). Social and Psychological Resources and Adaptation. *Review of General Psychology, 6*(4), 307–324. https://doi.org/10.1037/1089-2680.6.4.307

Junça Silva, A., & Coelho, N. (2022). The moderating role of organizational culture on the relationship between workers' attitudes towards telework and happiness. *Kybernetes*.

Junça Silva, A., Almeida, A., & Rebelo, C. (2022). The effect of telework on emotional exhaustion and task performance via work overload: the moderating role of self-leadership. *International Journal of Manpower*.

Junça-Silva, A., Almeida, M., & Gomes, C. (2022). The role of dogs in the relationship between telework and performance via affect: a moderated moderated mediation analysis. *Animals*, *12*(13), 1727. https://doi.org/10.3390/ani12131727

Kim, S., Cho, S., & Park, Y. (2022). Daily microbreaks in a self-regulatory resources lens: Perceived health climate as a contextual moderator via microbreak autonomy. *Journal of Applied Psychology, 107*(1), 60–77. https://doi.org/10.1037/apl0000891

Lahiri, S., Pérez-Nordtvedt, L., & Renn, R. W. (2008). Will the new competitive landscape cause your firm's decline? It depends on your mindset. *Business Horizons*, *51*(4), 311-320. https://doi.org/10.1016/j.bushor.2008.02.004

Lunde, L. K., Fløvik, L., Christensen, J. O., Johannessen, H. A., Finne, L. B., Jørgensen, I. L., ... & Vleeshouwers, J. (2022). The relationship between telework from home and employee health: a systematic review. *BMC public health*, *22*(1), 1-14. https://doi.org/10.1186/s12889-021-12481-2

Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional Intelligence: Theory, Findings, and Implications. *Psychological inquiry*, *15*(3), 197–215.

Nemțeanu, M. S., & Dabija, D. C. (2023). Negative Impact of Telework, Job Insecurity, and Work–Life Conflict on Employee Behaviour. *International Journal of Environmental Research and Public Health*, *20*(5), 4182.

Parent-Lamarche, A. (2022). Teleworking, work engagement, and intention to quit during the COVID-19 pandemic: same storm, different boats?. *International journal of environmental research and public health*, *19*(3), 1267.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. Journal of Applied Psychology, 88(5), 879e903.

Spector, P. E. (2006). Method variance in organizational research: truth or urban legend?. *Organizational research methods*, *9*(2), 221-232. https://doi.org/10.1177/1094428105284955

Vahdat, S. (2022). The role of IT-based technologies on the management of human resources in the COVID-19 era. *Kybernetes*, *51*(6), 2065-2088.

Wen, J., Huang, S. (Sam), & Hou, P. (2019). Emotional intelligence, emotional labor, perceived organizational support, and job satisfaction: A moderated mediation

model. *International Journal of Hospitality Management*, *81*, 120–130. https://doi.org/10.1016/j.ijhm.2019.01.009

Tables

Table 1

Confirmatory Factor Analyses

Models	SRMR	CFI	TLI	RMSEA
Model 1 (five factors)	0.06	0.95	0.94	0.06
Model 2 (four factors)	0.08	0.85	0.82	0.11
Model 3 (three factors)	0.15	0.62	0.55	0.17
Model 4 (unifatorial)	0.14	0.52	0.45	0.18

Note. *N*=290; SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation.
Model 1: five-factor solution: telework, positive affect, performance, EI, and autonomy.
Model 2: four-factor solution in which EI and positive affect were combined into a single factor plus telework, performance, and autonomy on separate factors.
Model 3: three-factor solution in which EI and positive affect were combined into a single factor as well as autonomy and telework plus performance onto another factor.
Model 4: All items were loaded onto a single factor.
*Table developed by the authors.

Table 2

Descriptive statistics

Variable	*M*	*SD*	1	2	3	4	5	6
1. Telework	3.53	0.66	(0.88)					
2. Positive affect	3.37	0.61	0.28**	(0.83)				
3.Performance	4.03	0.60	0.23**	0.46**	(0.88)			
4. EI	3.74	0.56	0.19*	0.51**	0.67**	(0.89)		
5. Autonomy	3.92	0.82	0.20**	0.35**	0.51**	0.37**	(0.88)	
6. Age	3.08[1]	9.17	-0.19*	0.1	0.15*	0.07	0.08	-
7. Gender	-	-	0.07	0.03	-0.09	-0.08	-0.03	0.07

Note: $N = 290$; $^{*}p < 0.05$ $^{**}p < 0.001$.
Cronbach's alphas are in brackets.
*Table developed by the authors.

Table 3

Standardized coefficients of hypothesis testing

Variable	PA	Performance
Control Variables		
Age	0.00	0.00
Gender	-0.02	-0.05
Main effect		
Telework	0.25***	0.16**
Indirect effect		
Positive affect	-	0.11**
Moderation effects		
EI		0.52***
PA*EI	-	-0.22**
Autonomy	-	0.22***
PA*Autonomy	-	0.16***
R2	0.06**	0.60***
F value	10.04**	41.61***

Note: $N = 290$; $^{**}p < 0.01$ $^{***}p < 0.001$. PA: Positive affect.
*Table developed by the authors.

Table 4

Results of indirect effects

		Indirect Effect 95% CI
Conditional indirect effect		-0.05** [-0.10, -0.01]
Telework→PA→Performance	Low EI	0.08* [0.02, 0.15]
	High EI	0.02 [-0.02, 0.07]
Conditional indirect effect		0.04* CI [0.01, 0.11]
Telework→PA→Performance	Low Autonomy	0.05 CI [-0.01, 0.13]
	High Autonomy	0.11*** [0.03, 0.21]

Note: $N = 290$; $^{**}p < 0.01$ $^{***}p < 0.001$.
PA: Positive affect. EI: Emotional Intelligence.
*Table developed by the authors.

Figures

Figure 1

Proposed moderated mediation model

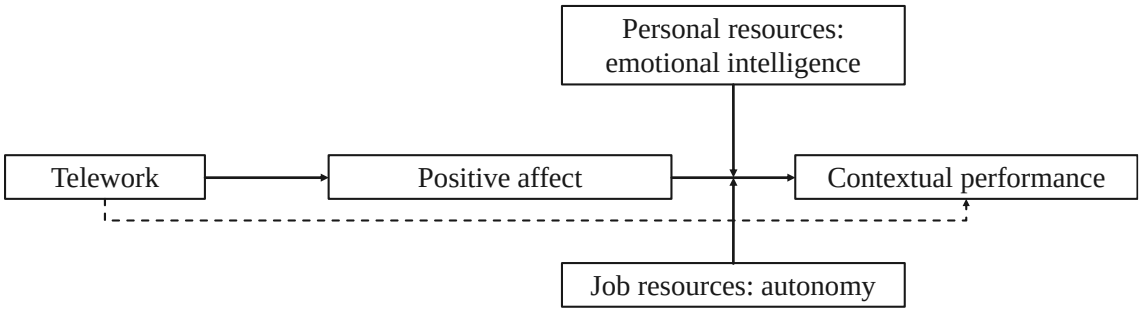

*Figure developed by the authors.

Figure 2

Moderation of IE on the PA and contextual performance relationship

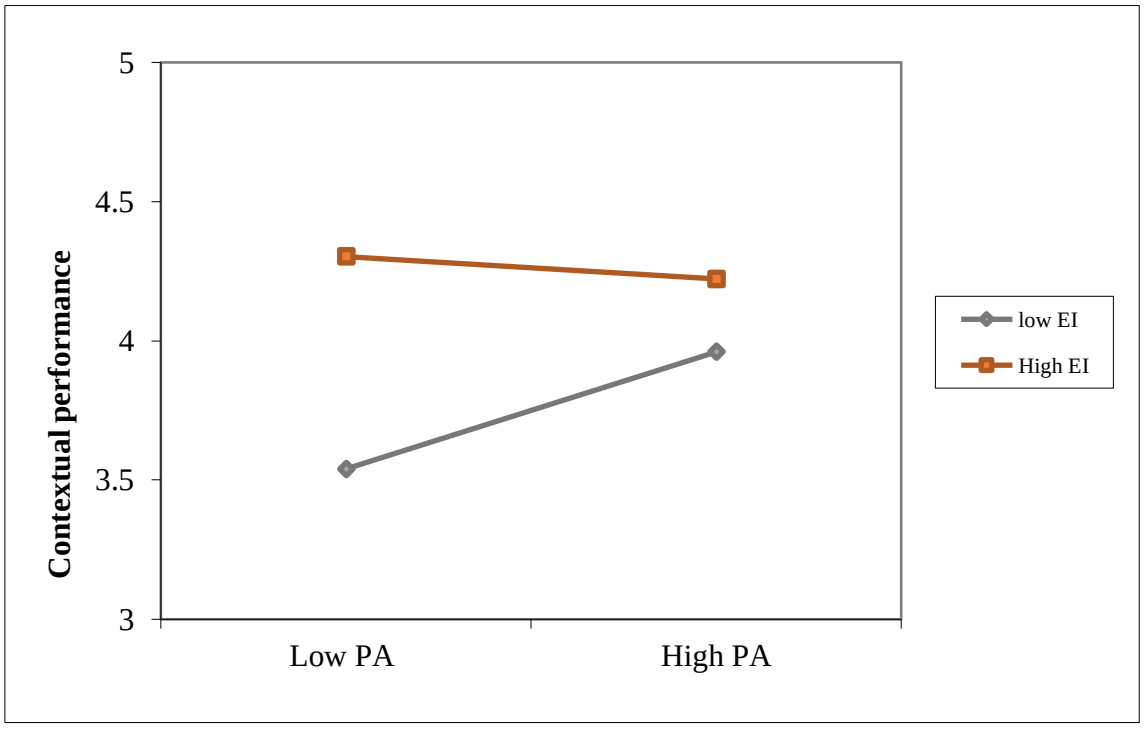

*Figure developed by the authors.

Figure 3

Moderation of autonomy on the positive affect and contextual performance path

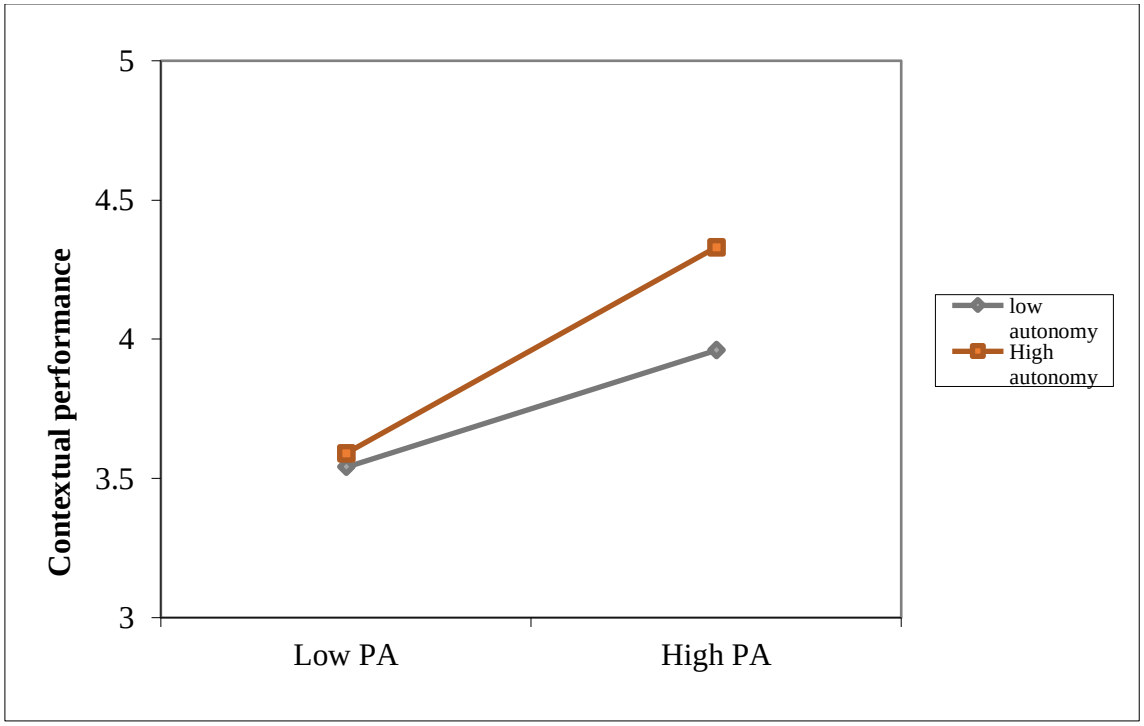

*Figure developed by the authors.