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Well-being of remote workers: Work characteristics and challenges

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Orientation: Remote working has allowed employees greater flexibility in fulfilling their tasks; but with the recent rapid shift to working from home for a significant proportion of the workforce, the common notions about remote work should be revisited, especially in a developing world context.

Research purpose: The aim of the research was to test the relationship between remote work challenges (i.e. procrastination, loneliness and work–home interference) and remote work characteristics (social support and job autonomy) and its effects on employee well-being, while controlling for workload and self-discipline.

Motivation for the study: Although remote working is not new, the changing work context has emphasised the opportunities in flexibility and job opportunities. However, challenges exist especially around the mental well-being of workers.

Research approach/design and method: A mixed method approach was followed with a cross-sectional quantitative survey as the primary focus, with an open-ended question added. Data were collected in the finance industry during the coronavirus disease 2019 (COVID-19) enforced lockdown period, when employees were compelled to work from home owing to the national lockdown restrictions.

Main findings: The study confirmed the hypothesis that employee well-being will be more pronounced during remote work if employees have fewer remote work challenges and are exposed to positive remote work characteristics. The study further found that the relationship between remote work challenges and well-being is influenced by self-discipline and workload.

Practical/managerial implications: Managers will do well to consider time and place dimensions for work models in their context, but must be mindful of the challenges and opportunities.

Contribution/value-add: The findings of the study are grounded in elements of self-determination theory, and the main implication for practice is the insight on how to facilitate a working environment that promotes well-being in the context of remote working.

Keywords: employee well-being; remote work; remote work characteristics; remote work challenges.

Introduction

Orientation

Remote working is not a new concept, but the coronavirus disease 2019 (COVID-19) pandemic and the subsequent lockdown measures have accelerated the trend of allowing employees to work remotely (De' et al., 2020; Saurombe et al., 2022). For example, during 2020 more than 38% of the active qualifying workforce in South Africa were working remotely compared to 4% in the pre-pandemic period (Intasure, 2020). Mergener and Trübner (2022) encouraged more research into employee's workplace preferences, including location of work, in future research. Even though the benefits and challenges of remote working are well-researched (Barber & Santuzzi, 2015; Bloom et al., 2013; Fonner & Roloff, 2010; Giberson & Miklos, 2013; Golden, 2006; Grant et al., 2013; Hartig et al., 2007; Parker & Grote, 2020; Peters et al., 2004; Wang et al., 2021), the rapid shift that compelled employees to work from home not only challenged the earlier notions of remote work but also challenged how remote work influenced the well-being of employees (Iqbal et al., 2020). Even before COVID-19 struck, scholars pointed out the challenges and their effect on remote workers' well-being (Barber & Santuzzi, 2015).

Remote worker's well-being relates to how employees can positively self-manage their health and wellness while working remotely and curbing overworking tendencies by desisting from thinking about work after hours (Grant et al., 2013), and thus taking care of their physical and mental health. Mental health problems are associated with high social and economic costs and lower productivity of workers, and need greater understanding in the context of remote work (Wöhrmann & Ebner, 2021). Social support, job autonomy and work–home interference are some of the factors identified in influencing well-being when working remotely (Bavik et al., 2020; Chesley, 2014; Galinsky, 2008; Grant et al., 2013; Olivares et al., 2020; Wöhrmann & Ebner, 2021). Another factor identified as a challenge while working remotely is procrastination and Bavik et al. (2020) found that greater social support assisted in helping lower the levels of procrastination experienced by remote workers. In a recent review of remote work, Leonardi et al. (2024) noted that those experiencing loneliness from being psychologically distant from others in remote work contexts, will likely choose co-located offices, confirming another factor influencing the experience of remote work. Thus, we were interested in understanding whether these challenges and characteristics of remote work were in fact related to employee-well-being in the context of the South African financial sector. Furthermore, as this relationship may seem obvious, we were interested in what may influence such a relationship. We therefore turned to workload and self-discipline as possible influencing factors as posited by Wang et al. (2021).

Workload has been posited in the discourse on remote work and specifically how it relates to the concern of employees being overworked (Grant et al., 2013; Fonner & Roloff, 2010), and often as a response to guilt from the allowed flexibility (Chesley, 2014). Furthermore, having autonomy requires a level of self-discipline that facilitates the ability to face and overcome stress (Rogus, 2009), and therefore we controlled for these two variables. These insights led us to two prominent theories that have been applied to understand how to create well-being in remote and hybrid working contexts, namely work design theory (WDT) and self-determination theory (SDT).

Work design theory considers the content and arrangement of work tasks, activities, relationships and responsibilities (Parker, 2014), and encompasses the notion of remote working (Wang et al., 2021). Evidence suggests that consideration for work design can influence well-being and other positive and social characteristics of work (Morgeson & Humphrey, 2006). Self-determination theory (Ryan & Deci, 2000) has shaped our understanding of worker motivation and has been a foundational lens to understand the changing world of work (Gagné et al., 2022). Wang et al. (2021) validated autonomy as a key characteristic for an effective remote working experience. Gagné et al. (2022) called for more research exploring the influence of remote working on psychological needs and motivation.

Morganson et al. (2010) noted that the effects of work characteristics on remote work outcomes could differ between various contexts. Prior research informing remote work may lack contextual relevance as during COVID-19 enforced lockdown remote working was practised on an unprecedented scale and was not necessarily an optional choice for many employees (see e.g. Kawohl & Nordt, 2020). Wang et al. (2021) also noted that the results obtained in previous remote work research may include selection bias because of the largely voluntary nature of the remote work practices in the pre-COVID-19 era. Kaduk et al. (2019) highlighted the unintended consequences based on whether flexible work was voluntary or involuntary. Both Wang et al. (2021) and Morganson et al. (2010) appealed for more research to be conducted on remote work and work characteristics. Furthermore, even after the pandemic, it is likely that flexibility with remote working will be encouraged. As such, future work models could be influenced by the growing tendency to work remotely and the influence of this trend on employee well-being needs to be studied (Iqbal et al., 2020; Trusson et al., 2024). The research shows that different assumptions may be linked to remote work owing to the flexibility and autonomy granted to employees when working remotely (Wood et al., 2019). It is therefore important for managers to understand the phenomenon of remote work and how work outcomes may be crafted to support and ensure employee well-being.

Research purpose and objectives

The purpose of this article is to address the call for research on remote work and employee well-being, and building knowledge on remote working conditions especially in the context of enforced remote work as opposed to volunteering or opting in for such a work model, by assessing the relationship between remote work challenges and remote work characteristics on employee well-being. If organisations are going to promote remote work as a modus operandi, a deeper knowledge of how remote work influences well-being will be required.

This study contributes to literature by setting out a comprehensive model of the challenges of remote work – offset by remote work characteristics – on employee well-being. The study further confirms that the relationship between remote work characteristics and challenges and well-being is influenced by employees' self-discipline and workload.

Literature review: The characteristics and challenges of remote work

Remote work which includes earlier conceptualisation such as teleworking and telecommuting entails working away from a designated office space, thus separating employees from physical contact and making use of technology to facilitate communication between co-workers and other stakeholders (Grant et al., 2013). Various studies have been published which show the benefits and challenges of working remotely for both employees and the organisation (Giberson & Miklos, 2013). For example, Bloom et al. (2013) found that

performance increased by 13% for employees working remotely compared to those working at the office. Findings on the advantages of remote work, such as increased job satisfaction and commitment (Golden, 2006) and reduced work–life conflict have also been reported (Fonner & Roloff, 2010; Grant et al., 2013; Parker & Grote, 2020; Wang et al., 2021). The disadvantages of remote working include a lack of control over productivity and quality assurance (Bloom et al., 2013), communication overload (Hartig et al., 2007), data security and risk to organisational systems and information (Peters et al., 2004), overwork (Grant et al., 2013) and the negative influence on performance (Parker & Grote, 2020; Wang et al., 2021). Wang et al. (2021), grounding the studies in WDT, argued that remote work outcomes could be moderated by remote work characteristics, which include social support and job autonomy; and that remote work characteristics could play a role in remote working challenges which often include work–home interferences, loneliness and procrastination. The concepts furthermore are characteristic of SDT and have been applied in remote work research (e.g. Gagné et al., 2022; Kira-Wilson et al., 2024).

Social support and job autonomy as remote work characteristics

The remote work characteristics posited in this study include social support and job autonomy, both characteristics posited by Wang et al. (2021) as influencing employee well-being. Social support is defined as verbal and non-verbal communication between the receiver and provider, which reduces uncertainty about a situation (Sias, 2009). In the context of remote work, social support has both positive and negative attributes (Gagné et al., 2022). Previous research has shown that receiving social support can lead to greater well-being and motivation (Schade et al., 2021). Mergener and Trübner (2022) also found that social relations is a strong contributor to employees rejecting the offer to work from home. Receiving social support can help remote workers to overcome social isolation, lessen social isolation, reduce psychological strain and increase job satisfaction (Bentley et al., 2016). Individuals who receive social support at work will suffer less from loneliness because social support can bring desirable online social interactions to meet their need for belonging (Bavik et al., 2020). Social support has also been found to increase organisational commitment (Rousseau & Aubé, 2010).

Job autonomy is defined as the extent to which employees have control over their tasks and may apply their discretion on how to conduct their tasks, thus giving them more flexibility (Lupu, 2017). In other words, employees are afforded their own discretion on how and when to do their tasks. The relationship between remote working employees who experience high autonomy has been positively linked to job satisfaction (Golden, 2006). Gajendran et al. (2015) suggested that remote workers perceived higher autonomy compared to office-based employees, possibly because job autonomy allows employees to balance different demands across different domains of their lives (Wang et al., 2021). The benefits of flexible working hours help employees to balance their family lives with work demands (Galinsky et al., 2008; Wheatley, 2017) through discretionary working time, pace and location, which accommodate their needs (Greenhaus & Powell, 2006). Working from home, however, may make the challenge of work–home interference more pronounced (Delanoeije et al., 2019; Wood et al., 2019) than working from an office. This is relevant when workflow during regular work hours is frequently interrupted by family demands and Wang et al. (2021) posited that job autonomy can effectively balance work–home interference.

Procrastination, loneliness and work–home interference as remote work challenges

Wang et al. (2021) applied WDT and validated remote work challenges including procrastination, loneliness and work–home interference. Work–home interference alludes to the negative interaction between work and home domains, where remote working employees find it difficult to disengage from work and create boundaries between their work and non-working lives (Grant et al., 2013). An inability to fully disengage from work can lead to increased family–work conflict, where remote working employees find it difficult to disengage and unplug, thus negatively affecting their family roles (Eddleston & Mulki, 2017). In contrast, some authors have stated that managing work–home interferences provides more flexibility to remote workers who need to consider family arrangements, which has worked in favour of many organisations in retaining skilled employees (Hilbrecht et al., 2008). While some research posits that remote working policies can reduce work–family conflict, others found that work–home interference was the most mentioned challenge in remote working situations (Gajendran et al., 2007; Wang et al., 2021). Kira-Wilson et al. (2024) applying SDT furthermore concluded that changes in work–home interactions may influence employees' motivational quality.

Loneliness has been deemed a challenge for remotely working employees (Leonardi et al., 2024) who could experience more isolation while working remotely (Gagné et al., 2022). While remote workers could connect online and via video-calling, conversations were often task-focussed (Wang et al., 2021). Remote workers also experienced social and professional isolation (Grant et al., 2013; Saurombe et al., 2022) because of the reduction in informal social interactions. Increased professional isolation is experienced when employees miss out on opportunities to engage in development activities at work.

Procrastination is defined as the irrational delay of action (Steel, 2007) and is seen as one of the biggest productivity challenges at work, especially remote work (Wang et al., 2021). Procrastination affects both the organisation and remote working employees' productivity, hence making it an important factor to understand. Work activity monitoring can help with procrastination. While monitoring of work activities in the context of remote working has received limited attention (Lautsch et al., 2009), the definition of monitoring work activities that currently holds sway is aligned to remote work management, to improve performance and the

efficiency of remote workers (Burri & Senouf, 2009). However, the cost of installing some of these monitoring systems can be hefty (Groen et al., 2018). Earlier research suggested that extra monitoring could be harmful to remotely working employees (Lautsch et al., 2009). Yet, Wang et al. (2021) found that remotely working employees believed monitoring was necessary to cope with procrastination. In previous research, monitoring was buffered by an employee's level of self-discipline (Wang et al., 2021). It has been found that heightened stress may lead to procrastination (Wang et al., 2021) and, in such instances, social support helps employees to cope with stress and focussing on tasks (Bavik et al., 2020).

From the preceding discussion, it is evident that the benefits and challenges of remote work have been linked to remote work characteristics and the experience of remote working. These factors play a clear role in aspects such as remote work productivity and well-being of employees (Wang et al., 2021). Barber and Santuzzi (2015), Parker and Grote (2020) and Wang et al. (2021) specifically noted the challenge that remote work presents in respect of the well-being of remote working employees.

The relationship between remote work characteristics and challenges, and well-being

Remote worker well-being, encapsulating both physical and mental health (Currie, 2001), has been shown in the preceding 'Procrastination, loneliness and work–home interference as remote work challenges' section, as influenced by remote work challenges and characteristics. Furthermore, the relationship between remote work characteristics and challenges is influenced by the extent to which remote workers can positively self-manage their work behaviour by, for instance, curbing their tendency to overwork themselves through non-adherence to regular office hours (Grant et al., 2013). Workload has been posited in the discourse in remote work (Chesley, 2014; Fonner & Roloff, 2010; Grant et al., 2013) and we considered it as an influencing factor.

Workload refers to the amount of work required to be done by someone during a specific period. One of the known associations of workload when working remotely is the growing concern of employees being overworked (Fonner & Roloff, 2010; Grant et al., 2013). The condition of being overworked occurs when remotely working employees voluntarily spend longer hours on work-related activities while working from home (Donnelly & Johns, 2020). This tendency, based on guilt, results in employees overworking themselves to compensate for the allowed flexibility (Chesley, 2014). Where there are no limits or boundaries (Baruch, 2000), overworking could lead to reducing restorative time and result in burnout (Hartig et al., 2007). Being overworked has also been shown to have a negative impact on work–life balance and to cause work–home interference (Wang et al., 2021). However, flexible working hours have proved to help employees to balance their family life with their workload (Galinsky et al., 2008; Wheatley, 2017) through discretionary working time, pace and location (Greenhaus & Powell, 2006). This brought us to considering self-discipline.

Self-discipline was posited by Leonardi et al. (2024) as key in navigating a world empowered by remote working. They emphasised that remote working requires individuals to manage their own schedules and priorities effectively. Coordination becomes more complex in remote work situations, and non-work–life boundaries become blurred (Song & Gao, 2020) further emphasising self-discipline (Ayoko et al., 2012; Baruch, 2000).

Factors that could influence the well-being of remote workers have been identified (Bavik et al., 2020; Chesley, 2014; Galinsky, 2008; Olivares et al., 2020) and include social support, job autonomy, work–home interference and job autonomy. Therefore, following the preceding discussion, and based on Wang et al.'s (2021) proposed link between remote work challenges (procrastination, loneliness, work–home interference), remote work characteristics (social support, job autonomy) and remote work outcomes (well-being), while controlling for self-discipline and workload, this study postulated the following hypothesis:

H1: *Self-discipline, workload, remote work challenges (procrastination, loneliness, work–home interference) and remote work characteristics (social support, job autonomy) explain variance in well-being.*

Research design

Research approach

The primary objective of this study was to assess the relationship between remote work challenges (procrastination, loneliness, work–home interference) and remote work characteristics (social support, job autonomy) and the effects on well-being. By considering the factors of self-discipline and workload, data needed to be collected from employees who worked remotely. As such, for purposes of this research, primary data were collected during the COVID-19 enforced lockdown period, when employees were compelled to work from home owing to the national lockdown restrictions. A mixed method approach was applied in that measurement scales informed the survey questionnaire, but an open-ended question was included to allow the employer to have greater insight on employees' experiences of remote working.

Permission was obtained from a financial services company in South Africa, to be named Company X for the purposes of this study, to gather primary data from permanent employees. At the time, the company's head office was situated in Johannesburg, South Africa, with branches across the country. Prior to the COVID-19 pandemic, only executives of the company, including senior managers, could typically work remotely on some occasions. However, at the start of the COVID-19 pandemic the entire workforce of the company transitioned to remote work. An online survey was distributed to all Company X employees, and was completed on a voluntary basis, provided that the participants fitted the inclusion criteria.

Research method

Research participants

Research participants included permanent employees aged between 18 years and 60 years who had been working remotely since the start of the first national lockdown in South Africa from March 2020. Owing to the COVID-19 pandemic and associated restrictions, all surveys were disseminated and completed electronically on a voluntary basis. A total of 263 participants completed the survey.

Measurement

A structured questionnaire, using 5-point Likert-type scales, was designed for this study. Specifically, items to measure remote work challenges, remote work characteristics, self-discipline, workload and well-being were scrutinised to obtain possible valid measurement scales. Most of the scales were adapted by adding the words 'while working remotely' at the start of each question, to make it clear for employees who were interested in their remote work experiences. Consequently, remote work challenges were measured by adapting the work–home interference scale of Carlson et al. (2000), the procrastination scale of Tuckman (1991) and the loneliness scale of Russell et al. (1980). Remote work characteristics were measured, using adaptations of the social support (Morgeson & Humphrey, 2006) and job autonomy scales (Hackman & Oldham, 1980). Workload was measured on the basis of the average number of daily working hours, as suggested by Wang et al. (2021); and self-discipline was measured using an adaptation of the self-discipline scale of Lindner et al. (2015). Finally, well-being was measured by using two items from the emotional exhaustion scale of Maslach and Jackson (1981) and three items from the life satisfaction scale of Diener Emmons et al. (1985).

As the company required additional information on employees' experience of remote work, an open-ended question was included in the survey where respondents were asked to comment on their experience of remote work. Including open-ended questions in online surveys often allows for valuable insights into why respondents responded in a certain way (Clow & James, 2014). Responses obtained were content analysed based on the theoretical framework outlined by Wang et al. (2021).

Assessing unidimensionality

Scale adaptation is a common practice in business research; however, evidence should support the validity of the adapted scale (Heggestad et al., 2019) and therefore the validity of scale adaptations was assessed. As the items within each subscale were designed to measure a single underlying latent variable, these items needed to operate as a unidimensional scale. To test this assumption of unidimensionality, principal component analysis (PCA) was used as it is an appropriate method to assess covariation among items when scales are modified (Skrondal & Rabe-Hesketh, 2004). Principal component analysis was further used to determine the number of components to extract from the data and assess the underlying structure of items in each scale. A scale-by-scale factor analysis rendered results, illustrating the internal consistency of the scales (i.e. reliability) and was also assessed by calculating Cronbach alpha (as depicted in Table 1).

Statistical analysis

The sampling adequacy and inter-item correlations of the measurement scales were determined using the Kaiser–Meyer–Olkin (KMO) and Bartlett's test of sphericity. Based on Field (2017), the KMO statistic measured to a level of satisfaction in all instances, as follows: well-being = 0.797; self-discipline = 0.621; social support = 0.636; job autonomy = 0.636; procrastination = 0.658, loneliness = 0.645, work–home interference = 0.709; (i.e.) KMO > 0.665 and Bartlett's test of sphericity significant: well-being: $x^2(10) = 512.527$; self-discipline: $x^2(3) = 54.22$; social support: $x^2(6) = 166.535$; job autonomy: $x^2(3) = 111.774$; procrastination: $x^2(3) = 113.579$; loneliness: $x^2(3) = 407.673$; work–home interference: $x^2(6) = 412.274$ $p < 0.05$, indicating that the data were suitable for factor analysis. Using the Kaiser criterion (i.e. retaining factors with Eigenvalues [λ] greater than 1), the results indicated that, in all instances, one component should be retained (Eigenvalue: standard deviation [SD] = 1.849 i.e. $\lambda > 1$, explaining 92.45% of variance; work load [WL] = 3.03 i.e. $\lambda > 1$, explaining 50.5% of variance; well-being [WB] = 2.969 i.e. $\lambda > 1$, explaining 74.23% variance). Results of the PCA, therefore, confirmed the unidimensionality of the seven scales: in other words, confirming the construct validity of the adapted scales. As depicted in Table 1, the factor loadings for the seven scales were all found to be greater than 0.4 (Field, 2017). The Cronbach's alpha coefficient was calculated and found to be satisfactory. Based on the foregoing evidence, it is possible to assume that the adapted scales were found to be both valid and reliable, and thus appropriate for use in further analyses.

Ethical considerations

This study was approved by the Research Ethics Committee at the Stellenbosch University, Faculty of Economics and Management Studies (study approval number USB-2021-23143). Participants gave consent on the survey invitation (electronic) prior to completing the survey. Written consent was received from the participating organisation. Anonymity was assured as no information from the survey could be traced back to any individual participant. No information in the dissemination of the research findings can be traced back to the participating organisation or participants.

Results

Factors explaining well-being during remote work

Hierarchical regression was performed to assess whether remote work challenges (procrastination, loneliness, work–home interference) and remote work characteristics (social support, job autonomy) explain variance in well-being, after

TABLE 1: Results of test for unidimensionality.

Factor	Factor matrix	Kaiser-Meyer-Olkin †	Bartlett's test	Cronbach alpha
Well-being_ex 2	0.846	0.797	$x^2(10) = 512.527$	0.852
Well-being_ex 1	0.780	-	-	-
Well-being_sat 1	0.748	-	-	-
Self-discipline 1	0.532	0.621	$x^2(3) = 54.22$	0.727
Self-discipline 2	0.519	-	-	-
Remote work characteristics				
Social support 4	0.647	0.735	$x^2(6) = 166.535$	0.692
Social support 2	0.633	-	-	-
Social support 3	0.586	-	-	-
Social support 1	0.561	-	-	-
Job autonomy 2	0.781	0.636	$x^2(3) = 111.774$	0.670
Job autonomy 3	0.608	-	-	-
Job autonomy 1	0.512	-	-	-
Remote work challenges				
Procrastination 2	0.690	0.658	$x^2(3) = 113.579$	0.668
Procrastination 1	0.633	-	-	-
Procrastination 3	0.581	-	-	-
Loneliness 3	0.935	0.645	$x^2(3) = 407.673$	0.837
Loneliness 2	0.903	-	-	-
Loneliness 1(R)	0.561	-	-	-
Work–home interference 3	0.956	0.709	$x^2(6) = 412.274$	0.796
Work–home interference 1	0.810	-	-	-
Work–home interference 6	0.637	-	-	-
Work–home interference 2	0.423	-	-	-

†, All Kaiser-Meyer-Olkin (KMO) findings were satisfactory.

controlling for the influence of self-discipline and workload. Self-discipline and workload were entered at Step 1, explaining 2.9% of the variance in well-being ($F[2, 246] = 3.609$; $p < 0.05$). After the entry of remote work characteristics (social support and job autonomy) at Step 2 the total variance explained by the model was 21% ($F[4, 244] = 17.334$; $p < 0.05$). Finally, after entry of remote work challenges (procrastination, loneliness, work–home interference) the total variance explained by the model was 39% ($F[7, 241] = 23.904$; $p < 0.05$), as depicted in Table 2.

It can be concluded from Table 2 that when controlling for self-discipline and workload, remote work challenges (procrastination, loneliness, work–home interference) and remote work characteristics (social support, job autonomy) explain variance in well-being. In other words, employees' well-being is enhanced during remote work, if employees have typical levels of self-discipline, are tasked with a reasonable workload, have fewer remote work challenges (i.e. are less likely to procrastinate, are less likely to feel lonely and have less work-home interference) and are exposed to positive remote work characteristics (i.e. experience higher levels of social support and have more job autonomy).

Confirming quantitative results with qualitative findings

Social support, loneliness and well-being

Responses obtained from respondents in answering the open-ended questions confirmed that remote work challenges, particularly loneliness, played a role in their well-being, as is evident from the following excerpt:

> 'I am a social person and having the office being taken away without having a say or having a substitute has changed my life and have made me feel drained. I understand that remote work is the new normal, but an option for office space and more in-person interaction with my team would be good for morale.' (Participant 5)

The excerpt confirms that when workers experience social support, they are less likely to feel isolated and experience the associated psychological strain (Bentley et al., 2016). Social support also addresses their need for belonging (Bavik et al., 2020) and thus facilitates a greater sense of well-being. Individuals who receive social support at work will suffer less from loneliness, because such support can bring desirable online social interactions to meet their needs for belonging (Bavik et al., 2020).

Procrastination, work–home interference and well-being

The statistical analysis of the results of this study showed that workload and procrastination can affect well-being in remote workers. Greater job autonomy allows workers to choose how to spend their time – perhaps delaying work on core activities during working hours and spending time on non-work-related activities such as caring for their family. As one participant noted:

> 'I have more time with my family, I am more relaxed, I am happy.' (Participant 26)

> 'I love working from home, taking accountability for my own work and performance. I feel I have the responsibility to balance personal and work–life.' (Participant 16)

> 'Working remotely help a lot to balance your work and family responsibility.' (Participant 3)

TABLE 2: Results of analysis of factors explaining well-being during remote work.

No.	Variable	*B*	Beta	*t*
1	Constant	0.912	-	3.524*
	Self-discipline	0.411	0.392	6.314*
	Workload	0.140	0.095	1.536
2	Constant	3.278	-	9.710*
	Self-discipline	0.119	0.114	1.745***
	Workload	0.030	0.020	0.367
	Procrastination	-0.325	-0.193	-3.460*
	Loneliness	-0.285	-0.347	-5.483*
	Work–home interference	-0.101	-0.207	-3.791*
3	Constant	3.444	-	9.311*
	Self-discipline	0.134	0.127	1.929**
	Workload	0.023	0.016	0.283
	Procrastination	-0.323	-0.192	-3.440*
	Loneliness	-0.285	-0.347	-5.476
	Work–home interference	-0.087	-0.178	-2.986
	Social support	-0.046	-0.033	-0.649
	Job autonomy	-0.049	-0.060	-1.120

*, Significant at the 0.001 level.
**, Significant at the 0.05 level.
***, Significant at the 0.1 level.

Remote worker well-being relates to how employees can positively self-manage their health and wellness while working remotely and curb overworking tendencies by desisting from thinking about work after hours (Grant et al., 2013), and thus take care of their physical and mental health. Galinsky (2008) has linked job autonomy to intrinsic motivation, which, in turn, can be linked to well-being (Olivares et al., 2020); thus, supporting the findings of this study. The benefits of flexible working hours help employees to balance their family life with work demands (Galinsky et al., 2008) through managing discretionary working time, pace and location to accommodate their needs. Employees with higher levels of job autonomy will experience less work–home interference during the period of working from home and will therefore experience higher levels of well-being. Work–home interference has also been linked to remote work (Grant et al., 2013) and workers who find it difficult to disengage from work and create boundaries between their work and non-working lives suffer from negative well-being factors such as overwork to compensate for the allowed flexibility (Chesley, 2014).

Job autonomy, workload and well-being

The statistical results in this study showed that job autonomy during remote work is positively linked to well-being. This was corroborated in the open-ended responses; for example, one employee reflected how much happiness is experienced:

> 'I am very happy to be working from home and often feel productive. I am more productive working from home.' (Participant 26)

> 'Have more time.' (Participant 42)

> 'Do not have to rush in the morning to get to work and rush as well to leave work.' (Participant 74)

However, a growing concern exists between workload and overworking (Grant et al., 2013), where remote workers spend longer hours on work-related activities while working remotely (Saurombe et al., 2022). One participant's response further revealed patterns of overworking, stating:

> 'I find myself working till very late into the night on some occasions. I find it difficult to hold to working hours as I often start very early and finish long after five.' (Participant 5)

Research suggests that overworking as a behaviour type results in burnout, as well as negatively influencing remote workers' performance (Hartig et al., 2007). Therefore, managing work–home interferences provides remote working employees with work–life balance, which has worked in favour of many organisations in retaining skilled remote workers, especially remote workers who need to consider family arrangements (Hilbrecht et al., 2008).

Discussion

Outline of the results

South African employees spend an average of 60 min – 90 min per day commuting to work (Kerr, 2015). According to the Inrix 2023 Global Traffic scorecard, the average Londoner lost 156 h owing to congestion in 2022, the average United States (US) driver lost 51 days and traffic delays exceeded pre-COVID levels in 39% of urban areas in the US and 42% in Europe (Pishue, 2023). The inception of hybrid work models (including remote work) appears to have eased the trend, yet – although remote work has increased – working solely from home has halved since the lockdown enforced work from home (Pishue, 2023). The financial and time cost of commuting is one factor, but the question that also arises is whether the emotional strain and safety concerns are worth the effort if people can work effectively from home. However, to leverage work flexibility and harness the benefits of remote work, organisations must set up remote working effectively to minimise the unintended mental well-being issues that may influence remote working.

The study confirmed that employee well-being could be higher during remote work if employees have self-discipline, have a reasonable workload, have fewer remote work challenges (procrastination, loneliness and work–home interference) and are exposed to positive remote work characteristics (social support and job autonomy). The relationship between these factors as posited in the research objective, was confirmed in the statistical analysis presented in the findings. The research furthermore contributes to the knowledge of remote work in a context where the decision to work remotely was not a choice.

Remote work allows flexibility regarding how and when to do work. An unintended consequence of this mode of work may be that officially legislated working hours and break times are also left to the employees' discretion and they may end up overworking themselves as the accustomed social cues found in an office environment to regulate working hours are now absent (Wöhrmann & Ebner, 2021). While their study found workload to influence remote work and well-being, other research confirmed that team leader workload also had an impact on communication and worker experience (Donnelly & Proctor-Thomson, 2015) especially in the aftermath of a disaster, as was the case in the present

study. The results discussed in this article confirmed Wang et al.'s (2021) notion that self-discipline should be dealt with as a controlling factor when assessing remote work outcomes. In this study, remote workers who measured high on self-discipline reported less procrastination and work–home interference, which in turn caused higher levels of well-being to be experienced. In contrast, participants who measured low on self-discipline experienced high levels of procrastination and low levels of well-being. In addition, self-discipline facilitates the ability to face and overcome stress (Rogus, 2009). Working remotely further creates boundaryless situations, blurring the home and work interface (Baruch, 2000), and this study confirmed that if the work–home interference is not minimised, it can affect employees' well-being.

Wöhrmann and Ebner (2021) found that remote work could lead to lower quality relations with co-workers and the present study validated the role of social support as a remote work characteristic that can positively influence well-being. Remote work isolates employees from their work network and feelings of social isolation and workplace detachment may be experienced. Resources such as social support at work act as health-protecting factors (Wöhrmann & Ebner, 2021). By creating opportunities using technology or arranging other workplace events for social interaction and support, leaders can positively influence the remote working experience (Boell et al., 2016). However, leaders' capacity to provide such social support must be considered as leaders themselves may also require social support (Donnelly & Proctor-Thomson, 2015). The findings of this study support earlier research that workplace relationships suffer when face-to-face interactions decrease (Golden, 2006); however, the same is true for a reduction in disturbance at work and Windeler et al. (2017) cautioned that social interaction at work carries a cost. The study found that if the benefit of autonomy can be complemented with adequate social support, remote work contributes to a greater experience of well-being.

The benefit of flexibility that remote work offers contributes towards increased autonomy for workers. If employees can choose when and where to engage with work, this contributes towards greater job satisfaction (Boell et al., 2016; Wöhrmann & Ebner, 2021). While enhanced autonomy in remote work promoted job satisfaction and performance outcomes (Hilbrecht et al., 2013), the findings of this study indicated that autonomy also had a positive influence on well-being.

Self-determination theory shapes our understanding of worker psychological needs and its influence on well-being showing that people need to feel capacitated, need autonomy and need to experience connection with others, and this can help predict the motivational requirements of remote working (Gagné et al., 2022). Gagné et al. (2022) called for more research to explore how these psychological needs can be satisfied while working remotely. This study posits that the autonomy presented in remote working may have a positive influence on employee well-being, if social support is built in the design of virtual collaboration. Furthermore, this study highlighted the remote work challenges to be considered but also found that self-discipline and workload are conditions for this to be true.

Practical contribution

While remote working is a trending topic, it is certainly not a new concept. Operationalising remote work is not a one-size-fits-all exercise. In creating a work environment that embraces job autonomy, provides adequate social support and manages workload, employers can control the level of remote work challenges for their employees. The 2021 Work Trends Index annual report (Microsoft, 2021) noted that the next great disruption would be hybrid (and remote) work. But the question that remained was whether this would also be true for developing countries, such as South Africa. Before the pandemic and the harsh lockdown that ensued, only about 4% of knowledge workers in South Africa identified as remote workers.[1] During the initial lockdown, almost 40% of eligible workers were impelled to work from home. Remote work has given employees more flexibility and has created job opportunities in new locations. But there are also challenges. Teams have become more siloed and digital exhaustion is a real and unsustainable threat. Managers also need to review their existing work models to operationalise remote work.

Work models determine how particular organisations function daily and set out who works, what work they do, what they need to carry out the work and where they do the work. Organisations have, on some level, always had to deal with hybrid work considerations, for example, flexitime, compressed workweek, shift work, part-time schedules, job-sharing, to name but a few. There are various permutations of remote work models. Some organisations do away with office space completely and set up workers to work permanently from home. Other organisations offer a level of hybrid work with some time spent in a physical location such as the office, while mostly working remotely. The office is provided as a resource should employees wish to go to the office to work, attend meetings or get to know colleagues. Companies choose how strictly or loosely the policy on office workdays is implemented. Hybrid work arrangements are however not restricted to location and may also include time of work (e.g. flexible hours) and breaks in continuity (e.g. seasonal work).

Managers will do well to consider time and place dimensions for work models in their context, but must be mindful of the challenges and opportunities, especially as they relate to the specific organisational culture and capacity. For a successful structural shift to a hybrid model, it is important to have both individual and organisation readiness. The individual and organisation readiness pillars are a guiding framework for ensuring that people (as individuals) are ready to work

1.Survey by business consultants Willis Towers Watson of 66 SA firms employing 207 000 people, conducted in September 2020 and October 2020. https://www.wtwco.com/en-ZA/News/2021/01/working-from-home-is-here-to-stay-but-firms-have-no-plans-for-jobs-offshoring-or-pay-cuts-tied.

remotely, and the organisation is ready to deploy the model. A reimagined work model will consider various dimensions from a people, work and organisational perspective. The people perspective considers the needs and circumstances of the workers, preparing and empowering people for extreme flexibility. Here management practices and styles – as well as the organisational culture, including symbols and rituals – are considered to support a hybrid model. Cultural rituals and symbols need to be intentionally embedded in the hybrid model design (not necessarily in the location). Leaders need to be empowered to optimally manage and lead in a hybrid model.

The work perspective considers job tasks, such as whether the worker is required on site, and critical drivers for productivity, such as energy, focus, coordination and cooperation. Data show that time spent in meetings and chats sent per person each week continue to climb (Microsoft, 2021). The work perspective promotes a human-centric organisation and work design, and reframes the workplace as a tool for engaging employees rather than a place exclusively for productivity. The organisational perspective considers the internal and external organisational ecosystem reaching from legislation informing governance, communication channels, investment in tools and training, future trends and social cohesion. Leaders therefore need to invest in physical meeting space and technology to bridge the physical and digital worlds.

Conclusion, limitations and future research

The concept of remote work is not new but has certainly received renewed attention since the COVID-19 pandemic and the subsequent lockdown measures enforced globally. Prior to the pandemic, remote work in developing countries such as South Africa was not widely practiced. Only 4% of individuals who performed work that could successfully be conducted remotely applied this trend. During the implementation of the lockdown measures, almost 40% of qualifying workers in South Africa were working remotely. The period was characterised by lower levels of employee well-being overall, as reported by the South African Depression and Anxiety Group (2020). The situation did bring to the fore the opportunities that remote work could present, and more workers have since reviewed their personal life circumstances and taken up flexible work arrangements (Raze, 2022).

The objective of this study was to build on the knowledge of remote working conditions, especially in the context of enforced remote work as opposed to volunteering or opting for such a work model. The study tested the relationship between remote work challenges and remote work characteristics, and well-being. The research confirmed the hypothesis that employee well-being will improve during remote work if employees have fewer remote work challenges, such as procrastination, loneliness and work–home interference, and are exposed to the positive remote work characteristics of social support and job autonomy. The study further found that remote work will be influenced positively by self-discipline and a reasonable workload.

A concept that Wang et al. (2021) included in their remote work model was that of work monitoring. Although not tested in this study, work monitoring is recommended as a topic for future research to discover the influence of work monitoring on employee well-being in a remote working context. While the examination of monitoring in the context of remote working has been limited (Lautsch et al., 2009), the definition that currently holds sway is aligned to remote work management, to improve performance and the efficiency of remote workers (Burri & Senouf, 2009). Examples of remote monitoring activities include daily reports, clocking in and out via applications and frequent 15-min meetings throughout the day to review team performance, challenges faced, the next course of action and what the workers are looking forward to doing the next day (Burri & Senouf, 2009). Monitoring has been found to help employees to cope with procrastination, specifically in the case of those reported to be less-disciplined (Wang et al., 2021). However, research also suggests that extra monitoring could be harmful to remote workers (Lautsch et al., 2009).

Future studies with larger samples could inspect a conditional process model to include mediation and moderation effects in the same analysis (Hayes, 2018). Future studies could also conduct a dominance analysis to determine the relative weights that each of the independent variables carries in predicting well-being (Nimon & Oswald, 2013). Future studies could also explore the more distal impact of increased well-being on outcome variables such as adaptive performance (Van Lill & Taylor, 2022).

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N.W.-T., C.G. and V.N. met the authorship criteria, and were involved in data collection, analysis and/or write-up of the article.

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Data availability

The data that support the findings of this study are available from the corresponding author, N.W.-T., upon reasonable request.

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