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Blurred boundaries: exploring the influence of work-life and life-work conflicts on university teachers' health, work results, and willingness to teleworking

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COVID-19 lockdowns forced organizations to rapidly shift from face-to-face interactions to online platforms, leading to unforeseen challenges. This study retrospectively examines the extreme conditions of teleworking, which blurred the boundaries between home and workspaces, providing a unique opportunity to assess perceptions of work-life and life-work conflicts and their consequences. Data were collected from university teachers through an anonymous online survey ($N = 383$). A path analysis using IBM SPSS AMOS software assessed the relationship between work-life and life-work conflicts, burnout, performance, and willingness to continue teleworking. Results suggest work-life and life-work conflicts produce different spillovers. Both conflicts significantly contributed to burnout, but only life-work conflict significantly related to perceived performance, and this relationship was negative. Burnout was negatively associated with perceived performance but had no significant relationship with willingness to continue teleworking after lockdowns. Conversely, the relationship between perceived performance and willingness to continue teleworking was significantly positive. These findings emphasize the interplay between work-life and life-work conflicts and their effects on workers' perceptions. Organizations should consider these dynamics when designing remote work policies to mitigate burnout and enhance employee performance and satisfaction. It is crucial for leadership to take responsibility for prioritizing the well-being of workers and their working conditions, as their actions significantly influence work design, individual and team goals, and the overall organizational climate.

KEYWORDS

COVID-19 pandemic, teleworking, work-life and life-work conflict, burnout, performance, university teachers

Introduction

During the global COVID-19 pandemic, lockdowns imposed an unprecedented disruption to life and work of millions of people worldwide. A significant portion of these individuals not only found themselves confined to their homes but also engaged in remote work. For example, in 2020, approximately 12.45% of EU workers aged from 20 to 64 years-old worked from home, whereas in 2019 this number was only 5.5% (Eurostat, 2021). More specifically,

according to Eurostat (2021) when urban areas and capital regions are considered, such as Germany, Luxembourg, the Netherlands and Portugal, the number of teleworkers increased to one fifth of the workforce in 2020.

The COVID-19 pandemic created a real-world scenario in which individuals were forced to adapt to various changes in their work and personal lives. During lockdowns the rapid shift to telework and the blurring of boundaries between work and home made personal and professional life more intertwined. Home became the hub for all daily activities, serving as a workspace, leisure area, family space, and, occasionally, a makeshift school for remote classes (Pennington, 2021; Uddin, 2021). Thus, COVID-19 lockdowns closely resemble what might be achieved in a controlled experiment. It presents a unique and unexpected opportunity to collect data on how individuals perceive the distinction between work-life and life-work conflicts and whether these conflicts have distinct consequences for their well-being and professional outcomes.

This study addresses key gaps in understanding the bidirectional nature of work-life and life-work conflicts within the context of extreme teleworking during the COVID-19 lockdowns, examining how these conflicts predict university teachers' burnout and performance and their willingness to continue teleworking post-pandemic. Existing research has largely focused on a unidirectional view of work-life conflict, often neglecting the interplay between work intruding into personal life and personal life interfering with work, which this study aims to explore as distinct yet interconnected dimensions. From an applied perspective, approaching work-life and life-work conflicts as distinct yet related concepts, allows organizations to tailor their practices and manage each dimension, and their respective consequences, effectively. This is particularly relevant given the continued prevalence of teleworking after the COVID-19 lockdowns which significantly impacted people's lives worldwide, affecting various aspects of their daily routines, well-being, and mental health. Specifically, companies' leadership face the challenge of devising strategies that align with the "new" reality and maintaining the well-being of workers and their performance (Dias-Oliveira et al., 2022; Lyons et al., 2009) in line with the United Nations Sustainable Development Goals (SDGs) (United Nations, 2020). By doing so, companies can mitigate the consequences of work-life and life-work conflicts on employment relationships and directly contribute to the achievement of two SDG goals: Good Health, and Well-Being (SDG 3) and Decent Work, and Economic Growth (SDG 8).

Theoretical framework and hypothesis

Individuals respond to demands in various domains of their lives, such as personal and professional, that may be conflicting. Indeed, individuals' participation in one domain affects their participation and experiences in another domain (i.e., family to work or work to family). The response to multiple demands is exacerbated when the cognitive ability of individuals is impaired, for example due to fatigue. In these situations, it is more challenging to compartmentalize, using "mental fences" (Zerubavel, 1991: 2), the different domains within which individuals move. As a result, it is difficult for individuals to assess when to open and close the gates that separate the different domains. Conceptually, Border Theories (i.e., Ashforth et al., 2000; Matthews and Barnes-Farrell, 2010) and Work-family Border Theory (Clark,

2000) advocate that the distinction of boundaries is critical. These boundaries must be perceived as being flexible for the fulfilment of basic psychological need for autonomy. In the work context, for example, if the employee has the ability or power to change when and where their work gets done and whether they can leave work for the family domain, then the boundaries are perceived as flexible.

Each domain has its own culture and provides different motivations for the behaviors performed. In this sense, workers are border-crossers making continuous, daily transitions between their work and family lives. The level of adjustment required for the transition between domains can be framed in terms of Spillover Theory (Bolger et al., 1989). For some individuals, the adjustment for the transition between domains (border-crossing) may be slight, for example when language and customs are highly similar in both domains. For others, the language and behavior expected in one domain are very different from what is expected in the other domain and, therefore, the adjustments for the transition between domains are more severe and might result in conflict (Clark, 2000). Thus, it could be argued that when the individual's adjustment to the transition is severe, the boundaries between domains is well-defined. Conversely, if an individual's adjustment to transitions between domains is slight, then the boundaries between domains are blurred.

In teleworking, the boundaries between work life and personal life may be even more blurred than in face-to-face working environments. Teleworking offers workers the benefits of working in silence with fewer interruptions and distractions (Carillo et al., 2021), leading to higher levels of concentration, increases in work efficiency, and a better balance of work and life demands (Charalampous et al., 2019). According with the European Commission (European Commission, 2020) prior to the COVID 19 pandemic, teleworking was used mainly by highly-skilled workers in knowledge-intense activities, who did most of their work on computers and enjoyed high degrees of autonomy. For knowledge workers, the highest prevalence of teleworking was amongst teachers (43%); which largely reflects informal overtime work at home, for example time spent for preparing lectures, conducting research, and marking assessments. Academia is one of the most flexible work environments. University teachers have a high level of self-autonomy and manage their work at their discretion (Damaska et al., 2014; Fontinha et al., 2019; Pitt et al., 2021). In addition, their academic work is closely linked to their identity, which correlates to the amount of time that they give to their work (Fox et al., 2011). Indeed, the literature shows that college and university teachers, tend to work longer hours than people in other professions and as a result they have less time to spend on their family and personal life (Jacobs and Winslow, 2004; Misra et al., 2012). Moreover, the culture in academia tends to reward university teachers who constantly perform at high levels often leaving them with little room to accommodate activities outside work (Fox et al., 2011). Furthermore, as Carlson et al. (2000) assert, in this context of extreme boundary flexibility, university teachers may struggle to meet the demands of their work and family and personal responsibilities at the same time.

The successive lockdowns caused by the COVID 19 pandemic resulted in abrupt and unexpected changes in working patterns, for example in universities, as in many sectors in society, work that was previously done on site was suddenly done remotely. These new ways of working might have further hindered the ability of university teachers to manage transitions between domains. Indeed, home became the place where all daily activities were carried out, at the

same time. Home was the space for work, leisure, family, and for parents, an improvised classroom for remote teaching (Pennington, 2021; Uddin, 2021). During the pandemic, university teachers were required to adapt their home, pedagogy, and work methods to accommodate digital interactions and technical equipment and to deliver their teaching online (Lizana and Vega-Fernandez, 2021). These changes had various consequences on academics' work-life and life-work boundaries including having less energy for leisure (Raišienė et al., 2022); extending their working hours and lowering their performance (Ahmadi et al., 2022); and impacting their mental health such as increased levels of exhaustion and fatigue (Raišienė et al., 2022), depression and anxiety, technostress and burnout syndrome (Lizana and Vega-Fernandez, 2021; Chirico et al., 2021). In addition, female academics reported increased domestic and childcare responsibilities (Guy and Arthur, 2020). In fact, as Hobfoll (1989) asserts, individuals typically strive to achieve and maintain their resources at work and at home. A disruption to one of these domains, such as the COVID 19 pandemic, led to an inability to protect resources and balance roles in either domain, resulting in a decline in well-being. As such, if the integrity of domains is difficult to maintain then the roles that individuals must perform within home and work might conflict.

Work-life and life-work conflicts occur when individuals must perform multiple roles at the same time. For example, being a worker, spouse, parent, and neighbor (Edwards and Rothbard, 2000; Carlson et al., 2000). This type of inter-role conflict operates in two distinct directions (Frone et al., 1992; Greenhaus and Beutell, 1985; Mäkelä and Suutari, 2011; Byrne and Barling, 2017; Netemeyer et al., 1996). One's work role can hinder one's role in the life domain. A negative spillover from work to the family domain, for example, when individual gives more time to their work, may result in a work-life conflict. In addition, one's family role can jeopardize one's role in the work domain. A negative spillover from family to the work domain, for example, when individuals give more time to family, may result in life-work conflict (Yucel and Latshaw, 2020; Frone et al., 1992; Rothbard, 2001; Mäkelä and Suutari, 2011; Soomro et al., 2018). Family and work domains invoke different norms, expectations, and requirements. When these pull an individual in opposite directions it results in an inevitable inter-role conflict, that is, work-life and life-work conflicts (Fredriksen and Scharlach, 2001; Shaffer et al., 2016). Research suggest that the two conflicts are sufficiently different in nature and scope to warrant independent examination (e.g., Byron, 2005; Mesmer-Magnus and Viswesvaran, 2005; Elahi et al., 2022). Indeed, a meta-analysis by Byron (2005) found that work-family and family-work conflicts have unique antecedents and attitudes (e.g., demographic, work, and non-work-related variables). Therefore, current research on this topic (Beigi et al., 2016; Elahi et al., 2022; Moreira et al., 2023) examines both work-life and life-work directions of the conflict and how each affects the work-related outcomes, for example employee's burnout and performance.

Burnout is a state of exhaustion which occurs when a worker lacks the emotional resources to perform their tasks. Maslach (1976) described this condition as a detachment from others and from work which results in a shift towards cynical feelings and poor work performance. The negative impact of burnout on distinct domains of human life justified the inclusion of this syndrome by World Health Organization (WHO) in the 11th Revision of the International Classification of Diseases (ICD-11; World Health Organization, 2019).

Currently, burnout is one of the most important work-related psychosocial threats. It is prevalent amongst many professions and occupational groups with significant costs for individuals, organizations, and society at large (Edú-Valsania et al., 2022; Epstein et al., 2020; Medina et al., 2021). The imbalance of work-life and life-work is a potential cause of stress and unconstructive work attitudes, which are positively related to burnout (Tziner et al., 2015; Rubio et al., 2015). Like other workers, when university teachers' work spills over into the family domain, or family issues spills over into the work domain, this may have a negative impact on their psychological and emotional health. University teachers with work-life and life-work conflicts are more likely to report higher levels of mental health problems (Denson et al., 2018; Badri, 2019; Pitt et al., 2021).

In a context of the COVID 19 lockdowns, when university teachers are teleworking the potential for burnout can be even more prevalent. As Molino et al. (2020) argue the pressure to be online, whether to work or to socially interact with colleagues, makes it more difficult to disconnect physically and mentally from work and to recover between workdays, with consequences on teleworkers' ill-being. Therefore, university teachers working remotely might be more prone to burnout, less willing to continue teleworking after the pandemic lockdowns and exhibit a decline in their performance.

Employee performance is a multidimensional concept. It refers to workers' behavioral engagements, that is, the action individuals take to carry out their work, as well as expected work outcomes which are the consequences of workers' job behavior (Pradhan and Jena, 2017). Previous research suggests that work-life and life-work conflicts causes a decline in workers' work attitudes (Schieman et al., 2003; Rothbard, 2001; Rotondo and Kincaid, 2008; Cohen and Liani, 2009; Mohsin and Zahid, 2012; Thompson and Aspinwall, 2009) and work effort (Konrad and Mangel, 2000) that in turn causes poor performance (Grzywacz and Marks, 2000; Ahmad, 2008; Mohsin and Zahid, 2012). In addition, Beauregard et al. (2019) reviewed existing research on teleworking prior to COVID 19 and concluded that the relationship between teleworking and employee performance is not clear. Some studies report a positive impact on individual and team-related performance (e.g., Golden and Gajendran, 2019) whereas others suggest negative consequences for workers' performance (e.g., Sardeshmukh et al., 2012; Van der Lippe and Lippényi, 2020). Research carried out during COVID 19 on the relationship between teleworking and workers' performance has produced similar mixed findings on job-performance outcomes related constructs. For example, Mohring et al. (2020) assessed individual panel data collected before and during lockdowns and found an overall decline in work satisfaction regarding remote work. Likewise, Abdel et al. (2021) reported a negative spillover effect of work demands over family demands during teleworking on workers' emotional health. By contrast, research by Saba and Cachat-Rosset (2020) found that although teleworking was associated with an increase in workload, modification of tasks and social isolation, workers perceived that they were more productive and able to reduce work-life conflict.

As work-life conflict and life-work conflict are two distinct constructs, they might affect workers' performance differently. As Anwar et al. (2013) argue work-life and life-work conflicts can affect employee performance positively or negatively. For example, Soomro et al. (2018) study of university teachers reported a non-significant negative relationship between life-work conflict and perceived performance, but a significant positive relationship between work-life conflict and

perceived performance. Thus, it could be argued that a negative spillover effect in the personal domain, such as when an employee takes work assignments home, will disturb the employee's personal life but might have a positive effect on their professional life and their perceived performance. Teleworking outside business hours is normative, expected and rewarded amongst university teachers particularly for those who are pursuing a high-level career (Fox et al., 2011). Thus, due to university teachers' high level of investment in the work domain, work-life conflict might contribute to a more positive perceived performance. However, whereas before the COVID 19 pandemic university teachers had the autonomy to choose whether to work from home or not, during the pandemic, teleworking was mandatory. These conditions might increase the work-life conflict and result in a positive perceived performance. In addition, a life-work spillover effect, such as when a university teacher brings their personal problems into work, would have a negative effect on the perceived performance. Indeed, if their career ambitions are constrained by responsibilities and issues in their personal life this may contribute to a negative perceived performance. As current perceptions of the work context influence future actions, and given that the connection between teleworking and performance is not clearly defined, we investigate whether university teachers who perceive their teleworking positively report a stronger inclination to continue teleworking. Thus, the research hypothesis are as follows:

H1: Higher levels of work-life conflict and life-work conflict predict higher levels of burnout for teleworking university teachers during COVID 19 lockdowns.

H2: Higher levels of work-life conflict predict higher perceived performance, whereas higher levels of life-work conflict contribute to lower perceived performance, in teleworking university teachers during COVID 19 lockdowns.

H3: Higher levels of burnout predict lower willingness to continue teleworking and lower perceived performance for teleworking university teachers during COVID 19 lockdowns.

H4: Higher levels of perceived performance predict higher willingness to continue teleworking for teleworking university teachers during COVID 19 lockdowns.

Method

Procedure

A protocol with the Consortium of Portuguese Higher Education Institutions was established for the study. Ten institutions from all major regions of the country participated: Northern (42%), Central (40%), and Southern (18%). Two (11%) were private, and the remaining 89% were public institutions. All participating institutions operated under an in-person teaching regime before the COVID-19 pandemic, adapting to teleworking during the lockdown period. The questionnaire was emailed to their teaching staff using QualtricsXM. Each participating institution designated a liaison, who was responsible for distributing the survey link to their teaching staff, ensuring effective dissemination within their organization. Participants were asked for their consent, and confidentiality and voluntary participation were guaranteed. Ethical

precautions were taken according to the Ethical Charter of the Portuguese Society of Education Sciences (2020) and the Universidade Católica Portuguesa (2015). There were no risks or monetary incentives. Respondents confirmed working remotely during the January 2021 lockdown, completed demographic information, and shared perceptions of work-life balance, burnout, performance, and future remote work willingness. Completing the questionnaire took approximately 17 min. Data was collected between 15th February and 12th April 2021.

Participants

Overall, 396 participants (university teachers) fully completed the questionnaire, 14 were removed from the dataset because they did not comply with the inclusion criteria of working exclusively from home during the lockdown. Thus, a final sample of 383 was considered. Most of the participants were female ($n = 229$, 60%), aged between 22 and 69 years-old ($M = 47.37$, $SD = 9.32$), and holding a PhD (63, 26% a MSc degree, and 11% a Bachelor's degree). Participants were mainly married (66, 21% single, 11% divorced, 1% widow, 1% did not answer), and living in a household of 4 people (32%; 25 and 23% lived in households of 2 and 3, respectively; 12% lived alone, and the remaining 7% lived in households of 5 or more individuals; 2% did not answer).

Regarding their work, participants' job experience ranged from 2 months to 40 years ($M = 16.5y$, $SD = 9.8y$). Only 11% had experience of teleworking in a previous organization, and 5% had some experience working remotely in the organization they were working in at the time they completed the survey. Most participants ($n = 328$, 86%) reported that they were working more hours in the lockdown (remote regime) than before the lockdown (the face-to-face regime). Twelve percent indicated that they worked the same amount of time, and 2% indicated that they were working fewer hours.

Measures

Work-life and life-work conflict

The Work/Non-work Interference and Enhancement Scale (Fisher et al., 2009) was used to assess participants' perceptions of work-life and life-work conflict during the lockdown. They were asked to rate their agreement (1 = completely disagree, 5 = completely agree) with 10 statements regarding (a) work-life conflict (e.g., "I often neglect my personal needs because of the demands of my work," 5 items, $\alpha = 0.92$) and (b) life-work conflict (e.g., "I am too tired to be effective at work because of things I have going on in my personal life," 5 items, $\alpha = 0.87$).

Burnout

To evaluate participants' perceptions of burnout, an adaptation of the Maslach Burnout Inventory (Maslach and Jackson, 1981) was used. Participants indicated how frequently (1 = never, 5 = always) they experienced ten different situations during the lockdown (e.g., "I feel emotionally drained from my work"). A single score of Burnout was computed by averaging their responses ($\alpha = 0.89$). Higher scores indicated stronger feelings of job burnout.

Perceived performance

The "Productivity" dimension of the E-Work Life Scale (Grant et al., 2018) was used to assess participants' perceptions regarding

their performance while teleworking. They rated their agreement (1 = *completely disagree*, 5 = *completely agree*) with four different statements (e.g., “E-working makes me more effective to deliver against my key objectives and deliverables”). Based on the average of their responses, a single score of perceived performance was computed ($\alpha = 0.80$). Higher scores indicated more positive perceptions of performance.

Willingness to continue teleworking

To assess participants' willingness to continue teleworking after the pandemic, they were asked to rate their agreement (1 = *completely disagree*, 5 = *completely agree*) with three statements: “I now hold a positive view of teleworking,” “I hope to have opportunities to keep teleworking,” and “I am motivated to keep teleworking.” A confirmatory factor analysis supported that this unidimensional structural is a good fit to the data: $\chi^2(1) = 6.34$, $p = 0.012$; $\chi^2/df = 6.34$; CFI = 0.995, $p_{CFI} = 0.332$, RMSEA = 0.099, $p_{RMSEA} = 0.089$, 90% CI [0.037, 0.178], SRMR = 0.020; AIC = 22.34, BCC = 22.46, MECVI = 0.041. Therefore, a single score of willingness to continue teleworking was computed ($\alpha = 0.90$).

Data analysis procedure

Data analysis followed a 2-step procedure: (1) descriptive statistics, normality and multicollinearity assumptions were calculated using IBM SPSS software® (version 28); (2) path analysis using IBM SPSS AMOS software (version 28) was conducted to test the study hypotheses. For the path analysis, the following indicators were used to assess the fit of the theoretical model to the collected data: (a) Chi-square test (χ^2); (b) Root Mean Square Error of Approximation (RMSEA) and the Root-Mean-Square Residual (SRMR), for which an adequate fit is considered if values are between 0.05 and 0.08, and values inferior to 0.05 and p value ≤ 0.05 indicate an excellent fit (cf. [Arbuckle, 2008](#); [Steiger, 1990](#); [Marôco, 2014](#)); (c) Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI), for which values ≥ 0.90 and ≥ 0.95 indicate an adequate and an excellent fit, respectively (cf. [Bentler, 1990](#); [Bentler and Bonett, 1980](#)).

Results

Preliminary analyses

Before conducting the path analysis, the normality and multicollinearity assumptions were checked. Skewness ($-0.46 < sk < 0.76$) and kurtosis ($-0.84 < ku < 0.43$) of all variables was below $|3|$ and $|10|$, respectively, thus no severe deviations from the normal distribution were found (cf. [Kline, 2015](#)). Correlations and VIF statistics were conducted to check for multicollinearity (cf. [Table 1](#)): all correlations were below 0.80 and VIF values inferior to 5 as necessary (cf. [Marôco, 2014](#)).

Path analysis

The study hypotheses were tested using path analysis. According to the proposed theoretical model, work-life conflict (i.e., high work

TABLE 1 Correlation matrix, means (standard deviations) and VIF coefficients across the study variables ($n = 373$).

	1.	2.	3.	4.	5.	VIF
1. Work-life conflict	3.32 (1.10)					1.68
2. Life-work conflict	0.45***	2.33 (0.91)				1.59
3. Burnout	0.60***	0.43***	2.59 (0.88)			1.71
4. Perceived performance	-0.31***	-0.52***	-0.39***	3.56 (0.79)		1.43
5. Willingness to remain in telework	-0.18***	-0.23***	-0.26***	-0.58***	3.46 (1.10)	

*** $p < 0.001$, ** $p < 0.010$, * $p < 0.050$.

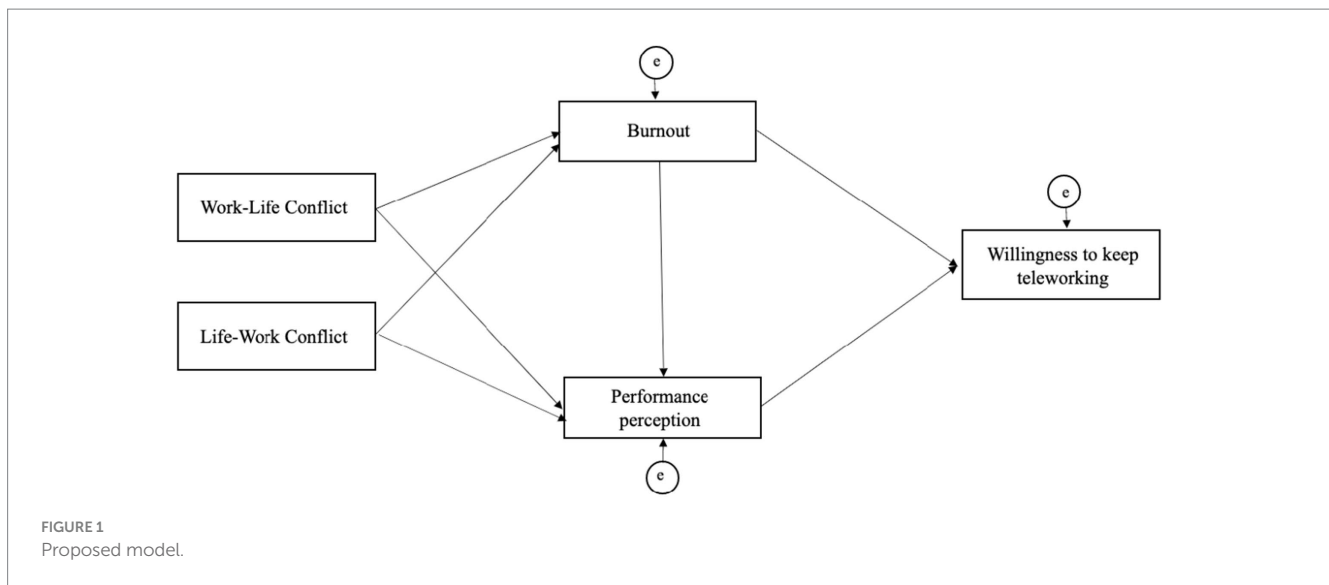
interference with personal life) and life-work conflict (i.e., high personal life interference with work) was expected to negatively predict willingness to continue teleworking via higher perceptions of burnout and lower perceptions of performance. It was also expected that higher feelings of burnout would predict lower perceptions of performance (cf. [Figure 1](#)).

Overall, the proposed model presents an excellent fit to the data: $\chi^2(2) = 5.19$, $p = 0.075$; $\chi^2/df = 2.60$; CFI = 0.994, $p_{CFI} = 0.199$, TLI = 0.971 RMSEA = 0.065, $p_{RMSEA} = 0.272$, 90% CI [0.000, 0.136], SRMR = 0.020; AIC = 41.19, BCC = 41.73, MECVI = 0.111. The proposed model accounted for 39% of variance of burnout, 30% of variance of perceptions of performance, and 34% of variance of willingness to continue teleworking. [Table 2](#) summarizes the parameters' estimates.

The results showed, consistently with H1, that university teachers' higher work-life and life-work conflict predicted higher levels of burnout. H2 was partially supported as only life-work conflict predicted lower levels of performance, whereas work-life conflict was not significantly related to perceived performance. Moreover, the more university teachers experience burnout, the lower their perceptions of performance. However, burnout does not have any direct and significant relation with their willingness to continue teleworking. Therefore, H3 was partially supported. H4 was fully supported. The direct relationship between performance levels and willingness to continue teleworking in the future was also significant. The indirect effects showed that burnout and perceived performance can mediate the relation between work-life conflict and life-work conflict and workers' willingness to continue teleworking post-covid ([Table 2](#)).

Discussion

The findings of Hypothesis 1 (H1) indicate that both work-life and life-work conflicts exert a strong influence on burnout, even when tested separately. The results are consistent with the existing literature suggesting that an imbalance between work-life and life-work is positively correlated with burnout ([Tziner et al., 2015](#); [Rubio et al., 2015](#); [Denson et al., 2018](#); [Badri, 2019](#); [Pitt et al., 2021](#)). As anticipated, findings for Hypothesis 2 (H2), show that higher levels of life-work conflict predict lower perceived performance. Also, as expected, life-work conflict does not predict performance



in the same manner as work-life conflict. In this case, the relationship between work-life conflict and perceived performance is positive but not statistically significant. In other words, work-life conflict does not affect performance in the specific context of the pandemic lockdowns. The results of H2 demonstrate that workers not only perceive both conflicts differently but also respond to them differently. Whereas negative spillover in the personal domain does not impact professional life and perceived performance, negative spillover into the professional domain adversely affects performance. These findings are consistent with [Soomro et al.'s \(2018\)](#) study of the relationship between both work-life and life-work conflicts and performance amongst university teachers where the former relationship yielded non-significant results.

H1 and H2 both encompass essential and unique elements in this study. These include a focus on investigating: (1) the conflict between the family and work domains, examining both work-life conflict and life-work conflict, and (2) the experiences of university teachers under extreme teleworking conditions during the COVID-19 lockdowns. While it is acknowledged in the literature that both work-life and life-work conflicts are different and can have a different impact on work outcomes (e.g., [Beigi et al., 2016](#); [Byron, 2005](#); [Elahi et al., 2022](#)), previous research has not always distinguished between work-life and life-work conflicts (e.g., [Gisler et al., 2018](#)).

During the COVID 19 period, the extreme teleworking context intensified the sense of strain across different domains of workers lives to an unprecedented level, rendering boundaries nearly non-existent or impossible to establish ([Dias-Oliveira et al., 2022](#)). Home became the focal point of people's lives. It served as the hub for family, work, school, shopping, and other aspects of life. To support their staff, companies' leadership implemented strategies to assist their teams to balance the various aspects of their lives using flexible work schedules, adapting tasks and meeting times for team members' family situations, enabling reduced work hours or alternative schedules, and encouraging weekend shutdowns ([Silva et al., 2023](#)). Therefore, these circumstances provided a unique opportunity to research work and family and family and work conflicts faced by worker, as university teachers, as if in a laboratory

setting. In this scenario, it is noteworthy that H1 was confirmed and H2 was partially confirmed (though all relationships were in the expected direction). This suggests that even in a highly adverse context where the boundaries between home and work are blurred, university teachers can distinguish between the two conflicts. Work-life and life-work conflicts are indeed two different constructs, contributing differently to the work relationship, and they should be measured, evaluated, and addressed by organizations as distinct constructs. Moreover, we argue that studies conducted in this new work reality, with the aim of studying the conflict between the two domains, should consider both dimensions.

Hypotheses 3 and 4 focused on workers' willingness to continue teleworking in the future. H3 is partially supported and reveals a significant finding. While university teachers' burnout predicts lower perceived performance, burnout does not predict university teachers' willingness to continue teleworking. In other words, even in an extreme teleworking context we can infer that teleworking will not be perceived as the cause of burnout. In fact, university teachers express a desire to continue working remotely in the future regardless of their level of burnout. Indeed, burnout is not an explanatory variable for the willingness to continue teleworking. Furthermore, H4 confirms that university teachers who perceived their teleworking performance positively are even more willing to continue teleworking in the future. These results are consistent with both pre- and post-COVID 19 literature. For example, prior to COVID 19 the literature suggests that from the workers' perspective, the advantages of teleworking are associated with a better balance between personal and professional life; increased flexibility, autonomy, productivity, job satisfaction, and employee morale; as well as reducing commuting time and presenteeism ([Gajendran and Harrison, 2007](#); [Tavares, 2017](#)). After COVID 19, [Raišienė et al. \(2021\)](#) found that the majority of workers claim to have become accustomed to working remotely and believe in its continuity, and most workers believe that teleworking is entrenched in the labor market. Moreover, the results are also consistent with previous studies of teleworking amongst knowledge workers, such as university teachers.

TABLE 2 Parameters' estimates for the proposed model.

	b	SE	p	β
Direct effects				
Work-life conflict - > Burnout (H1)	0.40	0.04	<0.001	0.50
Life-work conflict - > Burnout (H1)	0.21	0.04	<0.001	0.22
Work-life conflict - > Performance (H2)	0.02	0.03	0.619	0.03
Life-work conflict - > Performance (H2)	-0.38	0.04	<0.001	-0.44
Burnout - > Performance (H3)	-0.20	0.05	<0.001	-0.22
Burnout - > Willingness to continue teleworking (H3)	-0.05	0.06	0.342	-0.04
Performance - > Willingness to continue teleworking (H4)	0.79	0.06	<0.001	0.57
Indirect effects				
Work-life conflict - > Performance (via burnout)	-0.08	0.02	0.011	
Life-work conflict - > Performance (via burnout)	-0.04	0.01	0.011	
Work-life conflict - > Willingness to keep teleworking (via burnout)	-0.02	0.03	0.359	
Life-work conflict - > Willingness to keep teleworking (via burnout)	-0.01	0.01	-0.346	
Work-life conflict - > Willingness to keep teleworking (via performance)	0.02	0.03	-0.593	
Life-work conflict - > Willingness to keep teleworking (via performance)	-0.30	0.04	0.005	
Work-life conflict - > Willingness to keep teleworking (via burnout and performance)	-0.06	0.02	0.011	
Life-work conflict - > Willingness to keep teleworking (via burnout and performance)	-0.03	0.01	0.007	

The benefits of teleworking for knowledge workers have been well established in the literature even before COVID 19. [Mazzi \(1996\)](#), for example, found that knowledge workers with individually-based tasks which require high levels of concentration can benefit from the reduction of interruptions when working away from the office environment. This is in line with research findings that show that when knowledge workers are able to telework, they report higher levels of job satisfaction and perceived productivity ([Tustin, 2014](#)) and organizational commitment ([Kelliher and Anderson, 2010](#)). Other research on knowledge workers (e.g., [Kelliher and Anderson, 2010](#); [Tustin, 2014](#); [Arvola and Kristjuhan, 2015](#)) suggest that they also experience lower fatigue and frustration, and reduced stress associated with commuting and daily demands in the office. Furthermore, a study conducted between 2017 and 2018 in Sweden reported that compared to academics who work on campus, academics who telework are equally satisfied with their autonomy at work, and their relationships with colleagues; they also feel equally efficient at work, regardless of how much they telework ([Heiden et al., 2021](#)). Evidence also suggests (e.g., [Soomro et al., 2018](#)) that academics with the most professional experience are best suited for teleworking as their teaching experience seems to ensure high levels of teaching quality when teleworking.

In the current work environment, characterized by the coexistence of teleworking, hybrid, and face-to-face work, the results of this study are particularly relevant. The insights gained from extreme contexts provide valuable lessons for improving companies' leadership, work relationships, and organizational practices even in less extreme settings. As teleworking solidifies its place in the modern workplace, addressing work-life and life-work conflicts becomes crucial for companies aiming to enhance

employee performance and satisfaction. In fact, organizations and their leaders should carefully consider these dynamics when designing remote work policies. Efforts to reduce life-work conflict seem essential for maintaining high levels of perceived performance, while addressing burnout directly through support mechanisms and resources can sustain overall employee performance. This study also underscores the importance of tailored interventions to manage work-family dynamics, ensuring that teleworking remains a viable and productive option beyond the pandemic.

In terms of potential limitations of this study, one key aspect to consider is the measurement of performance which relies on self-reported data, reflecting participants' perceptions on their performance. Future studies could use more objective measures of performance to address this limitation. Another limitation relates to the research design, which provides only a snapshot of the moment, as it is a cross-sectional study. Looking ahead future research should explore the long-term impacts and effectiveness of various organizational strategies in supporting teleworkers, through longitudinal designs. Studies should continue to investigate the relationship between work-life and life-work conflicts and other outcomes, such as job satisfaction, physical health, or overall life satisfaction. This would deepen the understanding on how these conflicts influence both professional and personal aspects of workers' lives. Furthermore, conducting exploratory qualitative studies could provide richer insights into the diverse dimensions of individuals' experiences.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Author contributions

FS: Conceptualization, Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. ED-O: Conceptualization, Investigation, Writing – original draft, Writing – review & editing. CM: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – review & editing. JH: Writing – original draft, Writing – review & editing.

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