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The influence of remote work on exhaustion

Tiago Seiça Margato

Master in Human Resources Management and Organizational Consulting

Supervisor:

PhD Sílvia Costa Agostinho da Silva, Cathedratric Professor, Iscte-IUL

Co-supervisor:

PhD Helena Maria Barroso Carvalho, Cathedratric Professor, Iscte-IUL

October, 2021



BUSINESS
SCHOOL

Department of Human Resources and Organizational Behaviour

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Acknowledgements

First, I owe a deep sense of gratitude to Professor Sílvia for her dedication and availability at every stage of my research. Her knowledge and experience were essential to develop and complete this dissertation. I would like to extend my sincere thanks to Professor Helena for her timely advices and insightful contribution to this work.

I would like to manifest my appreciation words to those who demonstrated patience and availability to participate in this study as well as to my co-workers for their attitude of collaboration.

I also would like to give special thanks to my mother for her unconditional support and for trusting in my decisions without ever doubting about my ambition. To my sister for being such an inspiration in what concerns to overcome tough challenges in adverse moments of life.

I am extremely thankful to my grandparents for allowing me to have an excellent education since day one and to achieve what I have today. This achievement is entirely dedicated to my grandmother for everything she did for me.

My thanks and appreciations also go to my colleague João who have helped me with his abilities and gave me the confidence to keep working.

Last but not least, it is my privilege to thank Rita for always being there for me and loving me the way I am. She is responsible for pushing me to go further and encouraging me to achieve my goals.

In the beginning of this journey I was not aware of the several challenges that I would need to overcome in order to finish this academic chapter successfully. Now I am able to say this was a learning path that not only allowed me to understand that we should always set ambitious goals in our life but also get surrounded by those who really care about us providing their support no matter what.

Resumo

A pandemia covid-19 veio contribuir para que se olhasse de forma mais objetiva para o teletrabalho como parte integrante do futuro das organizações, tornando a necessidade de compreender o seu impacto na saúde dos colaboradores ainda mais relevante. Estudos mostraram que o teletrabalho pode ter efeitos positivos na vida dos colaboradores. Efetivamente, existem características durante o teletrabalho que podem atuar como recursos pessoais que ajudam a lidar melhor com certas exigências do trabalho, reduzindo os efeitos das mesmas e, conseqüentemente, favorecendo o processo de recuperação. Este estudo avaliou a relação de três dimensões do teletrabalho - produtividade, flexibilidade e interferência vida-trabalho - com a exaustão sob o efeito mediador da carga de trabalho. Seguidamente, foi medido o impacto do distanciamento psicológico durante o tempo de lazer na relação entre as três componentes do teletrabalho e a exaustão. Para tal, foi desenvolvido um estudo quantitativo ($N = 253$) dirigido a colaboradores em teletrabalho em Portugal. Todas as hipóteses foram suportadas pelos dados, exceto as hipóteses relativas ao papel moderador do distanciamento psicológico. Os resultados indicaram que as três componentes do teletrabalho (produtividade, flexibilidade e interferência vida-trabalho) estão negativamente relacionadas com a exaustão e que a carga de trabalho medeia a relação entre as três componentes do teletrabalho e a exaustão. No que diz respeito ao distanciamento psicológico, este estudo sugere que os colaboradores capazes de desligar mentalmente do trabalho durante o seu tempo de lazer experienciam uma menor exaustão.

Palavras-chave: teletrabalho; carga de trabalho; distanciamento psicológico; exaustão

Classificações JEL: O15 – Recursos Humanos; J24 – Capital Humano

Abstract

The covid-19 pandemic has contributed to analyse remote work in a more strategic manner as an important part of organisations' future, making the need to understand its impact on employees' health even more crucial. Studies have shown that remote work can have positive effects on employees' working life. In fact, there are job characteristics during remote work that can act as job resources by helping individuals to deal with certain job demands, thus reducing their effects and, consequently, promoting the recovery process. This study analysed the relationship between three components of remote work - job effectiveness, flexibility and work-life interference - and exhaustion considering the mediation effect of workload. Afterwards, it was measured the impact of psychological detachment during off-job time in the relationship between the three components of remote work and exhaustion. To do that, it was developed a quantitative study ($N = 253$) with employees working remotely in Portugal. All the hypothesis were supported by this study, excluding the hypothesis of the moderating role of psychological detachment. The results indicated that the three components of remote work are negatively related to exhaustion and workload mediates the relationship between these three components of remote work and exhaustion. Regarding the psychological detachment, this study provided evidence that when employees are able to mentally disengage from work during off-job time they experience lower exhaustion.

Keywords: remote work; workload; psychological detachment; exhaustion

JEL Classification System: O15 - Human Resources; J24 – Human Capital

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1. Introduction

The fast development of information and communications technology (ICT) has contributed to shape a new landscape in the way of work by providing employees with the opportunity to work anywhere and anytime (Braukmann et al., 2018). Actually, remote work has grown in the past decades across several sectors but in a slower pace than expected due to several organisational reasons (Nakrošienė et al., 2019). However, the unexpected outbreak of the covid-19 has accelerated the implementation of a flexible work environment, which contributed to observe most of knowledge workers experiencing remote work on a daily basis (Wang et al., 2020). There was a significant growth in terms of people working remotely when compared with the period before the pandemic in Portugal.

Remote work has been associated to positive effects for both individuals and organisations, being described as a means to reduce stress while increasing both productivity and flexibility (Grant et al., 2013). Besides, remote work also seems to be related to an intensification of work, where the constant access to ICT contributes to longer working schedules (Chesley, 2010; Kelliher & Anderson, 2010). Within this perspective, we found suitable to incorporate job demands-resources model (JD-R model) to better understand the impact of remote work on employees' well-being. This model states that when employees afford a set of job resources, the job demands from work can be reduced, thus decreasing the negative effects on employees' health (Bakker & Demerouti, 2007; Demerouti et al., 2001).

The main innovation of this research is to perceive if particular job characteristics of remote work - job effectiveness, flexibility and work-life interference – can act as job resources, leading to decreased exhaustion of employees. If employees can be more effective during remote work, provided with more flexibility and manage effectively the boundaries between home and work, they are more likely to experience less exhaustion.

There are previous studies focused on the characteristics, benefits and challenges of remote work (Bailey & Kurland, 2002; Baruch, 2000; Morgan, 2004), but existing empirical evidence is not clear to assume if remote work is actually valuable for employees' well-being (Charalampous et al., 2019). For that, there is a need to understand how remote work can impact employees' health, so that organisational strategies can be drawn to help companies to implement remote work successfully. Given the lack of agreement on whether remote work has a positive influence on well-being at work or not, the present research aims to cover this

investigation gap by analysing the relationship between remote work - through job effectiveness, flexibility and work-life interference - and employees' exhaustion.

Considering that workload has been associated to remote work (Chesley, 2010; Kelliher & Anderson, 2010), this study focused on analysing the mediating role of workload in the relationship between the three characteristics of remote work and exhaustion. By analysing job effectiveness, flexibility and work-life interference, it becomes possible to understand if these characteristics may help individuals to cope with the workload during remote work and, consequently, improve their well-being at work.

Further, another goal of this study is to analyse psychological detachment as moderator of the relationship between the three characteristics of remote work and exhaustion. By studying the effects of psychological detachment, it is possible to understand what kind of strategies employees can develop in order to reduce challenges that may arise from remote work while decreasing exhaustion. Accordingly, the intention of this study is to merge different areas of research – remote work, well-being and recovery experiences – by using the JD-R model theory to support this investigation.

This study involved measuring the experience of remote work in terms of job effectiveness, flexibility and work-life interference on employees' workload and exhaustion, and the effect of psychological detachment as a mechanism to decrease exhaustion and to blur the negative effects of remote work. Also, the research was conducted through a study applied to employees from several sectors that were working remotely in Portugal.

In the following chapters, there is a review of existing knowledge and empirical evidence from past studies on the main topics of this research, including the presentation of the investigation model and the respective hypothesis. Moreover, the method applied is explained and the results will be analysed. Finally, there will be a discussion based on the results and the conclusions drawn from this work will be presented.

2. Literature Review

2.1. Remote work

2.1.1. Origin and definition of remote work

The covid-19 global pandemic has impacted many lives and dynamics of working. Suddenly, the workforce started experiencing remote work as a new reality because it was not a widely common practice before the pandemic. As expected, the majority of workers had little experience working remotely as well as the organisations were not ready to support this practice. At this moment, millions of employees across the globe are experiencing remote work that has become the “new normal” in the twinkling of an eye (Wang et al., 2020).

Despite the fact of remote work came into higher usage due to the pandemic context, work from home is not something new. Actually, if we go back to the Pre-Industrial era, we are able to recognize that most of the people worked typically at home, for example on local land and in craft workshops (Baruch, 2000). After, the Industrial Revolution in the 18th century moved people from home to factories and offices, providing people less influence over decisions of when to work and when to take a break (Baruch, 2000; Zijlstra & Sonnentag, 2006). However, the information age has shown that a considerable amount of jobs could be done from home through telecommunications combined with computing technology (Baruch, 2000, 2001; Gajendran & Harrison, 2007). Moreover, these digital technologies would allow individuals to work wherever they want, and whenever they choose to work (Zijlstra & Sonnentag, 2006).

General interest in remote work begun in the 1970s as an oil crises generated concerns over gasoline consumption, long work commutes and intensive traffic in urban populated areas (Bailey & Kurland, 2002). The interest in remote work continued in the 1990s between workers, companies, communities and the telecommunications industry, who see remote work as a potential solution to some environmental, economic and social problems (Handy & Mokhtarian, 1995).

The complexity and broadness associated to remote work make defining this concept especially difficult (Baruch, 2001; Grant et al., 2013; Sullivan, 2003). One of the first terms to introduce remote work was teleworking as “the use of information technology to partially or totally replace work-related travel” (Nilles, 1997, p. 7). As a fast-changing phenomenon, there are a wide diversity of terms that can be used to define it, for example, teleworking, telecommuting, e-working and agile working (Grant et al., 2019). Actually, there is little

agreement about what remote work concept should include, which makes studies about this topic more challenging for researchers (Felstead, 1996). Nowadays, most definitions consider individuals who work from anywhere and at any time, and use information communication technologies (ICTs) as the main tool to perform their work (Charalampous et al., 2019; Grant et al., 2013).

More recently, remote e-working has been the term used to describe the type of work aligned with these previous assumptions. The practice of remote e-working is defined as “work being completed anywhere and at any time regardless of location and to the widening use of technology to aid flexible working practices” (Grant et al., 2013, p. 529). Although there is a growing agreement towards a general definition of remote work, Sullivan (2003) argues that current working practices gain more relevance than a single definition. As previously mentioned, remote work has been defined as work that is done away from the traditional office (Nakrošienė et al., 2019). In this sense, Nakrošienė (2019) says that remote work relies on particular work characteristics, such as intensity (how often?), timework (when?) and place (where?). According to this author, remote work should consider the following aspects: 1) the amount of time an employee spends working away from the traditional office; 2) if an employee works during the regular working schedule or out of regular working schedule; 3) the place from where an individual works.

Lastly, this research focused on remote workers who partly or fully work from home since there were periods of mandatory quarantine with several restrictions enacted by the government. These restrictions were applied to all people in order to protect them from the widespread covid-19 disease that threatened many lives.

2.1.2. The implications of remote work

The literature indicates that exist contradictory claims regarding the opportunities and the threats and limitations of working remotely (Fonner & Roloff, 2010). If remote work may bring clear advantages, there are also some negative effects to be mentioned. In this sense, the impact of remote work can be categorized at individual, organisational and social level (Baruch, 2000).

Regarding the individual level, there are advantages that can be addressed, such as: a) improved performance and better productivity due to employees' ability to work without interruptions (Bailey & Kurland, 2002; Baruch, 2000; Grant et al., 2013; Mann & Holdsworth, 2003; Morgan, 2004); b) ability to balance work and family commitments, particularly among women with small children at home (Bailey & Kurland, 2002; Baruch, 2000); c) time saved in

commuting and associated costs can be reduced or eliminated (Bailey & Kurland, 2002; Baruch, 2000; Golden, 2006; Mann & Holdsworth, 2003; Morgan, 2004); d) autonomy and flexibility of working at home, which allows employees to better organize working time (Bailey & Kurland, 2002; Baruch, 2000; Golden, 2006; Grant et al., 2013; Mann & Holdsworth, 2003; Morgan, 2004); e) more work opportunities to work for organisations potentially anywhere once there are no geographies barriers (Morgan, 2004); f) relieve stress from travel and from traditional day-to-day work activities (Bailey & Kurland, 2002; Mann & Holdsworth, 2003).

Conversely, there are drawbacks associated with remote work for the individuals, for example: a) constant access to technology, which creates pressure to respond to work matters outside normal working hours, not being able to fully disengage from work (Derks & Bakker, 2014; Kossek, 2016); b) detachment from both social and professional interactions that leads to isolation (Bailey & Kurland, 2002; Baruch, 2000; Grant et al., 2019); c) boundaries between working and personal life can become blurred (Grant et al., 2013; Grant et al., 2019; Kossek, 2016); d) less time dedicated to recovery due to constant technology usage (Derks & Bakker, 2014); e) increase of work intensification (Kelliher & Anderson, 2010); f) relationship building is more difficult and employees have less opportunities for social moments with co-workers (Baruch, 2000); g) employees have less opportunities to communicate simultaneously as well as to chat with each other using all human senses (Fonner & Roloff, 2010); h) fewer internal career development possibilities because visibility and office information still have impact on career prospects (Baruch, 2000; Mann & Holdsworth, 2003).

As for organisational level, remote work can provide strategic advantages to help organisations to obtain better results on their businesses, such as: a) less absenteeism because employees tend to work even when they are sick, not taking enough time to recover or taking no time off at all (Baruch, 2001; Mann & Holdsworth, 2003; Morgan, 2004); b) cost savings from reduced overheads (Baruch, 2001; Mann & Holdsworth, 2003; Morgan, 2004); c) productivity gains because of less interruptions, flexible schedule and working overtime (Mann & Holdsworth, 2003); d) possibility to source future employees from another locations (Morgan, 2004); e) less turnover associated to higher levels of satisfaction and loyalty provided from employees (Morgan, 2004); f) greater corporate image as an innovative employer by demonstrating their trust and support for workers' well-being (Morgan, 2004).

However, there are also disadvantages at the organisational level, including: a) those who are not motivated by remote working may under work (Grant et al., 2013); b) resistance to change that comes many times from managers (Mann & Holdsworth, 2003); c) it is more

difficult for managers to control their subordinates who are working away from the office (Dimitrova, 2003; Mann & Holdsworth, 2003); d) costs of providing tools and conditions to all employees so they can work effectively from a remote location, such as home (Bailey & Kurland, 2002; Morgan, 2004).

Lastly, if we consider the impact caused by remote work on society, there are positive aspects to be mentioned: a) more safety roads because with less commuting comes fewer accidents and road congestion (Bailey & Kurland, 2002; Baruch, 2000); b) less air pollution due to less commuting (Bailey & Kurland, 2002; Baruch, 2000); c) provide more work opportunities for disabled people or those with childcare or eldercare duties (Baruch, 2000). Nevertheless, remote work holds possible disadvantages even at the society level, such as the increased isolation from social institutions and fewer interactions with other individuals (Baruch, 2000).

To conclude, employees and organisations need to be aware of both the advantages and disadvantages of remote work practices. It is particularly important to reinforce the benefits of remote work and to mitigate the challenges ahead, so that remote work implementation can be managed in a more effective manner. Considering that the implications of remote work will be diversified, this study aimed to investigate the effects of particular dimensions of remote work on exhaustion as perceived by individuals who experienced remote work.

2.1.3. The dimensions of remote work

The effects of remote work on employees' working life can be diverse, which makes particularly important to support organisations in order to help remote workers developing strategies to improve their well-being. According to Grant (2019), there was a gap in the literature in what concerns to measure the remote work experience of employees. As a result of this, it was developed a scale that provides a way for human resources professionals and scholars to measure the components of remote work using technology on job effectiveness, organisational trust, flexibility and work-life interference (Grant et al., 2019).

2.1.3.1. Job effectiveness in remote work

Job effectiveness is defined as “the evaluation of the results of an employee’s job performance” (Jex, 1998, p.26). In the remote work, job effectiveness is related to the competencies required to assure the remote worker is setting work goals and achieving performance objectives (Grant et al., 2019). Job effectiveness has been one of the key dimensions associated to the impact of

remote work on individuals, supervisors and organisations (Grant et al., 2013). It is suggested in the literature that remote working practices have a positive impact on employee productivity (Barber & Santuzzi, 2015; Baruch, 2000; Grant et al., 2013; Mann & Holdsworth, 2003; van der Meulen, 2017). This higher level of employees' performance is associated to several factors, including working without interruption, longer working hours to ensure that work is completed on time and the ability to work flexibly by planning their own work schedule (Grant et al., 2013; Mann & Holdsworth, 2003).

Although remote work leads to increased productivity, some employees who are not engaged and motivated by working from home may have lower levels of performance (Grant et al., 2013). Furthermore, the existing remote work pressure to reply faster to ICT messages as a sense of higher productivity may be associated to poorer work quality. As a result of higher ICT, employees may face physical and psychological health related problems (Barber & Santuzzi, 2015). Lastly, as companies create expectations of greater productivity, employees tend to experience a feeling of guilt when they are in control of their own schedule, which may lead to worry about getting the work completed on time (Mann & Holdsworth, 2003).

Research by Grant (2013) found that specific working practices and digital tools were able to promote productivity since employees could work with customers remotely or from home through several types of technology. Moreover, companies provide their workers with smartphones and laptops with the aim of getting a return on investment (Korunka & Hoonakker, 2014). On the other hand, there are organisations that still value and reward being in the office as a way to prove commitment and productivity (Potter, 2003). Actually, the organisational culture has a significant influence on how job effectiveness is perceived among employees and supervisors. There are still companies who give more importance to the time spent in the office by their employees rather than measuring productivity based on performance on tasks and projects (Kowalski & Swanson, 2005).

2.1.3.2. Organisational trust in remote work

Being involved within a culture of trust gains more relevance since remote work depends on supervision from a distance and the honesty of the employees. Managers need to understand that employees are able to perform their work with effectiveness when working away from the office. At the same time, remote workers need to trust on their managers and how they will give them support and guidance (Kowalski & Swanson, 2005).

The relationship with the organisation is associated to the manner in which the employees perceive the relationship with their supervisors as well as the level of autonomy and responsibility they afford whilst working remotely. In order to have success in the implementation of a remote work program, organisations have to consider the relations between remote workers and their managers. This aspect is relevant to individuals in the adoption of remote work because there is a decrease of face-to-face interactions (Dimitrova, 2003). In addition, establish a psychological contract will help both managers and employees having a clear understanding of what is expected from each other in terms of performance (van der Meulen, 2017). In a study conducted by Richardson (2010) was highlighted the importance of trust as a way to enhance employees' productivity, commitment and organisational citizenship behaviour (Grant et al., 2019).

Although remote work requires from managers a different approach to monitor their employees, they have to assume the risk and "trust people outside their field of vision" (Potter, 2003, p. 79). In this sense, managers need to trust that workers will perform their tasks and behave in a predictable way. Despite the lack of physical interaction, managers should think that employees will have self-control on managing properly their working tasks (Cascio, 2000).

Managers have the opportunity to demonstrate their trust on employees by providing an adequate level of flexibility, which allow them to control their work and balance both professional and personal lives (Kossek et al., 2006). Hence, building a trusting relationship with managers may help employees to increase the ability to manage their hours of work more flexibly, which consequently may enhance work-life balance (Grant et al., 2019).

2.1.3.3. Flexibility in remote work

Implementing a remote work model within an organization can be seen as a step forward for a global strategy towards workplace flexibility (Martínez-Sánchez et al., 2007). Workplace flexibility is described as the degree to which employees are able to make work arrangements, particularly concerning where, when, and for how long work is performed (Hill et al., 2008). Remote work is a workplace flexible practice that has both positive and negative effects for remote workers, such as increased autonomy and work intensification, respectively (Dimitrova, 2003; Gajendran & Harrison, 2007; Kelliher & Anderson, 2010).

Previous research has shown that flexible working practices can contribute to work intensification. The freedom to have control over working time may lead to a sense of duty that remote workers reciprocate with additional effort through intensifying their work (Kelliher &

Anderson, 2010). Furthermore, having the freedom to use ICT anywhere and anytime may reduce the ability to disengage from work, which generates significant implications to employees, including longer working hours, increased stress and reduced time-off to recover from work (Mazmanian et al., 2013; Sonnentag et al., 2013).

On the other hand, the feeling of increased control over when and where employees work gives them the possibility to have more autonomy (ter Hoeven & van Zoonen, 2015; Towers et al., 2006). Organisations can provide the opportunity to employees have freedom of managing their own time by often choose the hours they work, which enables them to collect the children from school, to invest in leisure time, or simply work in periods when their productivity is higher (Mann & Holdsworth, 2003).

As flexible working approaches may lead to dual effects, organisations play a critical role to track the remote work arrangement that may benefit employees' well-being (Grant et al., 2019).

2.1.3.4. Work-life interference in remote work

Organisations are becoming more aware about the importance of existing a balance in the work lives of their workers and remote work can provide a way to balance work and non-work commitments through flexible working (Grant et al., 2013). Work-life interference describes the ability of an individual to integrate work and non-work demands and to positively self-manage health while working remotely (Grant et al., 2019).

According to the literature, boundaries between work and life can be physical when employees block a period of time on their schedule to not check the e-mail, which allows them to stay completely away from work. Also, the boundaries can be psychological when individuals are able to mentally disengage from work in order to dedicate attention to their family or friends. Further, boundaries are emotional when people are able to separate feelings and emotions experienced during the workday from home life (Kossek, 2016).

On the one hand, working from home may bring a potential issue related to the overlap between work and life that can cause mental health-related problems, including workload or the inability to switch off from work (Grant et al., 2013). It becomes essential to establish a boundary control that can be defined as “the degree to which you control the boundaries between your nonwork and work roles” (Kossek, 2016, p. 259). In other words, the boundary management strategy is the one used to better separate role demands and expectations into particular domains of home and work (Kossek et al., 2006). While some professionals believe

that establish tighter boundaries between work and home is the best, others prefer to integrate them (Kossek et al., 2006).

However, the literature has mentioned remote work as a process to reduce conflict since it provides employees the opportunity to better manage work demands so that they can be more prepared to accommodate family needs (Bailey & Kurland, 2002). Previous research has shown that remote work is negatively associated to work-life conflict and job stress (Raghuram & Wiesenfeld, 2004). Remote work can improve the way employees make use of resources such as time, energy and attention between work and life domains. For example, remote workers have the possibility to invest their mental energies on work in the morning instead of spending their energy on a bother commute (Raghuram & Wiesenfeld, 2004).

All in all, the impact of remote work on well-being is emerging as an important issue for organisations and individuals. Job effectiveness, organisational trust, flexibility and work-life interference are aspects of the work that change through remote work and, consequently, can become important job resources to help studying the influence of remote work on employees' well-being.

2.2. The JD-R model

By conceptualizing the impact of remote work in terms of job demands and job resources, we are able to address job effectiveness, organisational trust, flexibility and work-life interference as potential job resources that may help employees during remote work to reduce the effects of certain job demands (Sardeshmukh et al., 2012). The JD-R model provides a framework that organises work experiences into two main categories – job demands and job resources (Bakker et al., 2005).

According to Demerouti and other researchers, job demands are described as “aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological and psychological costs” (Demerouti et al., 2001, p. 501). Job demands can also be defined as adverse situations that deplete employees' energy, namely conflicts with others, workload and job insecurity (Schaufeli, 2017). On the other side, job resources are “those physical, psychological, social, or organisational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands and the associated physiological and psychological costs; (c) stimulate personal growth and development” (Demerouti et al., 2001, p. 501). Examples of job resources in remote work can

be job effectiveness, organisational trust, flexibility and work-life interference (Christine Anne Grant et al., 2019).

There are two processes associated to the JD-R framework - the stress process and the motivational process – that have impact on the development of illness and well-being, respectively (Kinnunen et al., 2011; Schaufeli, 2017). In the stress process, the fact of existing chronic job demands influence both mental and physical resources of employees, thereby leading to the depletion of energy. Consequently, job demands are associated to stress, namely development of fatigue, burnout and health problems (Kinnunen et al., 2011). Examples of negative outcomes emerging from this process can be poor health, low dedication, poor effectiveness and sickness absence (Bakker et al., 2014; Demerouti et al., 2001; Schaufeli, 2017). In contrast, the motivational process is triggered by the presence of abundant resources, which through work engagement may conduct to positive outcomes, such as organisational commitment and work productivity (Schaufeli, 2017). The literature suggests that while the stress process may deplete employee's energy, the motivational one is able to increase it (Schaufeli, 2017). Whereas burnout seems to be caused by high job demands when they are not compensated by job resources, employee engagement results from high job resources (Bakker et al., 2014).

This model fits particularly well to explain the potential job resources provided by remote work that can be able to reduce job demands associated to this mode of work and consequently attenuate exhaustion experienced by employees. With remote work, individuals can save more time and energy, possibly engaging in activities during their leisure time and experiencing a better stress resistance capacity (Hobfoll, 1989; Sardeshmukh et al., 2012).

2.3. Remote work and exhaustion

The job stressors are related to the lack of positive job characteristics as well as the presence of negative ones (Etzion et al., 1998). The continuous exposure to job stressors is commonly followed by negative reactions from individuals (Demerouti et al., 2001). As a result of this exposure to chronic daily stressors, individuals may experience burnout, which tend to occur when certain resources are lost, not being sufficient to support demands nor produce the expected returns (Lee & Ashforth, 1996).

According to the literature, burnout might be defined as “a work-related state of exhaustion that occurs among employees, which is characterized by extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing. These four core

dimensions of burnout are accompanied by depressed mood as well as by non-specific psychological and psychosomatic complaints” (Schaufeli et al., 2020, p. 4). Regarding the core dimensions of burnout, three describe the inability to invest energy (e.g., exhaustion, cognitive and emotional impairment) and one refers to the unwillingness to invest energy (i.e., mental distance). Beyond that, the literature also mentions the conceptualization of job burnout according to three dimensions - emotional exhaustion, cynicism and inefficacy (Maslach et al., 2001).

In the study developed by Schaufeli (2020), exhaustion is considered the most fundamental dimension of burnout and it can be described as “a severe and serious loss of energy, both physical as well as mental” (Schaufeli et al., 2020, p. 4). Hence, exhaustion will be analysed in this investigation linked to remote work.

Remote work changes the location, time and nature of work conditions, which may impact the way work is experienced, and consequently employees’ exhaustion (Golden, 2006; Sardeshmukh et al., 2012). Given the alterations originated by remote work, organisational conditions play a crucial role to explain the possible depletion of resources that may lead to exhaustion (Golden, 2006).

It was conducted a systematic review in order to better understand the link between remote worker and well-being (Charalampous et al., 2019). In which concern to employee well-being, it is said that “remote working may both relieve and create stress” (De Menezes & Kelliher, 2011, p. 462). As already mentioned, remote work has several advantages for both individuals and organisations but there is no clear evidence that remote work is actually beneficial for employees’ well-being (Charalampous et al., 2019). However, the literature mentions that remote work is linked with reduced stress (Gajendran & Harrison, 2007; Grant et al., 2013; Hartig et al., 2007; Kelliher & Anderson, 2010; Mann & Holdsworth, 2003; Raghuram & Wiesenfeld, 2004; Stephens & Szajna, 1998).

According to previous research, remote work can contribute to reduce stress because employees gain more control over the physical work environment, where they are able to satisfy their personal interests toward autonomy (Hartig et al., 2007; Mokhtarian & Salomon, 1994). In this sense, as remote work allows higher autonomy over when and how to respond to requests from others, employees can manage their interactions and consequently offset exhaustion emerging from regular face-to-face contact in the office (Golden, 2006; Kurland & Egan, 1999). Moreover, removing long daily commutes allow employees to increase the period of time during which they can be more productive, contributing to reduce the amount of stress linked to their work lives as well (Collins et al., 1999). Ultimately, employees who remote

work can also reallocate their additional time to recover from job demands by engaging in more leisure activities (Collins et al., 1999; Mokhtarian & Salomon, 1994). Given the dimensions associated to remote work, we suggest that certain aspects can contribute to decrease employees' exhaustion.

When working remotely employees can work with no interruptions, which enables them to manage their interactions with colleagues and, in consequence, buffer exhaustion that comes from face-to-face contact (Stephens & Szajna, 1998; Wiesenfeld et al., 1999). As remote workers have more control over their interactions, they also can concentrate better on their tasks by conserving emotional energy and avoid depletion (Golden, 2006). Besides that, there are studies that support the assumption that the avoidance of a tiring commute by a remote worker may signify that the individual has higher levels of energy for work (Kelliher & Anderson, 2010). Thus, we hypothesize that:

H1a: Job effectiveness in remote work is negatively related to exhaustion.

Grant (2019) explains that remote workers, who explore flexibility and autonomy provided by remote work, may experience a better level of psychological health. With more control over their work environment, employees may satisfy their interests through the autonomy provided by remote work and thereby decrease their levels of stress (Hartig et al., 2007; Mokhtarian & Salomon, 1994). Accordingly, we hypothesize that:

H1b: Flexibility in remote work is negatively related to exhaustion.

According to Golden (2006), remote workers tend to allocate some of their additional time and emotional energy provided by remote work to family needs, whilst not compromising their work responsibilities. By working at home, individuals are less likely to face office-based interruptions and pressure, which in turn gives them more time and energy to dedicate to family members (Golden et al., 2006). Furthermore, the employees that can set clear boundaries between work and non-work activities and get control over when and where they work may experience positive individual well-being (Kossek et al., 2006). Therefore, we hypothesize the following:

H1c: Work-life interference in remote work is negatively related to exhaustion.

2.4. The mediating role of workload

The organisational work environment has been through changes mainly caused by a fast technology growth, where time pressure and the volume of work has increased in various

industries. It is suggested in the literature that the role of technology has shaping the perception of workload among remote workers (Chesley, 2010).

Workload is often associated to the amount of work an employee has to do, however this definition requires a deeper understanding. Hence, workload can be measured regarding the number of working hours, level of production, or the mental challenges needed to complete the work (Spector & Jex, 1998). This concept includes both qualitative and quantitative dimensions (Bowling et al., 2015). In the context of the present study, we decided to focus on quantitative dimension that emerges when work demands overtake the time available to perform the work (Parasuraman & Purohit, 2000).

On the one hand, some employees may consider remote work a clear advantage provided by their organisations and, in result, they may respond to that by applying greater effort to compensate the benefit of working from home (Kelliher & Anderson, 2010). Further, working from home may also contribute to work long hours since ICT enables work extension (Towers et al., 2006) and there are studies that found higher workloads between remote workers compared with traditional office workers (Chesley, 2010).

However, the alterations caused by remote work may imply significant changes in job demands and resources. As such, workload can be perceived differently by employees whether characteristics of remote work – job effectiveness, organisational trust, flexibility and work-life interference – may act as job resources, which may have impact for employees' burnout and work engagement (Bakker & Demerouti, 2007; Van Steenbergen et al., 2018). The role of job resources can work as an accelerator of work engagement, while buffering the effects of high job demands such as workload, thus helping individuals to avoid burnout in form of exhaustion (Bakker et al., 2005).

Until this moment, little attention has been given to the effects of remote work on job demands and resources. As already mentioned, remote work involves some changes in employees' daily routine, including decreased commuting, increased flexibility in managing work schedule and decreased face-to-face interactions, among others. These alterations are bound to change the perceptions of employees regarding working practices and thus influencing their job demands and resources (Bakker et al., 2014; Sardeshmukh et al., 2012).

The way workload is perceived will depend on how individuals are able to maximize their job resources. For instance, if employees are able to get higher levels of productivity, flexibility or work-life interference when working remotely, they are more likely to experience changes on their workload.

Concerning job effectiveness experienced during remote work, individuals have the opportunity to manage their interruptions, enabling them to achieve a higher level of work performance. Besides that, remote work has been associated to more efficient communication, which can lead to less experienced workload (ter Hoeven & van Zoonen, 2015; Van Steenbergen et al., 2018). Hence, we hypothesize that:

H2a: Workload mediates the relationship between job effectiveness in remote work and exhaustion.

Regarding the flexibility provided by remote work, employees may decide a different schedule or place to work, depending on the type of tasks they have to do. For example, when work activities require full concentration, employees may choose to do them at a chosen timing at home with few interruptions by co-workers or family members. Also, the pressure of being on time to avoid a delay can work as a job stress and remote work helps to buffer that time pressure (Sardeshmukh et al., 2012). This reduced time pressure has been associated to lower mental fatigue and exhaustion (Bakker et al., 2004; Moore, 2000). Moreover, the literature argues that the increased autonomy that allow employees to choose the best timing to work should decrease the extent to which employees feel their job as mentally demanding (Van Steenbergen et al., 2018). Thus, we hypothesize that:

H2b: Workload mediates the relationship between flexibility in remote work and exhaustion.

Taking into account work-life interference in remote work, the time saved in commuting may be used in a more effective way to manage boundaries between work and non-work activities, which may further reduce the feelings of employees in terms of time pressure and workload (Golden et al., 2006; Sardeshmukh et al., 2012; Van Steenbergen et al., 2018). Accordingly, we hypothesize that:

H2c: Workload mediates the relationship between work-life interference in remote work and exhaustion.

2.5. The moderating role of psychological detachment

The need for recovery has been associated to characteristics of the work environment, specially when employees face high job demands, such as workload (Sonnentag & Krueger, 2006). Previous studies have shown that to understand the effects of job demands on well-being, it is very important to focus on variables that occur during off-job time (Etzion et al., 1998; S.

Sonnentag, 2001; Sonnentag & Fritz, 2007). In this sense, recovery provides the individual resources to reduce the negative impact of job demands (Westman & Etzion, 2001).

The concept of recovery has been described as the process of stepping away from work and its associated job demands, allowing individuals to replenish their resources (Fritz & Ellis, 2015; Trougakos & Hideg, 2009). In other words, recovery represents a way through which employees are able to switch off (Fritz & Ellis, 2015). Previous research mentions that recovery experiences promote employee well-being during off-job time (Sonnentag & Krueger, 2006; Strauss-Blasche et al., 2000; Westman & Eden, 1997; Westman & Etzion, 2001). The literature suggests that employees are able to recover from job demands through four different mechanisms that were called recovery experiences by Sonnentag and Fritz (2007) and they include psychological detachment from work, relaxation, mastery and control.

Firstly, relaxation is a state characterized by low mental effort and the absence of challenges (Sonnentag & Fritz, 2007). This state may occur as a result of leisure activities commonly associated to relaxation, such as meditation, reading a book, listening to music or taking a walk (Kinnunen et al., 2011). Previous research indicated that “relaxation had negative relations with health problems, emotional exhaustion, need for recovery, and sleep problems” (Siltaloppi et al., 2009, p. 333), which demonstrates its positive impact on employee well-being.

Master experiences refer to off-job activities in which employees are able to experience challenging opportunities in other domains, such as learning a new language or a new sport (Sonnentag & Fritz, 2007). Previous studies indicated that mastery experiences during a vacation contributed to lower levels of exhaustion (Fritz & Sonnentag, 2006).

Control can be seen as the ability a person has to decide what to do during leisure time, as well as when and how to do the chosen activities (Sonnentag & Fritz, 2007). Basically, control is defined as “the perceived ability to significantly alter events” (Burger, J.M., 1989, p. 246). The employees who own control over their actions tend to experience positive reactions, including happiness and well-being (Larson, 1989).

Finally, psychological detachment has been the most studied and it can be defined as “the individual’s sense of being away from the work situation” (Etzion et al., 1998, p. 579). It means disengaging mentally from work during non-work periods (Sonnentag & Fritz, 2007). Psychological detachment represents more than the physical absence from the workplace and abstaining from work activities, it also involves leaving the work environment mentally behind (Sonnentag & Bayer, 2005). For instance, making work-related phone calls or engaging in other work-related activities during off-job time will make detachment from work more

difficult to occur (Sonnentag & Krueger, 2006). Research suggests that psychological detachment helps individuals to recover from job stress, being a very important factor that contribute for improved well-being during longer break periods (Etzion et al., 1998; Siltaloppi et al., 2009). Ultimately, Sonnentag and Fritz (2007) demonstrated that psychological detachment is the most relevant mechanism for recovery to occur.

Regarding the several recovery experiences mentioned before, this study has focused on psychological detachment. Considering the “always on” culture over several jobs these days, do employees ever find the time to psychologically detach themselves from work during non-work time? (Park et al., 2011). When it is not possible to be physically away from the work, is psychological detachment from work even more crucial for recovery? In order to answer these questions, this study aims to understand whether psychological detachment moderates the relationship between remote work and exhaustion.

Considering the JD-R model and the COR theory, psychological detachment can help the employees to recover from the challenges that may arise from managing working from home, buffering the potential negative effects of remote work on employees’ exhaustion (Moreno-Jiménez et al., 2009; Sonnentag, 2010). Moreover, some researchers have shown that psychological detachment may play a role of moderator by attenuating the negative effects of one job demand on psychological strain (Moreno-Jiménez et al., 2009).

A study developed by Etzion, Eden, and Lapidot (1998) indicates that psychological detachment moderated the link between stressors and burnout. It was shown that greater psychological detachment reinforced the positive off-job experience, and the individuals who felt most disengaged brought more of their rest relief back to work in terms of reduced burnout (Siltaloppi et al., 2009). According to Siltaloppi (2009), through the help of mechanisms such as psychological detachment, individuals who face job demands in their work can replenish their resources and keep their well-being, which confirmed the role of recovery experiences as moderators in the relationship between work characteristics and well-being. Lastly, it was found that employees who experienced psychological detachment from work during off-job time reported better mood and less exhaustion (Sonnentag & Bayer, 2005).

As stated earlier, remote work can present positive and negative effects on employees’ exhaustion and we consider that psychological detachment as a recovery process might be an important factor to explain these dual effects. We assume that an incapacity to mentally disengage from work when at home may become an obstacle to obtain the benefits provided by remote work through weakening the negative relationship between remote work and

exhaustion. At the same time, we argue that when employees are effectively able to switch off from work, the beneficial effects of remote work in reducing exhaustion will be even stronger.

As remote workers are able to choose the working schedule where they are more productive, they can more easily reallocate time to detach from work after getting the job done (Mann & Holdsworth, 2003). In this sense, individuals with the capacity to switch off from work can be more able to self-manage their work in order to detach during leisure time. Hence, we hypothesize that:

H3a: Psychological detachment during off-job time moderates the relation between job effectiveness in remote work and exhaustion, such that the relation between job effectiveness in remote work and exhaustion is stronger for those with high psychological detachment than those with low psychological detachment.

There are studies suggesting that remote workers who have control over where and when they work are more capable of establishing boundaries between work and family, which promotes positive individual well-being (Kossek et al., 2006). Besides that, a study found that remote workers report more time with the family, more leisure time and lower commuting (Collins et al., 1999). The time and energy saved can be invested in leisure activities, which may help to disengage from work. Through psychological detachment individuals are more likely to enhance their flexibility since they can switch their thoughts from work to non-work activities more easily. Thus, we hypothesize that:

H3b: Psychological detachment during off-job time moderates the relation between flexibility in remote work and exhaustion, such that the relation between flexibility in remote work and exhaustion is stronger for those with high psychological detachment than those with low psychological detachment.

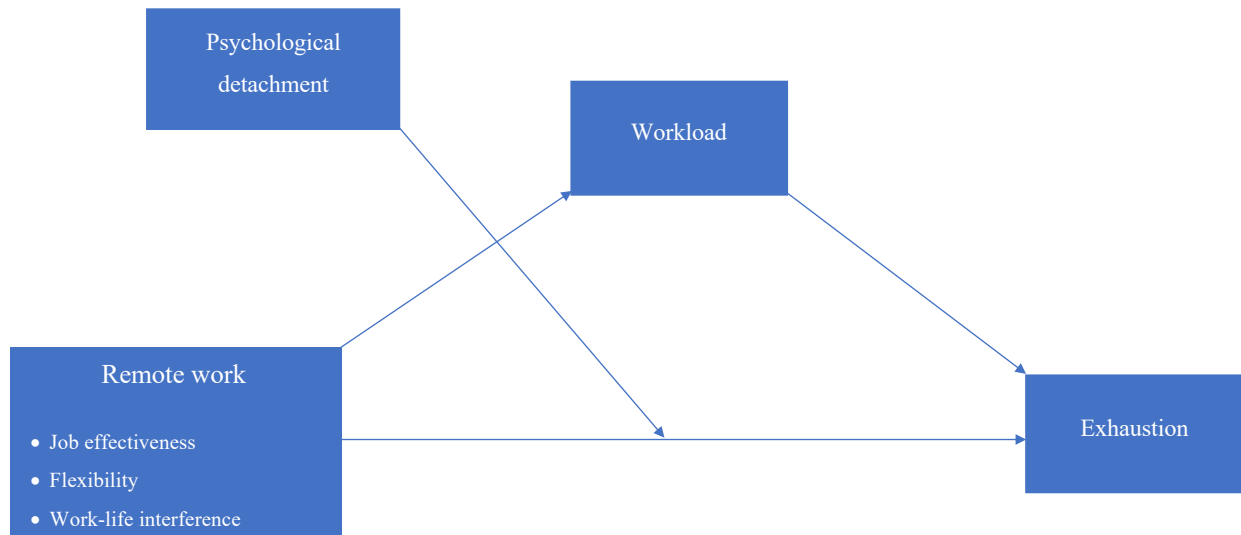
Remote workers can be able to achieve a better balance of home and work life with remote work because the time previously spent on commuting can be used to family moments or to cope with domestic duties (Mann & Holdsworth, 2003). There are strategies that can be used to better manage work-home boundaries (Kreiner et al., 2009), including choose periods of time to not check the email or give focus to family and friends by disengaging mentally from work (Kossek, 2016). If the individuals are able to mentally distance themselves from work during off-job time, they have more chances to take the most out of their non-work time. So, we hypothesize that:

H3c: Psychological detachment during off-job time moderates the relation between work-life interference in remote work and exhaustion, such that the relation between work-life

interference in remote work and exhaustion is stronger for those with high psychological detachment than those with low psychological detachment.

2.6. Investigation model

Figure 2. 1 Conceptual Model



3. Method

3.1. Participants and procedures

With the purpose of collecting data for this study, an online questionnaire was created and its link was sent to people which we identified as our target population. The main criteria to choose the participants was that they have to perform their work remotely. This questionnaire was held in Portuguese, as it is for any working person resident in Portugal, female or male, older than 18 years old and working in both full or partial remote work. In the end, this gathering process resulted in a sample of 253 responses.

Participants were 60.4% female, ranging in age from 21 to 55 years old ($M = 28.52$ years old, $SD = 7.59$). Regarding education, 55.2% had completed a master's degree, 40.9% had completed a bachelor's degree and the remaining 3.9% had completed Secondary education. It was reported that the majority were single (73.0%) and 82.2% reported having no children. Moreover, 17.0 % of the participants were supervisors.

This study was carried out during a pandemic in which remote work was a mandatory working practice, contributing to have a large group of people working from home. In this sense, it was reported that the majority of the respondents (73.9%) had not yet experienced remote work before the start of this pandemic. Furthermore, 94.3% of the respondents would like to have remote work as an option after the pandemic is over. From those who would like to have remote work as an option, 92.7% of them would prefer to have the possibility to switch between work in the office and remote work.

Table 3. 1 Sample descriptive characteristics

Variables		N	%
Sex	Female	139	60,4
	Male	91	39,6
Education	Secondary School	9	3,9
	Bachelor Degree	94	40,9
	Master Degree	127	55,2
Marital Status	Single	168	73,0

	Domestic Partnership	22	9,6
	Married	36	15,7
	Divorced	3	1,3
	Widowed	1	0,4
<hr/>			
Number of children	0	185	82,2
	1	13	5,8
	2	23	10,2
	3	4	1,8
<hr/>			
Leadership position	Yes	39	17,0
	No	190	83,0
<hr/>			

3.2. Measures

Remote work

To assess remote work, we based our items on E-work life (EWL) scale developed by (Grant et al., 2019). From the seventeen items of the original scale, we only used thirteen. In addition, we decided not to invert one of the items (“When working from home I do know when to switch off/put work down so that I can rest”) as the scale indicated. The thirteen items used comprise three dimensions of remote work: job effectiveness (three items; e.g., “When e-working I can concentrate better on my work tasks.”); work-life interference (seven items; e.g., “I am happy with my work life balance when e-working remotely”); flexibility (three items; e.g., “My work is so flexible I could easily take time off e-working remotely, if and when I want to”). Responses to the items were scored on a five-point Likert scale from 1 (“Strongly disagree”) to 5 (“Strongly agree”). The Cronbach’s α value was 0.85, 0.75, 0.86 - job effectiveness, flexibility and work-life interference, respectively.

Workload

The level of workload was assessed using the scale of five items from the Quantitative Workload Inventory (Spector & Jex, 1998). The participants were asked to identify the frequency to which items occur using a five-point Likert scale from 1 (“Less than once per month/Never”) to 5 (“Several times per day”). Two examples of sample items were “How often does your job require you to work very hard?” and “How often does your job leave you with little time to get things done?”. The Cronbach’s α value was 0.91.

Exhaustion

In order to measure employees’ exhaustion was used a scale of eight items developed by Schaufeli and his colleagues (Schaufeli et al., 2020). These eight items were measured with a five-point Likert scale from 1 (“Never”) to 5 (“Always”) and two examples of sample items were “I feel mentally exhausted at work.” and “At the end of the day, I find it hard to recover my energy.”. The Cronbach’s α value was 0.89.

Psychological Detachment

Psychological detachment was measured using the scale from Recovery Experience Questionnaire (Sonnentag & Fritz, 2007) to understand how employees relax and recover from work demands during off-job time. The 4 items were measured with a five-point Likert scale from 1 (“Strongly disagree”) to 5 (“Strongly agree”). Two examples of the assessed items were “I forget about work.” and “I distance myself from my work.”. The Cronbach’s α value was 0.84.

The scales used in this study can be made available upon request from an interested person.

3.3. Data Analysis

Descriptive statistics and measures of association (Person’s correlation), for study variables were first computed. To test the hypotheses, the PROCESS macro was used (Hayes, 2021) to study both. Hypotheses 1 and 2 concerning mediation were tested using Model 4, while hypothesis 3 regarding moderated mediation was tested by Model 5. To assess the indirect effects a bootstrap estimation was performed supported by 5,000 bootstrap samples, and confidence intervals at 95% were computed.

4. Results

4.1. Descriptive statistics and correlation analysis

Table 4.1 reports descriptive statistics and correlations. Job effectiveness provided to employees in remote work was positively and significantly correlated with workload ($r = .19$, $p < .01$). These results mean that when job effectiveness is higher, we can observe higher levels of workload. However, the correlations of job effectiveness with both exhaustion and psychological detachment were not significant ($r = -.12$, $p > .05$ and $r = .04$, $p > .05$, respectively).

Flexibility provided to employees in remote work was negatively correlated with both exhaustion ($r = -.28$, $p < .01$) and workload ($r = -.28$, $p < .01$), and positively correlated with psychological detachment ($r = .27$, $p < .01$). In this sense, when flexibility is higher, we verify that there are lower levels of both exhaustion and workload, and higher levels of psychological detachment.

Work-life interference provided to employees in remote work was negatively correlated with both exhaustion ($r = -.53$, $p < .01$) and workload ($r = -.44$, $p < .01$), and positively correlated with psychological detachment ($r = .58$, $p < .01$). Thus, when work-life interference is lower, we can observe that exist lower levels of both exhaustion and workload, while psychological detachment gets higher.

Table 4. 1 Means, standard deviations and correlations between the variables

Variables	Mean	SD	1	2	3	4	5
1. Job effectiveness in remote work	3.34	0.88					
2. Flexibility in remote work	3.56	0.92	0.01				
3. Work-life interference in remote work	2.94	0.87	0.22**	0.32**			
4. Workload	3.49	1.00	0.19*	-0.28**	-0.44**		
5. Psychological detachment	2.72	0.84	0.04	0.27**	0.58**	-0.50**	
6. Exhaustion	2.82	0.65	-0.12	-0.28**	-0.53**	0.43**	-0.42**

Note. N = 234

* $p < .01$ ** $p < .001$.

Moreover, workload is positively correlated with exhaustion ($r = .43$, $p < .01$) and negatively correlated with psychological detachment ($r = -.50$, $p < .01$), meaning that high levels of workload increase exhaustion and decrease psychological detachment.

Finally, psychological detachment is negatively correlated with exhaustion ($r = -.42, p < .01$), which means that when psychological detachment is higher, the levels of exhaustion are lower.

4.2. Hypothesis

Hypothesis (H1a), regarding the negative relationship between job effectiveness and exhaustion, was supported ($B = -.09, t = -1.89, p = .06$), which means that job effectiveness in remote work was marginally significant predictor of exhaustion. The results indicated that there was a positive relationship between job effectiveness in remote work and workload ($B = .21, t = 2.86, p = .005$), meaning that job effectiveness provided to employees in remote work was a significant predictor of workload. Simultaneously, workload was a significant predictor of exhaustion in a positive way ($B = .31, t = 8.00, p < .001$). The 95% confidence interval for the indirect effect of job effectiveness on exhaustion through workload ($B = .06$) did not include zero (.02 to .11), suggesting a significant indirect effect. Thus, hypothesis H2a was supported (see Table 4.2).

Table 4. 2 Results of the relationship between job effectiveness in remote work and exhaustion via workload

						R ²
Mediator variable model		Outcome: Workload				0.03
		Coeff.	SE	<i>t</i>	<i>p</i>	
	Job effectiveness	0.21	0.07	2.86	.005	
Outcome variable model		Outcome: Exhaustion				0.23
		Coeff.	SE	<i>t</i>	<i>p</i>	
	Job effectiveness	-0.15	0.04	-3.57	< .001	
	Workload	0.31	0.04	8.00	< .001	
Bootstrapping results for the indirect effect						
		Effect	SE	LL 95% CI	UL 95% CI	
	Indirect effect of Job effectiveness on Exhaustion via Workload	0.06	0.02	0.02	0.11	

Note. N = 235. Unstandardized regression coefficients are reported. Bootstrap sample size = 5000
LL lower limit, *CI* confidence interval, *UL* upper limit

Hypothesis (H1b), regarding the negative relationship between flexibility and exhaustion, was supported ($B = -.21, t = -4.68, p < .001$), which means that flexibility in remote work was a significant predictor of exhaustion. The results indicated that there was a negative relationship between flexibility provided to employees in remote work and workload ($B = -.31, t = -4.52, p < .001$), meaning that flexibility was a significant predictor of workload. The workload was a significant predictor of exhaustion in a positive way ($B = .25, t = 6.25, p < .001$). The 95% confidence interval for the indirect effect of flexibility in remote work on exhaustion through workload ($B = -.08$) did not include zero ($-.12$ to $-.04$), suggesting a significant indirect effect. Therefore, we found support for hypothesis H2b (see Table 4.3).

Table 4. 3 Results of the relationship between flexibility in remote work and exhaustion via workload

						R ²
Mediator variable model	Outcome: Workload					0.08
		Coeff.	SE	<i>t</i>	<i>p</i>	
	Flexibility	-0.31	0.07	-4.52	< .001	
Outcome variable model	Outcome: Exhaustion					0.22
		Coeff.	SE	<i>t</i>	<i>p</i>	
	Flexibility	-0.13	0.04	-3.06	< .005	
	Workload	0.25	0.04	6.25	< .001	
Bootstrapping results for the indirect effect						
		Effect	SE	LL 95% CI	UL 95% CI	
	Indirect effect of Flexibility on Exhaustion via Workload	-0.08	0.02	-0.12	-0.04	

Note. N = 235. Unstandardized regression coefficients are reported. Bootstrap sample size = 5000
LL lower limit, *CI* confidence interval, *UL* upper limit

Hypothesis (H1c), regarding the negative relationship between work-life interference and exhaustion, was supported ($B = -.39, t = -9.66, p < .001$), which means that work-life interference in remote work was a significant predictor of exhaustion. The results indicated that there was a negative relationship between work-life interference provided to employees in remote work and workload ($B = -.51, t = -7.62, p < .001$), meaning that work-life interference

was a significant predictor of workload. The workload was a significant predictor of exhaustion in a positive way ($B = .16, t = 4.02, p < .001$). The 95% confidence interval for the indirect effect of flexibility in remote work on exhaustion through workload ($B = -.08$) did not include zero ($-.12$ to $-.04$), suggesting a significant indirect effect. Therefore, we found support for hypothesis H2c (see Table 4.4).

Table 4. 4 Results of the relationship between work-life interference in remote work and exhaustion via workload

						R ²
Mediator variable model	Outcome: Workload					0.20
		B	SE	<i>t</i>	<i>p</i>	
	Work-life interference	-0.51	0.07	-7.62	< .001	
Outcome variable model	Outcome: Exhaustion					0.33
		B	SE	<i>t</i>	<i>p</i>	
	Work-life interference	-0.31	0.04	-7.10	< .001	
	Workload	0.16	0.04	4.02	< .001	
Bootstrapping results for the indirect effect						
		B	SE	LL 95% CI	UL 95% CI	
	Indirect effect of Work-life Interference on Exhaustion via Workload	-0.08	0.02	-0.12	-0.04	

Note. N = 235. Unstandardized regression coefficients are reported. Bootstrap sample size = 5000
LL lower limit, *CI* confidence interval, *UL* upper limit.

Hypothesis (H3a) mentioned that psychological detachment during off-job time moderates the relation between job effectiveness in remote work and exhaustion. We found that the interaction between job effectiveness in remote work and psychological detachment did not contribute to exhaustion ($B = -.03, t = -.06, p > .05$). Therefore, hypothesis H3a was not supported (see Table 4.5).

Table 4. 5 Results of the moderated mediation, with psychological detachment as a moderator between job effectiveness in remote work and exhaustion

Outcome variable model	Outcome: Exhaustion				R ²
	B	SE	<i>t</i>	<i>p</i>	
Job effectiveness	-0.13	0.04	-2.98	.003	0.27
Workload	0.22	0.04	5.02	< .001	
Psychological detachment	-0.19	0.05	-3.61	< .001	
Job effectiveness * Psychological detachment	-0.03	0.05	-0.61	> .05	

Note. N = 233.

Hypothesis (H3b) assumed that psychological detachment during off-job time moderates the relation between flexibility in remote work and exhaustion. The interaction between flexibility in remote work and psychological detachment did not contribute to exhaustion ($B = -.00, t = -.05, p > .05$). Therefore, hypothesis H3b was not supported (see Table 4.6).

Table 4. 6 Results of the moderated mediation, with psychological detachment as a moderator between flexibility in remote work and exhaustion

Outcome variable model	Outcome: Exhaustion				R ²
	B	SE	<i>t</i>	<i>p</i>	
Flexibility	-0.10	0.04	-2.33	.021	0.26
Workload	0.17	0.04	3.93	< .001	
Psychological Detachment	-0.20	0.05	-3.75	< .001	
Flexibility * Psychological detachment	-0.00	0.05	-0.05	> .05	

Note. N = 234.

Hypothesis (H3c) stated that psychological detachment during off-job time moderates the relation between work-life interference in remote work and exhaustion. The interaction between work-life interference in remote work and psychological detachment did not

contribute to exhaustion ($B = .04, t = .77, p > .05$). Therefore, hypothesis H3c was not supported (see Table 4.7).

Table 4. 7 Results of the moderated mediation, with psychological detachment as a moderator between work-life interference in remote work and exhaustion

Outcome variable model	Outcome: Exhaustion				R ²
	B	SE	<i>t</i>	<i>P</i>	0.33
Work-life interference	-0.28	0.05	-5.62	< .001	
Workload	0.13	0.04	3.19	.002	
Psychological detachment	-0.08	0.06	-1.52	> .05	
Work-life interference * Psychological detachment	0.04	0.05	0.77	> .05	

Note. N = 234.

5. Discussion and Conclusion

5.1. General discussion

The global pandemic has shown that organisations need to rethink its business context regarding remote work. Given the fast-technological change, people have significantly reduced virtual distances through collaborative platforms such as Microsoft Teams and Zoom. This investigation aimed to study the relationship between the characteristics of remote work and employees' exhaustion through the mediation of workload. Moreover, this study also analysed the moderating role of psychological detachment during off-job time on the previous relationship.

The main goal of this research was to understand if certain characteristics of remote work - job effectiveness, flexibility and work-life interference – could, based on JD-R model, act as job resources, leading to decreased exhaustion of employees. According to this model, job resources have the potential to buffer the effects caused by job demands and thereby helping organisations to tailor their remote model effectively. The previous research indicates that remote work might be a predictor of workload and we focused attention on the mediating role of workload between each characteristic of remote work and exhaustion. Finally, and given the importance of recovery on employees' well-being, we also decided to analyse if psychological detachment could explain the dual effects – positive and negative - caused by the characteristics of remote work on exhaustion.

5.2. Theoretical implications

Across the literature (Charalampous et al., 2019; Grant et al., 2013; Grant et al., 2019; Sardeshmukh et al., 2012), remote work has been associated with lower levels of stress, as it comprises positive effects such as greater flexibility and the avoidance of daily demands of the office and commute. These benefits associated to remote work allow employees to avoid stress moments and, consequently, keep them away from burnout. In line with the literature, the results have shown that each characteristic of remote work - job effectiveness, flexibility and work-life interference - influences negatively exhaustion.

Firstly, regarding job effectiveness and exhaustion, the results have shown a negative relationship between the variables. This means that the higher the job effectiveness in remote work, the lower the exhaustion experienced by employees. When employees are working from

home they can better manage their interactions with colleagues, having less interruptions and, consequently, getting more concentrated on their work (Golden, 2006; Stephens & Szajna, 1998; Wiesenfeld et al., 1999). Moreover, by working at home, individuals may reduce the frustration associated to the stress of feeling less concentrated and ineffective (Golden et al., 2006). By avoiding a commute, employees can save more energy that can enhance their work performance, which may contribute to accumulate less work, thereby reducing employees' feelings of time pressure (Kelliher & Anderson, 2010).

Concerning flexibility, the results of this study are consistent with former research, corroborating a negative relationship between flexibility and exhaustion. That is, higher levels of flexibility will lead to lower exhaustion. This negative relationship can be explained by the ability that most remote workers have in deciding not only the work schedule that best suits for them as well as the location where they are going to work (ter Hoeven & van Zoonen, 2015; Towers et al., 2006). As such, individuals are more likely to satisfy family needs without compromising their work tasks (Mann & Holdsworth, 2003). Furthermore, the literature argues that flexibility perceived by employees has a positive impact on their levels of mental health (Grant et al., 2019).

Regarding work-life interference, there is a negative relationship between this variable and exhaustion, which means that lower levels of work-life interference contribute to lower exhaustion. This can be explained by the following. Remote work can be a tool to help balance challenging work and family demands, thereby decreasing conflict (Stephens & Szajna, 1998). The chance to work from home allow individuals to alter traditional workplace strains, including reducing co-workers interruptions, dedicating less time and effort to go to work and decreasing the desire to socialize (Golden et al., 2006). Thus, the balance between work and non-work activities can be an important strategy to save time and strain.

After all, this mode of work allows employees to experience positive emotions, which means that remote work might be an option for those who get good levels of satisfaction by working from home (Charalampous et al., 2019).

Remote workers may extend their work schedule by working harder, or longer. In fact, this work intensification may occur due to flexible working practices provided by remote work that may lead to an increased effort to perform work activities. Hence, previous research refers to remote work as a relevant predictor of intensification of work, which in turn may lead to workload, and consequently affect employees' mental health (Dimitrova, 2003; Grant et al., 2013; Kelliher & Anderson, 2010). This study analysed the mediating role of workload in the relationship between each characteristic of remote work and exhaustion.

Firstly, regarding the influence of job effectiveness on exhaustion through workload, the results demonstrated that, with workload as mediator, the job effectiveness contributes to increase exhaustion. This means that, the greater the job effectiveness provided to employees in remote work, the higher their workload and, consequently, higher levels of exhaustion. This mediation effect was not expected because employees with higher job effectiveness are expected to be more accurate on their work, which may help to reduce additional efforts thus decreasing exhaustion. However, the “always on” culture that make employees to be constantly available to respond work communications may not contribute to know when individuals should stop working for respite after having their daily tasks finished (Grant et al., 2013; Grant et al., 2019). We observe that in many organisations the time employees spent in the office is frequently associated to productivity but in remote work employees are not seen at the office, which may contribute to increase their pressure to prove their commitment (Kelliher & Anderson, 2010). The literature argues that remote work is associated to increased productivity due to several factors such as working with no interruptions, ensuring that work is finished on time, better concentration on work tasks and lack of noise and more privacy (Grant et al., 2013).

Regarding the influence of flexibility on exhaustion via workload, the results indicated that, when workload is mediating, the flexibility provided to employees in remote work contributes to decrease exhaustion. In other words, the greater the flexibility provided to employees in remote work, the lower their workload and, in consequence, lower levels of exhaustion. There are various aspects that can explain this association. Firstly, flexibility allows employees to better organize their time without having to commute to work at a fixed time every day. Secondly, employees also have more time to engage in leisure activities that will help them to recover from job demands (Collins et al., 1999; Mokhtarian & Salomon, 1994; Sonnentag & Fritz, 2007). Next, the control provided by remote work give employees the possibility to have autonomy in order to manage their own time according to their preferences. Lastly, employees may feel less work pressure when working from home because of not having to necessarily adopt a rigorous posture as in the office with colleagues around. Several authors have been argued that owning a flexible schedule with autonomy and control over work activities contributes to reduce both stress and work-family conflict, while fostering employees’ well-being (Bailey & Kurland, 2002; Gajendran & Harrison, 2007; Grant et al., 2019; Mann & Holdsworth, 2003; Raghuram & Wiesenfeld, 2004).

In respect of the relationship between work-life interference and exhaustion via workload, the results indicated that work-life interference contributes to reduce exhaustion. This means that the lower the work-life interference provided to employees in remote work,

the lower their workload and, consequently, the exhaustion will decrease. When working from home employees often face the challenge of managing boundaries between home and work, which may result in overwork for some individuals and fewer time to recover from resources depletion. However, employees who are able to set clear boundaries may find a good balance between work and life domains (Kowalski & Swanson, 2005), which can contribute to save time and energy that will allow them to face less strain. For instance, after getting a work task done in the morning, employees can do an extra breakfast to give some support to their children (Golden et al., 2006). Thus, if employees are able to accommodate their personal needs in a better way, they may feel less work pressure and thereby experiencing less exhaustion.

Moreover, we can verify that work-life interference is the component of remote work with most impact on reducing exhaustion, which shows the importance to establish clear boundaries between work and life domains in order to avoid negative consequences.

Finally, it was tested the moderating role of psychological detachment in the relationship between the characteristics provided by remote work – job effectiveness, flexibility and work-life interference – and exhaustion. Despite of not playing a significant moderating role, psychological detachment was significantly associated with other variables of this study. For instance, there is a negative relationship between psychological detachment and exhaustion, meaning that high levels of psychological detachment contribute to lower exhaustion. As such, psychological detachment may help individuals unwinding from stress and, consequently, contribute to their psychological well-being. This result is in line with previous research that argues that individuals who experience psychological detachment from work during off-job time enhance their well-being through increased positive mood, feelings of energy, reduced stress and increased life satisfaction (Fritz & Ellis, 2015; Sonnentag & Fritz, 2007).

Regarding the fact of psychological detachment does not play a significant role as moderator between the variables, there are several factors that can help explaining this result. On the one hand, as remote work requires constant access to digital tools, employees get involved into a “always on” culture that make it harder to detach from work. In this case, setting tight technological boundaries between work and non-work domains can act as a potential enabler of psychological detachment (Park et al., 2011). In this sense, those who cannot avoid the use of technological devices after regular work hours may struggle to distance themselves from work while at home.

Besides that, this study was conducted during a global pandemic that made of remote work a mandatory work practice adopted by organisations, where people had to respect a

quarantine period with several restrictions. As a consequence, individuals were very limited to use their leisure time to engage in recovery experiences as well as to spend time with family or friends. In this situation, individuals may have experienced even more difficulties to manage the overlap between home and work since during off-job time they had to stay at home because of the imposed restrictions.

Therefore, managing the boundaries between life and work seems to be critical if the goal is to switch off from work during leisure time in order to unwind. Additionally, the restrictions that were established due to covid-19 possibly contributed to blur the boundaries between their work and non-work domains. In these working conditions, if employees do not manage effectively their boundaries, their opportunities to reach psychological detachment may be hindered (Mellner et al., 2016).

5.3. Practical implications

This research provides some contributions that might help organisations to develop human resources practices that allow individuals to boost productivity, flexibility and work-life balance with a positive impact on their well-being. These job characteristics during remote work shape the experience of individuals and organisations should understand these changes in order to promote employees' well-being. In this sense, there are several practical implications for organisations, supervisors and employees.

Considering that remote work has become the “new normal”, organisations should give priority to understand what are the workforce expectations about having capacity to deal with both work and life domains, which also includes the expectations of the organisation to provide these opportunities. Therefore, organisations should keep a responsive approach towards workers' expectations in order to achieve a new work model that fits to their employees' needs and preferences.

There is evidence that people who are less methodical and disciplined might experience more challenges while working remotely and thus the remote work approach might need to be adjusted for them. It is particularly important to understand which work arrangements best suits for each employee since the challenges of remote work affect worker's performance and well-being (Golden et al., 2006; Perry et al., 2018). Moreover, provide adequate levels of flexibility and autonomy to employees while avoiding micromanagement can result as a job resource that might decrease exhaustion and leading to better job satisfaction (Charalampous et al., 2019).

It is known that workload might be a problem for some employees, so organisations should take a step forward in terms of guarantee to employees that the expectations for managing the workload are discussed with their managers. In addition, managers should improve the communication with subordinates in order to ensure regular checks on their workload, exhaustion, productivity, among others (Grant et al., 2013).

This research also suggested that psychological detachment during leisure time might have positive impact in employees' recover and feelings of exhaustion. As such, organisations should implement policies to support employees to recover from job demands in order to promote employees' well-being (Fritz & Ellis, 2015). On the one hand, organisations should develop policies regarding the usage of work-related technology through their leaders that could encourage employees to unwind by setting limits on the frequency of phone calls or emails related to work during off-job time. Indeed, organisations can also make use of workplace flexibility to promote opportunities for recovery by implementing remote work practices (e.g. three remote workdays each week), which would contribute to increase employees' schedule control.

On the other hand, individuals can take a proactive attitude and take time to disengage from work through the implementation of strategies, such as turning off work related technologies after getting the job done or using the out-of-office message during vacations. Additionally, they might separate computers or phones for work and non-work moments. These practices might enhance the ability of employees to detach psychologically from work (Fritz & Ellis, 2015).

Remote work has become a fast-changing phenomenon in our society, where most of the individuals look at this transformational moment as an opportunity to explore a new way of living. Simultaneously, employers need to start understanding what is the most appropriate work model to implement for the future in order to meet employees' expectations without compromising business results.

5.4. Limitations and future research

This study had some limitations that should be raised. One limitation is the scale used to measure remote work. The E-Work Life (EWL) scale is relatively recent as the investigation developed by Grant (2019) aimed to provide an initial validation in order to measure the experience of remote work. This scale was composed by four factors but organisational trust was not considered because one of its three items was not saturated and, consequently, we

decided to not use this factor only with two items. Besides that, one of the components was named of work-life interference and most of their items had to be reversed. However, the name “work-life interference” might be confused due to the fact that this component mentions a positive perspective of remote work regarding the need to balance both personal and work lives. In terms of future steps, it might be important to test this scale in more studies as well as to replace the name of “work-life interference” by a more suitable one, such as “work-life integration”.

Furthermore, this research had a cross-sectional design which not gives us the opportunity to establish a true cause and effect relationship between variables once it is made at one time point. In addition, as the collected data was based on self-reported measures, the results may be affected by common bias since individuals tend to consider the more socially acceptable answer. Therefore, we suggest future longitudinal studies that investigate psychological detachment and exhaustion at different points in time, which will allow us to retain an individual change on levels of well-being (Charalampous et al., 2019).

Also, the sample consisted of employees from a broader spectrum of occupations and organisations and, as such, including these various backgrounds and working contexts could be regarded as a more robust study. Nevertheless, future studies could consider specific occupations and organisations to better understand the effects of remote work on well-being in particular sectors of activity and in other countries as well.

It is also important to mention that this study was developed during a pandemic crisis, in which remote work was adopted under unusual conditions. Regarding this context, it is important to mention that remote work was suddenly implemented and most of the organisations were not prepared to handle this organisational change. As a suggestion for further investigation, it might be significant to conduct a study after the pandemic to evaluate the impact of remote work with policies and practices already established.

In addition, it would be interesting to implement control variables that could enrich this study, such as job insecurity. Many people may also be experiencing job insecurity given the negative consequences of the covid-19 pandemic in terms of global economy and unemployment. In this sense, it can be expected that people with more uncertainty about their employment status could report higher levels of exhaustion and, in this way, could be interesting to conduct studies considering this variable.

In order to deepen knowledge on the topics studied, and regarding this study evidence, future investigation might include other consequences of implementing remote work, including

employees' performance. This variable could be included as the literature suggests that remote work has a positive impact on productivity (Baruch, 2000; Morgan, 2004). On the other hand, further studies might measure the role of other recovery experiences as mastery experiences or relaxation (Sonnetag & Fritz, 2007) on remote workers' well-being.

Further, this study has found that managing boundaries between home and work can help workers mentally detach from work and recover from stress. As a suggest for future research, it might be relevant to explore which characteristics of work-life boundary management can allow positive work conditions to emerge into the life domain but still stop thoughts related to work (Park et al., 2011).

Finally, future studies might consider the role of managers to assess their ability to provide support to remote workers not only about work issues but also regarding psychological matters, including workload, stress levels and work-life boundaries (Grant et al., 2013).

5.5. Conclusion

There were two main goals when we decided to conduct this study. The first goal was to understand the relationship between the components of remote work (job effectiveness, flexibility and work-life interference) and exhaustion through the mediation effect of workload. The second goal was to understand if psychological detachment during off-job time moderated the relationship between the components of remote work and exhaustion.

The findings indicated that job effectiveness, flexibility and work-life interference provided to employees in remote work have a negative relationship with exhaustion. However, only flexibility and work-life interference keep the negative relationship with exhaustion through the mediation effect of workload. Moreover, despite of not playing a moderating effect, this study suggested that if employees detach from work during off-job time, they are expected to have decreased exhaustion.

To conclude, this research demonstrates that remote work through job effectiveness, flexibility and work-life interference contributes to decreased exhaustion. It also provides evidence that flexibility and work-life interference during remote work contribute to reduce workload and, consequently, decreased exhaustion. Furthermore, those who engage in psychological detachment during off-job time should expect to achieve lower levels of exhaustion. Therefore, organisations and managers might be aware of the benefits and drawbacks of remote work practices to implement and manage strategies to enhance well-being at work.

6. References

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