International Journal of Workplace Health Management

New ways of working and psychological well-being: work intensity as a target variable of job resources

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Received 15 January 2024
Revised 1 April 2024
19 May 2024
28 May 2024
31 May 2024
Accepted 1 June 2024

Abstract

Purpose – Digitalization and flexibility of workplaces as aspects of new ways of working are associated both positively and negatively with employees' well-being. However, the mechanisms behind this relationship are not clear yet. We present work intensity as a link between new ways of working and psychological well-being. Furthermore, we address two job resources to alter this association: autonomy and boundary control.

Design/methodology/approach – Overall, 1,099 employees of a public administration organization participated in the survey and answered a web-based questionnaire. The organization was in the transition to new ways of working including the introduction of a digital filing system and remote work.

Findings – The results of regression analyses provided evidence that flexibility and dissolution of boundaries were positively related to work intensity, which in turn was associated with emotional exhaustion and work engagement. Thus, new ways of working were negatively associated with psychological well-being, mediated by work intensity. Further analyses revealed that the job resources of autonomy and boundary control moderated the relationship between flexibility respectively dissolution of boundaries with work intensity. Thus, these job resources acted as buffering factors and mitigated the association of new ways of working with work intensity.

Originality/value – The results indicated that work intensity could be perceived as a conceptual bridge between new ways of working and psychological well-being providing a promising target variable for the deployment of job resources to preserve employees' well-being.

Keywords New ways of working, Work intensity, Psychological well-being, Autonomy in the workplace, Boundary control

Paper type Research paper

The present work was performed in partial fulfillment of the requirements for obtaining the degree "Dr. rer. biol. hum."

Funding: This research was supported by grants from the Deutsche Gesetzliche Unfallversicherung (Project No. FF-FP 0428).

International Journal of Workplace Health Management
Vol. 17 No. 4, 2024
pp. 353-366
Emerald Publishing Limited
1753-8351
DOI 10.1108/IJWHM-01-2024-0010

Introduction

The world of work has profoundly changed. Information and communication technologies have expanded the availability of information and shaped the way we communicate and collaborate over the past decades (Korunka and Kubicek, 2017). The variety of communication tools has increased, such as videoconferencing, and work environments have changed due to increased flexibility in both work locations (e.g. working from home) and work hours (e.g. working in the evening). The Covid-19 pandemic has also accelerated these developments, such as working from home (Dettmers and Plückhahn, 2022). These recent changes in the world of work have not been given a consistent name in research, but can be summarized under the general term "new ways of work" (e.g. Poethke *et al.*, 2019). Demerouti *et al.* (2014) defined new ways of working as "a work design in which employees can control the timing and place of their work while being supported by electronic communication." (p. 2). New ways of working is a broad term that encompasses various flexible work arrangements, such as activity-based working, remote working, or hybrid working.

The consequences of these new ways of working are often associated with the notion of work intensity, and their impact on psychological well-being is controversial (cf. Kirchner and Ipsen, 2023). Information and communication technologies have increased the flexibility of work arrangements, with positive consequences. For example, Kelliher and Anderson (2010) reported that flexible workers had higher levels of overall job satisfaction and organizational commitment alongside higher work intensity. Shifrin and Michel (2022) also concluded that flexible work arrangements can make it easier for employees to maintain their health. However, research has also reported negative consequences of new ways of working. For example, using different samples of service workers and a government institution, Kubicek *et al.* (2015) reported that new ways of working as well as changes in work situations were positively related to work intensification, which in turn was associated with emotional exhaustion. Furthermore, work intensification was associated with negative outcomes such as stress (Blanco-Donoso *et al.*, 2023) and limited psychological health (Chouhan, 2023). Current research therefore confirms that work intensity is a relevant aspect in the relationship between new ways of working and psychological well-being.

The job demands-job resources model provides a theoretical framework for analyzing the importance of work intensity (Demerouti *et al.*, 2001). The model classifies working conditions as either job demands or job resources. Job demands are physical or emotional stressors, such as high work intensity, that can lead to strain in the form of reduced psychological well-being. In contrast, job resources, such as autonomy, can increase motivation including high work engagement. Moreover, the negative consequences of job demands could be mitigated by job resources (Demerouti *et al.*, 2001). For example, allowing employees to control the boundaries between work and personal life can prevent the negative consequences of blurred boundaries and ensure the positive effects of new ways of working (Leung, 2011).

To understand the impact of new ways of working and work intensity on psychological well-being, we need to address two fundamental questions. First, are new ways of working related to psychological well-being, mediated by work intensity? Second, can specific job resources shape the relationship between new ways of working and work intensity? We will contribute to these questions as follows. First, we introduce work intensity as a conceptual bridge between new ways of working and psychological well-being. Second, we point to two job resources that offer promising avenues for altering the relationship between new ways of working and work intensity. We argue that autonomy in the workplace and boundary control attenuate the association of flexibility and dissolution of boundaries with work intensity.

Literature review

Work intensity

Work intensity is often described as "working hard", including working for long periods of time at intense levels of effort (Burke *et al.*, 2010). However, Piasna (2017) suggested that "work at high speed and to tight deadlines might not fully capture the complexity of work intensity in its many job-specific forms" (p. 171). Accordingly, Burke *et al.* (2010) proposed that work intensity goes beyond the notion of "working hard" and relates to effort, pace, and affect. Against the background of changing working conditions, Kubicek *et al.* (2015) described the intensification of work demands related to workload, planning and decision making, and learning demands. Thus, new ways of working have not only increased quantitative aspects, such as the amount and pace of work, but they have also led to qualitative changes, typically related to the mental or emotional complexity of work (Mauno *et al.*, 2023). For example, the flexibility in working hours and work locations increases the need for planning and decision making, leading to higher levels of work intensity (Korunka and Kubicek, 2017). In addition, working from home challenges the segmentation of work and personal life and leads to higher demands on employees' self-regulation. Regarding all these aspects, Boekhorst *et al.* (2017) concluded that work intensity should relate to both quantitative and qualitative aspects.

In their conceptual clarification, Burke *et al.* (2010) characterized work intensity as a work demand and suggested that work intensity could have different outcomes such as stress or work engagement. Other studies see work intensity as a consequence of new ways of working (e.g. Green, 2004). This suggests that work intensity may be a link between new ways of working and well-being. In the following, we explain how new ways of working, work intensity, and psychological well-being have been related in previous research.

New ways of working and work intensity

"New ways of working" serves as an umbrella term for current developments in the world of work, such as remote or hybrid work. The rapid development of information and communication technologies has had a far-reaching impact on working conditions and demands at work (e.g. Demerouti *et al.*, 2014; Korunka and Kubicek, 2017). According to Poethke *et al.* (2019), the dimensions of the "new way of work" are digitalization of work processes, flexibility concerning working time and location, the dissolution of boundaries between work and non-work spheres, the possibility to participate in work processes, and the subjective relevance of work (Poethke *et al.*, 2019). As we are primarily interested in changing working conditions, we refer to the dimensions of flexibility and dissolution of boundaries and examine their relationship with work intensity.

Flexibility. Flexibility in working conditions includes flexibility in the workplace and working hours (Hill *et al.*, 2001). Employees are not tied to a permanent workplace to carry out regular work tasks and do not have fixed attendance times. The results of a meta-analysis showed that flexible working arrangements are associated with better physical health, reduced absenteeism, and fewer somatic symptoms (Shifrin and Michel, 2022). However, flexible work schedules, especially employer-imposed changes in work hours, were also associated with high work intensity (Piasna, 2017). Kelliher and Anderson (2010) also reported higher work intensity for flexible work arrangements. Therefore, we expect flexibility to be positively associated with work intensity.

H1. Flexibility is positively related to work intensity.

Dissolution of boundaries. Digitalization and flexible work arrangements led to a shift away from traditional work arrangements. Advances in information and communication technologies have fostered a mentality of "being always available" among the white-collar workforce (Park *et al.*, 2011). As a result, the boundary between work and private life is gradually disappearing, leading to extended availability that is a component of work intensity (Soucek and Voss, 2020). Accompanied by a focus on work results, work outside

regular working hours has increased (e.g. Albertsen *et al.*, 2010). Dettmers and Biemelt (2018) also related the permeability of work-home boundaries to extended availability, reporting a positive association between extended availability requirements and longer working hours. In another study, individuals with extended work availability reported higher perceived work intensity (Rau and Göllner, 2019). Thus, we suggest that the dissolution of boundaries between work and private life is positively related to work intensity.

H2. Dissolution of boundaries between work and private life is positively related to work intensity.

Work intensity and psychological well-being

Psychological well-being has many facets. The job demands-resources model is often used to analyze how job demands and job resources affect employees' well-being by leading to emotional exhaustion as an aspect of burnout (Demerouti *et al.*, 2001). Schaufeli *et al.* (2002) proposed work engagement as the antipode of burnout as an expression of well-being. Therefore, we consider emotional exhaustion and work engagement as indicators of psychological well-being.

Emotional exhaustion. Emotional exhaustion is a symptom of burnout and refers to the "feelings of being overextended and exhausted by the emotional demands of one's work" (Demerouti *et al.*, 2001, p. 499). Extended availability, as an aspect of work intensity, affects health and is associated with burnout (Barber and Santuzzi, 2015). More specifically, work intensification has been associated with stress (Blanco-Donoso *et al.*, 2023) and limited mental health (Chouhan, 2023). Also, Mander and Antoni (2023) reported a positive association between work overload and emotional exhaustion. Boekhorst *et al.* (2017) found that work intensity was associated with emotional exhaustion. Therefore, we hypothesize that work intensity is positively related to emotional exhaustion.

H3. Work intensity is positively related to emotional exhaustion.

Work engagement. Work engagement describes an affective-motivational state that includes vigor, dedication, and absorption and results in a high level of personal investment in work tasks (Schaufeli *et al.*, 2002). However, the relationship between work intensity and work engagement is not clear. On the one hand, a high work intensity could be the manifestation of high work engagement. Accordingly, Rau and Göllner (2019) reported a positive correlation between perceived work intensity and work engagement. On the other hand, high work intensity could limit the engagement of employees. For example, Chouhan (2023) reported a negative effect of work intensification on work engagement. Regarding work intensity as a demand (cf. Korunka and Kubicek, 2017), we expect work intensity to be negatively related to work engagement.

H4. Work intensity is negatively related to work engagement.

Autonomy and boundary control as job resources

The job demands-resources model is often used to analyze how job demands and job resources affect the well-being of employees (Demerouti *et al.*, 2001). As described above, changes in working conditions and new ways of working can lead to increased job demands, such as work intensity. However, changed working conditions may also provide employees with additional resources that enable them to perform their work tasks more easily (for a similar conceptualization regarding agile work practices, see Rietze and Zacher, 2022). Following the primary prevention perspective, we present two essential job resources for new ways of working, namely autonomy in the workplace and boundary control.

Autonomy. Autonomy in the workplace means that employees have control over decisions within their work. This includes control over work tasks and work pace, as well as control over the timing and location of work (Wheatley, 2017). Control over work tasks, especially the

timing of work tasks, includes the ability to postpone tasks and avoid scheduling conflicts or to reduce the number of tasks.

Autonomy as a job resource might influence the relationship between new ways of working and work intensity. In particular, autonomy in the workplace might counteract flexibility requirements. Mache *et al.* (2020) found that the increase in job autonomy due to the transition to flexible work arrangements had a positive buffering effect on the perception of work stress and the need for recovery. In addition, they showed a significant interaction effect between flexible work arrangements and job autonomy, which reduced work stress. Similarly, Piasna (2017) reported that the impact of working non-standard hours on work intensity differed depending on the control over the work schedule. Therefore, we expect autonomy in the workplace to moderate the relationship between flexibility and work intensity.

H5. Autonomy moderates the relationship between flexibility and work intensity.

Boundary control. The rise of technological devices such as laptops and smartphones allows work tasks to be performed outside of the workplace and regular working hours, thus weakening the boundaries between work and private life. Extended availability outside of working hours is an aspect of work intensity (Soucek and Voss, 2020). As a countermeasure, organizations can provide employees with boundary control, which is the perception that someone "can control the timing, frequency, and direction" of mental, physical, and temporal transitions between the work and family domains (Kossek *et al.*, 2012, p. 115).

Barber and Jenkins (2013) reported that the effect of increased work-home boundary crossing on psychological detachment occurred only among employees with low boundary creation. Accordingly, Mellner (2016) reported that boundary control mitigated the negative effects of dissolution of boundaries concerning work-related smartphone use during leisure time. In a different context, Kubicek and Tement (2016) reported an interaction of work intensification and work-home segmentation on a time-based work-to-home conflict. Specifically, work-home segmentation as a boundary management strategy counteracted the effects of work intensification on work-to-home conflict. Overall, we suggest that boundary control buffers the relationship between the dissolution of boundaries and work intensity.

H6. Boundary control moderates the relationship between dissolution of boundaries and work intensity.

Figure 1 provides an overview of the hypotheses. In summary, we consider work intensity as a mediating factor linking new ways of working and psychological well-being (cf. Burke *et al.*, 2010; Soucek and Voss, 2020). Furthermore, work intensity serves as a target variable for two job resources as moderating variables, namely autonomy and boundary control.

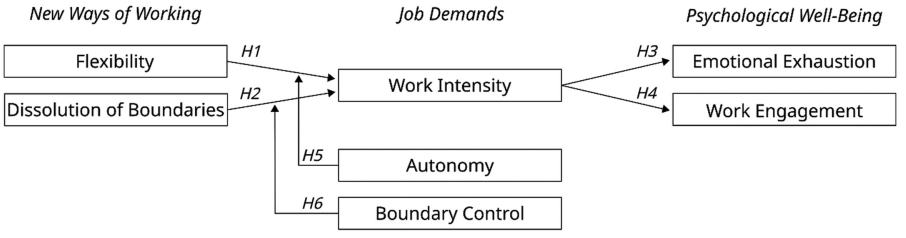

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Figure 1.
Overview of variables and hypotheses

Methodological approach

Participants

In November and December 2020, 1,099 employees of a public organization that administers pension funds completed a web-based questionnaire. The organization was in the process of transitioning to new ways of working, including the introduction of a digital filing system and remote working. In addition, the Covid-19 pandemic accelerated the adoption of remote work in this organization. Thus, flexibility and the dissolution of boundaries were relevant issues. The study was conducted to identify starting points for early intervention, namely autonomy and boundary control.

The participation rate was 34% of all employees in this organization. The proportion of male participants was 22%. The mean age of the participants was 45.92 years ($SD = 11.93$). Forty-seven percent of the participants were holding a university degree. Of the participants, 15% reported working from home, and 14% were working from anywhere. The average number of hours worked per week was 36.60 h ($SD = 6.13$). Overall, 19% of the participants held supervisory positions. Eighty-three percent of the participants had direct customer contact. The average number of team members was 11.89 members ($SD = 10.92$).

By and large, the sample was representative of this company when compared to the organizational records of all employees. However, the proportion of participants in supervisory positions was higher in the sample.

Measures

New ways of working. To assess new ways of working we used the dimensions flexibility (sample item: "I am able to organize my working time in a flexible way.") and dissolution of boundaries (sample item: "When I am on vacation, I am always available to my colleagues and superiors.") from the questionnaire developed by Poethke *et al.* (2019), each consisting of five items. Participants indicated their answers on a 5-point Likert scale from 1 (*does not apply at all*) to 5 (*fully applies*). The reliabilities (Cronbach's alpha) were $\alpha = 0.70$ (flexibility) and $\alpha = 0.78$ (dissolution of boundaries).

Work intensity. To assess work intensity, we used the questionnaire developed by Soucek and Voss (2024) with 21 items. Example items are: "I have a lot of tasks to do" and "At my workplace, I have to perform multiple tasks at the same time". Participants indicated their answers on a 5-point Likert scale from 1 (*does not apply at all*) to 5 (*fully applies*). Cronbach's alpha was $\alpha = 0.91$.

Autonomy. We assessed autonomy in the workplace using three items from the questionnaire by Prümper *et al.* (1995). A sample item is: "Can you plan and schedule your work independently?" Participants answered on a 5-point Likert scale from 1 (*very little*) to 5 (*very much*). Cronbach's alpha was $\alpha = 0.65$.

Boundary control. We used four items developed by Kossek *et al.* (2012) to assess boundary control. A sample item is: "I control whether I am able to keep my work and personal life separate". Answers were indicated on a 5-point Likert scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Cronbach's alpha was $\alpha = 0.86$.

Emotional exhaustion. We assessed emotional exhaustion with eight items from the Oldenburg Burnout Inventory (Demerouti *et al.*, 2003). An example item is: "During my work, I often feel emotionally drained". Participants answered on a 4-point Likert scale from 1 (*strongly disagree*) to 4 (*strongly agree*). Cronbach's alpha was $\alpha = 0.85$.

Work engagement. We used the short version of the Utrecht Work Engagement Scale (Schaufeli *et al.*, 2002) with nine items. A sample item is: "At my job I feel strong and vigorous". Participants indicated their responses on a 7-point Likert scale ranging from 1 (*never*) to 7 (*always*). Cronbach's alpha was $\alpha = 0.95$.

Control variables. We asked participants about demographic and work-related variables, as these have been linked to work intensity (e.g. Burke *et al.*, 2010). Gender was dummy coded: 0 (*female*) and 1 (*male*). Participants reported their age in years and their weekly hours worked. Supervisory position, working from home (i.e. having a fully equipped workplace at home), and working from anywhere (i.e. working in changing locations outside of the company) were dummy coded as 0 (*no*) and 1 (*yes*).

Statistical analyses

We used the statistical software R (version 4.3.3; R Core Team, 2024) to test all models and performed hierarchical regression analyses. For all dependent variables, we proceeded as follows. First, we included control variables in the model. Second, we included the main effects of each predictor. Finally, we included the interaction effects in the case of work intensity. We tested for indirect effects using the PROCESS function from the R package bruceR (Bao, 2023). All control variables and constructs were included as covariates in predicting both the mediator and the criterion. Confidence intervals were bootstrapped with 1,000 simulations. To control for common method bias, we conducted a confirmatory factor analysis using the R package lavaan (Rosseel, 2012). The measurement model, which included all constructs of our study, showed an acceptable fit. Although common method variance cannot be completely excluded, the results are not violated.

Results

Table 1 presents the descriptive measures and the correlations between the variables.

New ways of working and psychological well-being

New ways of working and work intensity. Table 2 summarizes the hierarchical regression analyses for predicting work intensity. Model 1a included the control variables of gender, age, supervisory position, working from home, working from anywhere, and weekly hours worked. Model 1b additionally included flexibility and dissolution of boundaries. Flexibility was positively associated with work intensity, $b = 0.18$, $p < 0.001$, confirming Hypothesis 1. Similarly, dissolution of boundaries was positively related to work intensity, $b = 0.17$, $p < 0.001$, confirming Hypothesis 2. Thus, both flexibility and dissolution of boundaries were associated with work intensity.

Work intensity and psychological well-being. Table 3 summarizes the models predicting psychological well-being. In Model 2a, we regressed emotional exhaustion on the control variables, new ways of working, and job resources. Model 2b additionally considered the

		M	*SD*	1	2	3	4	5	6
1	Flexibility	2.75	0.84						
2	Dissolution of boundaries	1.77	0.82	0.24^{***}					
3	Work intensity	2.78	0.60	0.30^{***}	0.33^{***}				
4	Autonomy	3.22	0.81	0.35^{***}	0.14^{***}	0.09^{**}			
5	Boundary control	4.05	0.82	0.18^{***}	0.00	-0.07^{*}	0.22^{***}		
6	Emotional exhaustion	2.40	0.55	-0.07^{*}	−0.05	0.44^{***}	-0.25^{***}	-0.19^{***}	
7	Work engagement	3.94	1.15	0.04	0.22^{***}	-0.09^{**}	0.21^{***}	0.05	-0.50^{***}

Note(s): $N = 1{,}099$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$
Source(s): Authors' own work

Table 1. Descriptive statistics and correlations between study variables

	Model 1a	Model 1b	Model 1c	Model 1d
(Intercept)	2.82***	2.10***	2.44***	1.82***
Gender[a]	−0.04	−0.05	−0.05	−0.05
Age	−0.01***	−0.01***	−0.01***	−0.01***
Supervisory position	0.40***	0.33***	0.34***	0.34***
Working from home	0.09	−0.19**	−0.20***	−0.18**
Working from anywhere	0.38***	0.08	0.06	0.08
Weekly hours worked	0.01*	0.00	0.00	0.00
New ways of working				
Flexibility		0.18***	0.21***	0.39***
Dissolution of boundaries		0.17***	0.17***	0.28*
Job resources				
Autonomy			−0.04	0.03
Boundary control			−0.08***	0.04
New ways of working x Job resources				
Flexibility x Autonomy				−0.05*
Dissolution of boundaries x Autonomy				0.04
Flexibility x Boundary control				−0.00
Dissolution of boundaries x Boundary control				−0.06*
R^2	0.15	0.24	0.26	0.27
ΔR^2		0.09***	0.02***	0.01**

Note(s): N = 1,099; [a]Gender is dummy coded with 0 (*female*) and 1 (*male*); *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
Source(s): Authors' own work

Table 2. Hierarchical regression results for work intensity

	Emotional exhaustion		Work engagement	
	Model 2a	Model 2b	Model 3a	Model 3b
(Intercept)	3.20***	1.92***	2.06***	2.99***
Gender[a]	−0.13**	−0.10**	−0.13	−0.15
Age	−0.00	0.00*	0.01***	0.01**
Supervisory position	0.12**	−0.07	−0.00	0.13
Working from home	−0.10	0.00	0.16	0.09
Working from anywhere	−0.10	−0.14**	0.24	0.26*
Weekly hours worked	0.00	−0.00	0.01	0.01*
New ways of working				
Flexibility	0.08**	−0.03	−0.19**	−0.10
Dissolution of boundaries	−0.02	−0.11***	0.30***	0.37***
Job resources				
Autonomy	−0.17***	−0.15***	0.27***	0.25***
Boundary control	−0.10***	−0.06**	0.04	0.01
Work intensity		0.52***		−0.38***
R^2	0.10	0.34	0.11	0.14
ΔR^2		0.24***		0.03***

Note(s): N = 1,099; [a]Gender is dummy coded with 0 (*female*) and 1 (*male*); *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$
Source(s): Authors' own work

Table 3. Hierarchical regression results for psychological well-being

relationship between work intensity and emotional exhaustion, which turned out to be positive, $b = 0.52$, $p < 0.001$, confirming Hypothesis 3. In predicting work engagement, Model 3a included the control variables, new ways of working, and job resources. Finally, Model 3b outlined that work intensity was negatively related to work engagement, $b = -0.38$,

$p < 0.001$, confirming Hypothesis 4. Thus, high work intensity was associated with high emotional exhaustion and low work engagement.

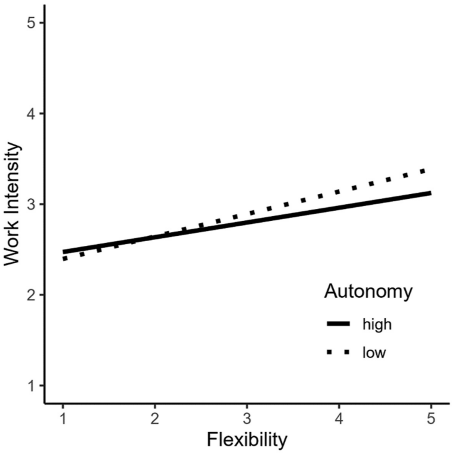
Work intensity as a mediator variable. We proposed work intensity as a conceptual bridge between new ways of working and psychological well-being, and therefore, tested for indirect effects. Regarding flexibility, we found indirect effects on emotional exhaustion, $b = 0.11$, $p < 0.001$, 95% CI [0.08, 0.15], and work engagement, $b = -0.08$, $p < 0.001$, 95% CI [−0.12, −0.05]. Regarding dissolution of boundaries, we found indirect effects on emotional exhaustion, $b = 0.09$, $p < 0.001$, 95% CI [0.06, 0.11], and work engagement, $b = -0.06$, $p < 0.001$, 95% CI [−0.09, −0.04].

Job resources and work intensity

In Table 2, Model 1c additionally included the two job resources. Autonomy was not associated with work intensity, $b = -0.04$, $p = 0.084$. In contrast, boundary control was related to work intensity, $b = -0.08$, $p < 0.001$. Thus, higher boundary control is associated with lower work intensity. Model 1d additionally included the interaction effects of the different aspects of the new ways of working and job resources. The results indicate an interaction between flexibility and autonomy, $b = -0.05$, $p = 0.023$. Figure 2 depicts this interaction effect and shows that the relationship between flexibility and work intensity was weaker in the case of high autonomy, confirming Hypothesis 5. In Model 1d, the interaction of dissolution of boundaries and boundary control was significant, $b = -0.06$, $p = 0.015$. As shown in Figure 3, high boundary control reduced the magnitude of the relationship between dissolution of boundaries and work intensity, confirming Hypothesis 6.

Discussion

New ways of working have profoundly changed workplaces and are associated with both the facilitation and intensification of work processes. We showed that flexibility and dissolution of boundaries were positively related to work intensity, which in turn was associated with emotional exhaustion and work engagement. Furthermore, we identified work intensity as a conceptual bridge mediating the relationship between new ways of working and psychological well-being. These findings suggest that qualitative aspects such as altered



Source(s): Authors' own work

Figure 2. Interaction effect of flexibility and autonomy on work intensity

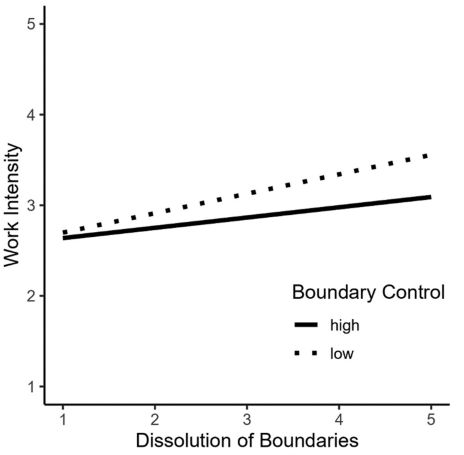


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Figure 3.
Interaction effect of dissolution of boundaries and boundary control on work intensity

work arrangements (i.e. flexibility requirements and boundary-crossing) had an influence on work intensity and might endanger the psychological well-being of employees.

We presented autonomy and boundary control as job resources that were revealed as promising starting points for shaping the relationship between new ways of working, work intensity, and psychological well-being. In this context, Kubicek *et al.* (2017) argued that "there is only weak empirical support for the assumption that job autonomy does indeed counteract the negative effects of high demands on employee well-being and physical health" (p. 48). This so-called "buffer hypothesis" suggests that job control attenuates the negative impact of job demands (van der Doef and Maes, 1999). However, Taris (2006) pointed out the weak empirical support and raised the question of whether the buffer hypothesis is a "zombie theory". Nevertheless, our results on the interaction between new ways of working and job resources on work intensity and its effect on well-being corroborated the buffer hypothesis. Regarding the interaction effects, our results provide evidence for the conclusion of Häusser *et al.* (2010), who assumed that the buffer hypothesis receives more support in the case of matching demands. More specifically, our results suggest the importance of job resources from a primary prevention perspective. Job resources may not only buffer the impact of high job demands on well-being, but may even prevent high job demands in the form of accentuated work intensity. Moreover, new ways of working must not always lead to additional job demands but can also contribute to job resources. For example, activity-based working could lead to autonomy, mediated by task-environment fit (Becker *et al.*, 2022). The attention of workplace managers to this interplay between new ways of working, job resources, and work intensity is crucial to ensure the psychological well-being of employees.

Limitations

The present study has several limitations. First, we relied on cross-sectional data, which does not allow us to draw conclusions about causal relationships. Therefore, future studies should focus on longitudinal processes to unravel the interrelations between new ways of working, work intensity, and psychological well-being. Second, we used self-reported data, which may inflate the correlations between the variables. However, confirmatory factor analyses indicated that the results were not violated by common method bias. Furthermore, the interaction effects may not be compromised because common method bias tends to attenuate interaction effects (Siemsen *et al.*, 2010). In addition, the use of self-reports to assess work

intensity and strain is appropriate because these aspects are experienced by the persons (Cooper *et al.*, 2001). Third, we recruited participants from a public institution, which is not representative of the general working population. Therefore, future studies should replicate the findings of this study for other industries and samples. Finally, the sample was not fully representative of the respective company. In particular, individuals in supervisory positions were overrepresented. Therefore, we statistically controlled for several demographic variables that were associated with work intensity such as supervisory position.

Implications

From a theoretical perspective, we introduced work intensity as a conceptual bridge to explain the mechanisms by which new ways of working may endanger psychological well-being. Furthermore, with two specific job resources, we revealed promising starting points for organizational interventions tackling work intensity. Future research should replicate these findings, preferably in longitudinal studies, and identify further combinations of specific aspects of new ways of working and matching job resources.

From a practical perspective, the conceptual distinction between new ways of working and work intensity as a job demand facilitates the communication between workplace managers and employees about changing working conditions. When implementing new ways of working, workplace managers should consider whether the new ways of working have the potential to provide new resources. For example, flexible working arrangements should be accompanied by a high degree of autonomy so that they do not just become an additional burden. However, the so-called autonomy paradox (e.g. Mazmanian *et al.*, 2013) suggests that autonomy can lead to employees spending more time at work or even exploiting themselves. Therefore, managers should be careful not to send mixed messages that simultaneously encourage and discourage employees from using flexible policies, such as encouraging them to go home early and then calling them on their cell phones later in the evening. Therefore, flexible work arrangements should be accompanied by policies and agreements such as defined periods of no expected availability. Also, the effectiveness of boundary tactics regarding psychological detachment varies depending on individual segmentation preferences and organizational availability requirements (Haun *et al.*, 2022). Therefore, the implementation of new ways of working must be a participatory process that aligns individual preferences with organizational needs.

Conclusions

The results showed that new ways of working were related to work intensity, which in turn was associated with impaired psychological well-being. Therefore, work intensity is a link between new ways of working and psychological well-being and thus represents a promising target for prevention. Specifically, our results showed that job resources limited the extent of work intensity and therefore protected psychological well-being. However, job resources must match the specific aspects of new ways of working. When implementing new work arrangements, organizations should assess their impact on work intensity and provide appropriate job resources.

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