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Article — Published Version

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Journal of Occupational and Organizational Psychology

Provided in Cooperation with:
John Wiley & Sons

Suggested Citation: Poethke, Ute; Klasmeier, Kai N.; Radaca, Elvira; Diestel, Stefan (2023) : How modern working environments shape attendance behaviour: A longitudinal study on weekly flexibilization, boundaryless work and presenteeism, Journal of Occupational and Organizational Psychology, ISSN 2044-8325, Wiley, Hoboken, NJ, Vol. 96, Iss. 3, pp. 524-544, https://doi.org/10.1111/joop.12437

This Version is available at:
https://hdl.handle.net/10419/288132

Received: 18 January 2022 | Accepted: 1 March 2023

DOI: 10.1111/joop.12437

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ARTICLE

How modern working environments shape attendance behaviour: A longitudinal study on weekly flexibilization, boundaryless work and presenteeism

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Abstract

In the face of technological advancements, flexibilization and boundaryless work have become integral parts of modern occupational settings. Simultaneously, current research indicates a considerable increase in presenteeism—the behaviour of working while sick. Meta-analytic findings indicate two main drivers for presenteeism: a high work motivation and an impaired state of health and psychological well-being. Research on flexibilization and boundaryless work shows that these job conditions enhance employees' work motivation but also impair employees' health. Based on conservation of resources theory and Miraglia and John's (J Occupational Health Psychol, **21**, 2016, 261) dual-path model on antecedents of presenteeism, we investigate how both job conditions affect attendance behaviour (absenteeism and presenteeism) via motivation and well-being by conducting a weekly diary study over the course of 9 weeks. In total, 284 people provided data on flexibilization, boundaryless work, flow experience, well-being, absenteeism and presenteeism ($N = 2284$ week-level). Multilevel mediational analyses revealed that flexibilization prevents presenteeism, whereas boundaryless work can increase presenteeism. The results further revealed support for the health impairment path at the within-person and between-person levels whereas the motivational path was not supported at the within-person level. Our results offer several theoretical and practical implications for how modern work shape attendance behaviour.

KEYWORDS
boundaryless work, diary study, flexibilization, multilevel investigation, presenteeism

Practitioner points

- Organizations and managers should be aware of the double-edged sword of modern working environments and should distinguish between flexibilization, which promotes agency as a resource, and boundaryless work, which acts as a job demand and impairs well-being.
- Although flexibilization promotes psychological well-being and hence reduces the risk of presenteeism, employees and managers should take care that flexibilization generally fosters highly engrossing states (flow experiences) at work, which in turn heighten the risk of presenteeism.
- Organizations should counteract boundaryless work by creating effective work schedules or establishing clear rules for communication during non-work time to ensure employees' well-being and to prevent presenteeism.

BACKGROUND

Ongoing globalization and technological advancements make ubiquitous working—working independently of locations and fixed time schedules (Burmeister et al., 2018)—an integral part of employees' working life. Two core aspects predominantly characterize ubiquitous working. First, flexibilization (i.e., flexible work conditions regarding time and space) that enables employees to decide where and when to achieve their tasks and work goals (Poethke et al., 2019). Second, boundaryless work that is characterized by blurred boundaries between work and private domains (Korunka & Kubicek, 2017) and implies that employees engage in job-related activities during nonwork time (e.g., vacation, weekends or evenings) or are interrupted at work by private matters.

Results from organizational research strongly suggest that flexible and blurred work structures positively predict work motivation but can also reduce employees' well-being and health (e.g., Allen et al., 2013; Derks & Bakker, 2014; Ferguson et al., 2016; Park et al., 2020). Whereas flexibilization allows for effective adaptation to changing circumstances (Park et al., 2020) and may foster motivating states of mind during work (Hoornweg et al., 2016), authors have also argued that boundaryless work can impair well-being (Ďuranová & Ohly, 2016; Piszczek, 2017; Sonnentag & Fritz, 2015) due to self-regulatory requirements (Kreiner et al., 2009). Employees typically react to changes in their motivation and well-being by being more or less present at their workplace (Miraglia & Johns, 2016). In doing so, they regulate their effort and resources to prevent impaired health or to enhance their well-being. As a result, ubiquitous working should considerably affect attendance behaviour, namely presenteeism (working while sick) and absenteeism (not working while sick). For organizations, both potential outcomes of flexibilization and boundaryless work are of particular importance, since presenteeism and absenteeism can produce excessive costs (Darr & Johns, 2008). However, empirical evidence on how ubiquitous working relates to attendance behaviours is far from being conclusive (cf. Ruhle et al., 2020). Specifically, past research has neither examined relationships between ubiquitous work and attendance behaviour nor revealed explanatory variables that mediate such relationships. A deeper understanding of how and why ubiquitous work shapes attendance behaviour offers implications about effective ways of creating optimal circumstances for modern work arrangements, thereby mitigating their potential risks and facilitating their positive outcomes (Malhotra, 2021).

In our study, we build on conservation of resources (COR) theory (Hobfoll, 2002; Hobfoll et al., 2018) and Miraglia and Johns' (2016) dual-path-model that links meta-analytical findings on attendance behaviours to the job demand-resources (JD-R) model (Demerouti et al., 2001). In doing so, we

extend the dual-path model of attendance behaviour by investigating a multilevel mediational model that proposes indirect effects of flexibilization and boundaryless work on attendance behaviour via flow experiences and well-being (Figure 1). Because most flexible work arrangements bear on week schedules (Shifrin & Michel, 2022), we examine the proposed indirect effects on the basis of a weekly diary study to capture temporal fluctuations and stable differences in the study variables. In detail, we propose that flexibilization facilitates flow experiences that encourage employees to continue to work even when feeling sick. Conversely, flexibilization should also foster well-being, thereby preventing employees from engaging in presenteeism. Finally, we argue that boundaryless work taxes employees' resources, harms psychological functioning and hence is positively indirectly associated with weekly presenteeism via impaired well-being.

Our study seeks to provide three contributions. First, by exploring the link of ubiquitous work to attendance behaviour, we connect two streams of research that have thus far developed separately. While past research has primarily focused on how modern working environments can influence well-being (Derks & Bakker, 2014; Piszczek, 2017), much less is known about their relations to behavioural outcomes. We also contribute to the literature on attendance behaviour and aim to extend the dual-path model of Miraglia and Johns (2016) by examining flexibilization and boundaryless work. Thus, our study sheds light on how attendance behaviour is shaped by modern working environments because it may fundamentally change patterns of attendance behaviour, especially presenteeism, if job conditions allow, for example working from home when sick.

Second, by linking COR and JD-R theory to ubiquitous working and attendance behaviour, we provide insights into how and why flexible and boundaryless work relates to presenteeism and absenteeism. Our perspective on flow and well-being allows for implications about how employees enhance their psychological functioning when they are able to flexibly decide where and when completing their work tasks. Similarly, we also reveal how employees react to resource losses due to blurred work–home boundaries that hinder them from effectively managing their duties and hence impair their well-being. Therefore, our study sharpens the awareness of how flexible and boundaryless work differentially predicts attendance behaviour.

Third, we capture temporal dynamics in attendance behaviour by conducting a weekly diary study over the course of 9 weeks. Presenteeism is not an everyday working behaviour but a low base-rate phenomenon (average presenteeism rate of 3.69 days per year in the EU-28 states, see e.g., Steidelmüller et al., 2020). This implies that presenteeism is only shown occasionally (Rivkin et al., 2022) and varies over time rendering cross-sectional designs as somewhat limited (cf. Ployhart & Vandenberg, 2010; Ruhle et al., 2020). Thus, to advance our understanding of presenteeism, it is crucial to take its temporal dynamics into account by adopting a weekly diary study (McCormick et al., 2020). This study design provides important insights into weekly changes in job conditions and employees' functioning that immediately

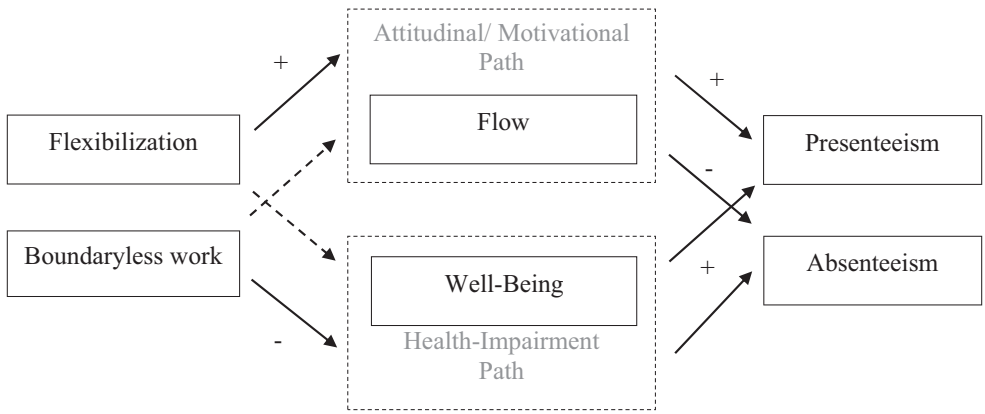

FIGURE 1 Hypothesized model of relationships.

precedes presenteeism and go beyond existing knowledge about how stable job conditions predict attendance behaviour (cf. Ruhle et al., 2020). Finally, since we separate within- and between-person relationships, we also examine whether stable and weekly levels of flexible and boundaryless work similarly relate to attendance behaviour, thereby reducing the risk of endogeneity bias due to omitted variable bias (e.g., contextual factors or preferences for ubiquitous working) for within-level relationships (Antonakis et al., 2021) and providing a valid test for homologous relationships (cf. Gabriel et al., 2019).

THEORY AND HYPOTHESES

The relation of flexibilization and boundaryless work with flow and well-being

JD-R model (Demerouti et al., 2001) proposes that detrimental and beneficial job conditions differentially shape psychological well-being and health via two processes. Detrimental job conditions (e.g., job demands) require prolonged physical and/or psychological effort and can produce costs via *health-impairment processes*. In contrast, beneficial job conditions (e.g., job resources) facilitate *motivational processes* that enhance work-related functioning, such as work engagement and job performance (Bakker & Demerouti, 2014).

Building upon this theoretical distinction, we conceptualize flexibilization as a beneficial job condition that is functional for achieving goals, enables employees to adapt to dynamic circumstances and fosters intrinsic motivation at work. Thus, employees' functioning should largely benefit from flexibilization. In contrast, we assert that boundaryless work puts high demands on employees' self-regulatory effort and taxes limited resources. This is because employees are required to be constantly ready to respond to job-related issues and to be able to quickly switch between the occupational and private spheres during work and non-work time. Thus, boundaryless work as a detrimental job condition should impair employees' functioning.

Although both job conditions are likely to exhibit differential relationships with psychological functioning, their effects on attendance behaviour are much less clear. To expand our understanding how both are related to presenteeism via psychological health and motivation, we draw on COR theory (Hobfoll, 2002; Hobfoll et al., 2018). Accordingly, employees seek to gain, maintain, and protect resources that allow them to achieve their work goals and complete their tasks. We argue that flexibilization helps employees to build resources and to prevent resource losses, thereby facilitating well-being and motivation (Miraglia & Johns, 2016). This is because flexibilization implies that employees can leave their workplaces for a few hours, flexibly plan their schedules, or efficiently react to job or family duties. This free shaping of one's own work stabilizes employees' work–life balance (Fuller & Hirsh, 2019; Van der Lippe & Lippényi, 2020) and well-being (Almer & Kaplan, 2002). Moreover, several studies have shown that flexible work arrangements positively relate to job performance and negatively relate to absenteeism (Goldin, 2014; Govender et al., 2018).

COR theory implies that work flexibilization facilitates adaptive resource regulation in a way that allows employees for adapting their goal-directed behaviour to changing circumstances and requirements of both their job and private lives. Hence, they can optimally complete their tasks at work. Therefore, and in line with the JD-R model, flexibilization enables employees to align task requirements with their current skills and resource availability, thereby developing psychological resources. In support, Fullagar and Kelloway (2009) reported that job autonomy as a core aspect of flexible work arrangements, positively predicts day-specific flow experiences that involve engrossing states of total absorption in task completion (Csikszentmihalyi & LeFevre, 1989). Thus, flexibilization allows employees to optimally use their resources and skills to complete their tasks, thereby enhancing psychological functioning. As a result, a high-level balance between skills and job requirement leads to higher flow and well-being.

Although flow experiences can lead to short-term well-being (i.e., more positive and less negative emotions, Gross, 1998; Leary & Gohar, 2014; Lynch & Troy, 2021), flow experiences and well-being are different concepts. While well-being refers to a person's general (mental) health status and includes

dimensions such as activation, vigour and good spirit (Topp et al., 2015), the flow experiences describe an enjoyable and engrossing state of mind during work activities. Thus, positive feelings occur after the flow activity is completed but not as an overall positive affective state (Csikszentmihalyi, 1997). Therefore, flow reflects an individual's acute motivational state, whereas well-being refers to an individual's general health status. Based on our theorizing, we hypothesize:

Hypothesis 1. Flexibilization is positively related to flow experiences in the same week (a) at the within-person level and (b) at the between-person level.
Hypothesis 2. Flexibilization is positively related to well-being in the same week (a) at the within-person level and (b) at the between-person level.

Another core aspect of the 'new ways of working' (Demerouti et al., 2014) implies the dissolution of boundaries between work and leisure. New management strategies have led to a 'blurring of the boundaries between paid work and workers' private lives and to the erosion of further institutions of work and employment' (Korunka & Kubicek, 2017, p. 15). However, temporal and spatial boundarylessness of work can impair effective resource regulation and cause resource losses (Kamp et al., 2011).

From the perspective of resource regulation, boundaryless work implies an erosion of the rhythms and routines of work, including the routines of collective breaks (Kamp et al., 2011), and is associated with impaired health (e.g., strain, sleep problems, burnout, Ďuranová & Ohly, 2016; Kreiner et al., 2009; Sonnentag & Fritz, 2015). Moreover, blurring boundaries imply that employees are often required to interact with colleagues and clients during non-work time. Conversely, boundaryless work can go along with boundary violations by unwanted interruptions (e.g., by family members), when pursuing work goals. Consequently, boundaryless work impedes employees' efforts to adapt their goal-directed behaviour to changing circumstances of their work, thereby failing to align their skills with task requirements. Therefore, employees are less able to effectively regulate and build psychological resources, when they are required to unexpectedly switch between the private and work domain. As a result, boundaryless work prevents a high-level balance between skills and tasks and, thus, is likely to prevent employees from engaging in flow experiences and impair their well-being.

In line with our argument, several authors have already suggested that blurring of boundaries requires constant availability in both spheres and largely restricts opportunities to recover from job demands (Allvin et al., 2013; Boswell & Olson-Buchanan, 2007; Fenner & Renn, 2010; Grant et al., 2013; Wajcman et al., 2008). Thus, boundaryless work can cause employees to put high self-regulatory effort into coping with unexpected disruptive events, thereby investing resources to prevent or recover from resource losses. Furthermore, individuals who lack resources, are more vulnerable to resource loss, causing them to protect their threatened resources (Hobfoll et al., 2018). Consequently, if employees are faced with boundaryless work, they will be less likely to engage in flow experiences and will be more likely to suffer from impaired well-being:

Hypothesis 3. Boundaryless work is negatively related to flow experiences in the same week (a) at the within-person level and (b) at the between-person level.
Hypothesis 4. Boundaryless work is negatively related to well-being in the same week (a) at the within-person level and (b) at the between-person level.

Flow and well-being as mediators in the links of flexibilization to attendance behaviour

Attendance behaviour refers to both phenomena: sickness absenteeism—defined as 'not attending work because of illness' (Aboagye et al., 2019, p. 438) and presenteeism—defined as the 'behaviour of working in the state of ill-health' (Ruhle et al., 2020, p. 346). Presenteeism represents the focal construct of our study. We include sickness absenteeism primarily in our research model as both attendance behaviours

are associated with each other and should be examined together (Johns, 2008). Based on the JD-R model, Miraglia and Johns (2016) argue that personal and work characteristics affect presenteeism via both a decline in health ('health impairment path') and elevated motivation ('attitudinal/motivational path'). In addition, both the motivational and health-impairment paths of the JD-R model are used to explain the relationship of work environment factors with flow and well-being (Bakker et al., 2011; Bakker & Demerouti, 2007; Schaufeli et al., 2009). We predict that weekly flexibilization is positively and negatively related to presenteeism over time via both the motivational and health impairment path.

According to the motivational path, we propose that flow experiences can cause employees to invest further resources and effort in their job, even when they feel sick and unhealthy. Miraglia and Johns (2016, p. 265) have argued that motivational states at work can facilitate 'good attendance even in the face of some medical discomfort'. In detail, employees, who experience highly engrossing motivational states during their working activities, may feel 'well enough' to attend at work. In support of this line of argument, Clark et al. (2020) reported a strong meta-analytical correlation between absorption (a core facet of flow) and workaholism, suggesting that flow—being fully absorbed in work-related activities—can also produce detrimental behavioural outcomes. In addition, employees who experience flow and intensively enjoy their work, are more committed to and highly satisfied with their job (Ceja & Navarro, 2011; Csikszentmihalyi & LeFevre, 1989). Therefore, they are also inclined to face personal challenges and achieve job goals (Hedman & Sharafi, 2004; Moneta & Csikszentmihalyi, 1996). This is because flow is likely to create the impression of being capable of completing tasks at work (Rheinberg, 2002), even when feeling sick. Since flexibilization should enhance flow experiences, we predict that flexibilization is positively associated with flow and relates indirectly to presenteeism via the motivational process. Thus, we hypothesize:

Hypothesis 5. Flexibilization is indirectly positively related to presenteeism via flow experiences (a) at the within-person level and (b) at the between-person level.

According to the health path, we expect flexibilization to reduce presenteeism via psychological well-being. Consistent with COR theory, we propose that well-being reflects high resource availability that allows employees to stabilize and enhance their health and functioning. As a result, employees should refrain from engaging in presenteeism because it is rather unlikely that they will feel unhealthy and sick when their well-being is high. In line with our previous argument that flexibilization as a job condition facilitates building up resources, we expect flexibilization to increase well-being (see H2). Following Miraglia and Johns (2016) findings on the relationship between job resources and presenteeism, we predict that flexibilization is indirectly associated with lower presenteeism via the health process. This is because flexibilization fosters resource availability and should, thus, reduce experienced stress and health risks (Bakker et al., 2005; Schaufeli & Bakker, 2004). Therefore, we posit:

Hypothesis 6. Flexibilization is indirectly negatively related to presenteeism via well-being (a) at the within-person level and (b) at the between-person level.

Flow and well-being as mediators in the links of boundaryless work to attendance behaviour

COR-theory suggests that boundaryless work impairs resource regulation (i.e., triggering resource losses) and hence negatively affects flow and well-being. Impaired well-being can involve ill-health, such as depressive symptoms (e.g., Awata et al., 2007; Topp et al., 2015; Vijayakumar et al., 2008). According to Miraglia and Johns (2016) model, declines in health can result in presenteeism. They found job demands to predict presenteeism via the health impairment path because job demands result in stress and reduced well-being that increases the likelihood of working when ill. Research on attendance behaviour provides strong evidence for well-being as a predictor of presenteeism (Miraglia & Johns, 2018, pp. 187–189). For

example, Marlowe (2002) notes that depression, which is strongly associated with reduced well-being, is a precursor of presenteeism.

Furthermore, as boundaryless work is exhausting for employees—for example, working during nonwork time, being available anytime and anywhere—we assert that under these circumstances, it is difficult for individuals to experience flow. Consistent with our assertion, research shows that boundaryless work leads to increased stress and restlessness (Bannai & Tamakoshi, 2014; Caruso, 2014; Dahlgren et al., 2006) that can be regarded as the opposite of flow experiences. Thus, and in line with Miraglia and Johns (2016), the motivational path should not be triggered here, so we do not predict an indirect relationship between boundaryless work and presenteeism via flow. In contrast, we predict that impaired well-being, as a negative outcome of boundaryless work, can enhance presenteeism via the health-impairment path. Thus, we propose:

Hypothesis 7. Boundaryless work is indirectly positively related to presenteeism via well-being (a) at the within-person level and (b) at the between-person level.

METHODS

Sample and procedure

Our study draws on a weekly diary design. As presenteeism is a low base-rate phenomenon (Steidelmüller et al., 2020), we chose a weekly instead of a daily-diary design to cover a larger period and to increase the likelihood that the participants could show presenteeism. The data were collected in Germany over the course of 9 weeks from October until December 2017. Potential participants were employees in active employment who were able to participate throughout the whole study period. They were approached directly in person or via e-mail by a recruitment team of research associates, research assistants, and students of a master class in business and economics at a German university. The goal of this recruitment strategy was to cover a wide range of occupations to achieve a heterogeneous representation of flexible working conditions in different organizations, industries and forms of employment (cf. Hülsheger et al., 2020). All participants were assured that their participation was anonymous and voluntary, and they agreed to be contacted via e-mail and allowed the use of their data. No monetary or quasi-monetary incentives were provided in return for participation.

Initially, 320 employees expressed interest in the study. They received an e-mail with further information about the study with a link to the baseline questionnaire. The baseline questionnaire had an average response time of 30 min and assessed demographic data and between-person measures of the study variables (i.e., flexibilization, boundaryless work, flow, well-being, presenteeism and absenteeism). The baseline questionnaire was supplemented by a short 5-min questionnaire that the participants had to complete once per week in the following 9 weeks. For the weekly questionnaire we took a selection of items to keep the processing time manageable for the participants. The participants were automatically invited to complete the weekly survey via e-mail with a personalized link every Thursday at 4 PM. A reminder was sent to all participants who had not completed the weekly survey until Friday at 2 PM. The weekly survey was available until Friday at 10 PM and thereafter became invalid.

A total of 284 employees completed the baseline questionnaire, resulting in a response rate of 88.75%. Among the 284 participants, 276 completed the survey in the first week, 261 in the fifth week and 234 in the last week at the end of the study in December 2017. This overall drop-out rate of 20% resulted in weekly survey data based on 2284 person-weeks. These samples sizes at the within- and between-person level exceed recent benchmarks by Gabriel et al. (2019). On average, the participants completed 7.78 weekly questionnaires. The participants in the final sample were an average age of 31.51 ($SD = 10.71$) years old, 51% were male, 20% were supervisors, and about 43% held an academic degree as highest educational level. The mean professional tenure was between three and 5 years, and the mean contract working time was 33.95 hr/week ($SD = 10.06$). The participants were employed in the industrial sector (20%), public administration (19%), the trading sector (13%), and the health sector (10%).

Measures

We used validated German measures for all constructs (see Table S1 for all items). Additionally, we adapted our measures for the diary study design (Ohly et al., 2010).

We collected our core study variables with the weekly questionnaire. To reduce common method variance (Podsakoff et al., 2003) and to better capture the hypothesized direction of the relationships, the weekly questionnaire was structured in such a way that flexibilization and boundaryless work were assessed at the beginning of the questionnaire and retrospectively for the entire week ('During this week …'). The potential mediator variables well-being and flow were assessed for the same day ('Today …'). Presenteeism and absenteeism were recorded in the subsequent week ($t+1$). Flexibilization, boundaryless work, well-being, and flow were rated on 5-point Likert scales ranging from 1 'I fully disagree' to 5 'I fully agree'.

Flexibilization and boundaryless work

We assessed flexibilization and boundaryless work with a German instrument for assessing central aspects of new ways of working (Poethke et al., 2019), adapted for week-level assessment. We used two items to measure flexibilization (flextime: 'During this week, I scheduled my working hours flexibly.'; flexplace: 'During this week, I regularly worked from home.') and three items to assess boundaryless work (sample item: 'During this week, my colleagues and superiors were always able to reach me during my leisure time.'). We used coefficient omega to estimate the reliability of the multi-item measures. For flexibilization, omega ranged between .44 and .67 (average omega was .54) across the 9 week (see supplementary analyses section for a reanalysis with single items). Coefficient omega ranged between .55 and .78 (average omega was .69) for boundaryless work across the weeks.

Well-being

We measured well-being with the WHO 5-item Well-Being Index (WHO-5, Topp et al., 2015; sample item: 'Today, I have felt active and vigorous'). Coefficient omega ranged between .88 and .92 (average omega was .90) across the 9 weeks.

Flow experiences

We assessed flow with four items reflecting the absorption dimension of flow (Rheinberg et al., 2003; sample item: 'Today at work, I felt just the right amount of challenge.'). This questionnaire has been used in previous diary studies and exhibited good psychometric properties (e.g., Rivkin et al., 2018). Coefficient omega ranged between .78 and .85 (average omega was .80) across the 9 weeks.

Presenteeism and absenteeism

We measured sickness presenteeism and absenteeism in the subsequent week ($t+1$) with one item each from the Copenhagen Psychosocial Questionnaire (German validation by Nübling et al., 2005). For presenteeism, the participants reported on how many days during the last week they 'came to work even though you truly felt unwell and sick?' Sickness absenteeism was assessed with the item 'How many days did you stay away from work due to a health problem during the last week?' We added the remark "'came to work/stay away from work" includes working at home/at freely chosen places' in front of the variables to measure these attendance behaviours also for the participants with flexible work arrangements.

Participants reported on average .27 presenteeism days per week ($SD = .67$) and .24 absenteeism days per week ($SD = .90$). Over the period of the study, participants reported on average 1.63 days of presenteeism ($SD = 2.84$) and 1.45 days of absenteeism ($SD = 3.95$).

Data analyses

Factorial validity

We ran a series of multilevel confirmatory factor analyses to test the construct validity of our measures using Mplus 7.3 (Muthén & Muthén, 1998–2015). A four-factor model (flexibilization, boundaryless work, flow and well-being) with all items loading on their respective factors on both levels had a good model fit ($\chi^2 = 629.50$, $df = 142$, $p < .001$; CFI = .95, RMSEA = .04, $SRMR_{Within} = .04$, $SRMR_{Between} = .08$). Alternative three-factor models, in which flexibilization and boundaryless work ($\Delta\chi^2 = 40.84$, $\Delta df = 6$, $p < .001$) as well as flow and well-being respectively ($\Delta\chi^2 = 2129.48$, $\Delta df = 6$, $p < .001$) were integrated into one factor, showed a worse fit. Thus, the results reveal that our measures reflect distinct constructs.

Statistical analysis strategy

As our data had a hierarchical structure of weekly measures nested within individuals, we tested our hypotheses with a multilevel path analytic approach (Preacher et al., 2010) using Mplus, Version 7.3 (Muthén & Muthén, 1998–2015). Accordingly, because the variance of a weekly measured construct (e.g., weekly well-being) was partitioned into its within-person (Level 1) and between-person (Level 2) components, centring was not required (Preacher et al., 2010). Furthermore, the person means (i.e., between-person means as Level 2 representation of the within-person construct) are treated as latent variables that are corrected for unreliability based on ICCs and Level 1 sample sizes (number of within-person observations). This estimation technique yields unbiased estimates on Level 2 (Lüdtke et al., 2008; Zitzmann et al., 2015). Following this analytic approach, we specified paths at the within-person (Level 1) and the between-person level (Level 2) and simultaneously tested the hypotheses at both levels.

For parameter estimation, we used a Bayesian approach (Depaoli & Clifton, 2015; Muthén & Asparouhov, 2012). The analysis was run with 100,000 iterations and different starting points for the two Markov chains. The first 50,000 iterations served as a 'burn-in' and were excluded from the parameter estimation (Depaoli & Clifton, 2015). The median of the posterior distribution was used as point estimate for model parameters. Because the present relationships have been not examined so far, the model priors were left uninformative. Thus, the Mplus default model priors were used (Muthén & Muthén, 1998–2015).

Following the recommendations of Depaoli and van de Schoot (2017) and Kaplan and Depaoli (2012), we checked the Bayesian model fit and MCMC convergence through the inspection of posterior predictive checking (PPC), potential scale reduction (PSR), trace plots and degree of autocorrelation for each model parameter.

RESULTS

Descriptive statistics and correlations

Table 1 shows the descriptive statistics, correlations and ICC(1)-values of all variables. Compared to other constructs, flexibilization and boundaryless work are more stable across all weeks, but showed relevant within-person variation (flexibilization: 34%; boundaryless work: 35%). The other constructs showed within-person variation from 57% to 64%.

Test of hypotheses

Our hypothesized model fit the data well (Bayesian PPC 95% CI = −32.14; 23.95; PPP = .60).[1] The PSR fell below 1.01 after approximately 2000 iterations. Trace plots indicated a typical pattern of MCMC convergence for all parameters as the plots displayed stable estimations without long-term trends or between-chain discrepancies. The autocorrelation plots exhibited only a small amount of within-chain autocorrelation. We tested all hypotheses within one model (see Figure 2). On the within-person level, weekly flexibilization was positively related to flow (H1a) (B = .077, 95% CI = [.018; .137], zero seemed not credible) and well-being (H2a) (B = .078, 95% CI = [.007; .150]). Boundaryless work was positively related to flow (H3a) (B = .088, 95% CI = [.032; .143]) and negatively related to well-being (H4a) (B = −.108, 95% CI = [−.175; −.041]). The present results provide support for Hypotheses 1a, 2a and 4a, whereas Hypothesis 3a was not supported. Thus, flexibilization seems to act as a job resource and boundaryless work—at least partly—as a job demand.

The indirect relationships (see Table 2) indicated within-level mediation for flexibilization on presenteeism via well-being (H6a) as the 95% CI of the posterior distribution excluded zero (B_{ind} = −.007, 95% CI = [−.016; −.001]). Similarly, flexibilization reduced weekly absenteeism mediated by well-being (B_{ind} = −.003, 95% CI = [−.009; −.000]). In sum, flexibilization was negatively indirectly related with presenteeism and absenteeism via well-being (H6a). Boundaryless work indirectly positively predicted presenteeism (B_{ind} = .010, 95% CI = [.003; .019], zero seemed not credible) and absenteeism (B_{ind} = .005, 95% CI = [.001; .012]) by reducing well-being (H7a). Contrary to our prediction, no mediating effects via flow (H5a) on attendance behaviour were found, as the posterior distributions of the indirect effects contained zero as a plausible value. In summary, the within-level results provided support for the health-impairment path (i.e., boundaryless work enhanced presenteeism via decreased well-being) but not the motivational path from flexibilization via flow to presenteeism. Thus, Hypothesis 5a was not supported, whereas Hypotheses H6a and H7a were in line with our data.

At the between-person level, the pattern of results was similar to our findings at the within-person level. Flexibilization was positively associated with flow (H1b) (B = .126, 95% CI = [.023; .231]) and well-being (H2b) (B = .213, 95% CI = [.069; .355]). Boundaryless work was not related to flow (H3b) (B = −.048, 95% CI = [−.149; .053]) and negatively related to well-being (H4b) (B = −.190, 95% CI = [−.330; −.053]). Therefore, Hypotheses 1b, 2b and 4b were supported, and 3b was not in line with our data.

The posterior distributions of the indirect effects on the between-person level indicated mediational pathways only for presenteeism. For flexibilization, our analysis displayed a twofold mediation effect on presenteeism: Flexibilization indirectly predicted presenteeism via flow (H5b) (B_{ind} = .030, 95% CI = [.004;

TABLE 1 Descriptive statistics and intercorrelations.

	M	SD	ICC1	ICC2	1.	2.	3.	4.	5.	.6
1. Flexibilization	2.07	1.03	.65	.93		.26**	.08**	.03	−.04	−.01
2. Boundaryless work	2.20	1.07	.64	.93	.45**		.09**	−.06**	−.03	.04
3. Flow	2.86	.94	.36	.80	.14*	.02		.16**	−.04	.00
4. Well-being	3.69	1.21	.43	.85	.11	−.10	.30**		−.07**	−.10**
5. Absenteeism$_{t+1}$	.24	.90	.36	.80	.00	.00	−.14*	−.19**		−.24**
6. Presenteeism$_{t+1}$	.27	.67	.37	.81	.05	.08	.00	−.29**	.54**	

Note: Between-person level correlations are presented below the diagonal (N = 284); within-person level correlations are presented above the diagonal (N = 1846–2229).

*p < .05.

**p < .01.

[1]Reanalysis with Maximum Likelihood also showed an excellent model-fit (χ^2 = 8.56, df = 12, p = .74, CFI = 1.00, RMSEA = .00, $SRMR_{within}$ = .01, $SRMR_{between}$ = .03) and results were highly comparable to Bayesian analysis.

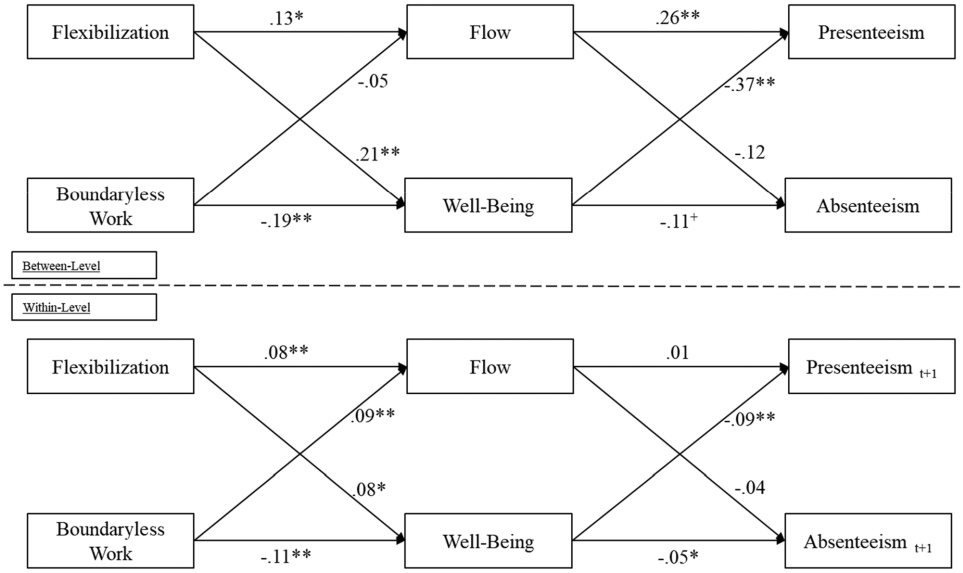

FIGURE 2 Results from Bayesian multilevel analysis. Unstandardized model results for the multilevel mediation model. Covariances were not shown for parsimony. + 90% CI excludes zero. * 95% CI excludes zero. ** 99% CI excludes zero.

TABLE 2 Indirect effects.

	Indirect effect	Lower 95% CI	Upper 95% CI
Within—mediation path			
Flexibilization → Flow → Presenteeism$_{t+1}$	.001	−.003	.006
Flexibilization → Well-being → Presenteeism$_{t+1}$	−.007*	−.016	−.001
Boundaryless work → Flow → Presenteeism$_{t+1}$	.001	−.004	.006
Boundaryless work → Well-being → Presenteeism$_{t+1}$	.010*	.003	.019
Flexibilization → Flow → Absenteeism$_{t+1}$	−.002	−.008	.001
Flexibilization → Well-being → Absenteeism$_{t+1}$	−.003*	−.009	−.000
Boundaryless work → Flow → Absenteeism$_{t+1}$	−.003	−.009	.001
Boundaryless work → Well-being → Absenteeism$_{t+1}$	.005*	.001	.012
Between—mediation path			
Flexibilization → Flow → Presenteeism	.030*	.004	.072
Flexibilization → Well-being → Presenteeism	−.076*	−.139	−.024
Boundaryless work → Flow → Presenteeism	−.01	−.043	.014
Boundaryless work → Well-being → Presenteeism	.068*	.018	.128
Flexibilization → Flow → Absenteeism	−.013	−.045	.006
Flexibilization → Well-being → Absenteeism	−.021	−.057	.001
Boundaryless work → Flow → Absenteeism	.004	−.008	.026
Boundaryless work → Well-being → Absenteeism	.018	−.001	.052

Note: Indirect effects were computed using Bayesian model estimation with 100.000 MCMC iterations.
*95% CI excludes zero.

.072]) and via well-being (H6b) (B_{ind} = −.076, 95% CI = [−.139; −.024]). Thus, Hypotheses 5b and 6b were supported. Boundaryless work positively indirectly predicted presenteeism only via well-being (B_{ind} = .068, 95% CI = [.018; .128]); therefore, Hypothesis 7b was supported.

Supplementary analyses

To provide additional support for our proposed full-mediation model, we compared our results with an alternative model that included the direct relationship of flexibilization and boundaryless work on presenteeism and absenteeism. The alternative model had a similar Bayesian model fit (alternative model PPP = .59 versus full-mediation model PPP = .60). Furthermore, at the within- and the between-person level there were no notable direct relations of flexibilization and boundaryless work with attendance behaviour (all CIs included zero). Thus, the results indicated that the within-level relationship between boundaryless work and flexibilization with time-lagged presenteeism and absenteeism were fully mediated by flow and well-being.

Moreover, we also addressed the low reliability of flexibilization by analysing the proposed relationships for both items separately. The results indicated that only week-level flex*time* was positively associated with flow ($B = .066$, 95% CI = [.028; .105]) and well-being ($B = .084$, 95% CI = [.038; .131]) whereas the CIs for week-level flex*place* included zero. Furthermore, the results showed notable indirect effects on time-lagged presenteeism ($B_{ind} = -.008$, 95% CI = [−.014; −.003]) and absenteeism ($B_{ind} = -.004$, 95% CI = [−.009; −.001]) via well-being and thus highlighted our proposed relationships for this facet of flexibilization.

Following the suggestion of an anonymous reviewer, we controlled for work intensification (operationalized via working hours) to rule out the possibility that changes in working hours may influence the mediational pathways via flow and well-being. Accordingly, we included overall weekly working hours, weekly working hours at home and weekly overtime as controls on the within and between-person level (Bayesian PPC 95% CI = −35.88; 45.42; PPP = .41). In general, the pattern of results remained identical, except for the link between boundaryless work and flow at the within-person (i.e., week) level for which the 95% CI of the posterior distribution now included zero as a plausible value. Hence, the pattern of results for our mediational pathways were not influenced by the inclusion of working hours.

DISCUSSION

In our study, we investigated time-lagged indirect relationships between flexibilization and boundaryless work on the one hand and presenteeism on the other, via flow experiences and well-being. By linking COR theory (Hobfoll et al., 2018) with Miraglia and Johns' (2016) dual-path model on presenteeism, we predicted that flexibilization works as a job resource and may enhance presenteeism by increased flow via the 'attitudinal/motivational path'. Our prediction derives from the argument that flexible work arrangements enable employees to build up resources and avoid resource losses (see COR theory), thereby facilitating flow and well-being. That is, a high flow experiences due to resources gains (e.g., by successfully completing tasks) can lead employees to invest further resources at work despite being sick or unwell. In addition, flow implies that employees get fully absorbed in current projects or tasks, put effort to face current requirements at work, or engage in self-regulation motivating themselves to complete the tasks even if they do not feel well in terms of health. Furthermore, we propose that boundaryless work act as a job demand that can enhance presenteeism by impaired well-being and health via the 'health impairment path'. Following Miraglia and Johns (2016), the health impairment path posits that the risk of presenteeism is increased when individuals' health status is poor. Thus, we predict that impaired well-being, as a negative outcome of boundaryless work, can enhance presenteeism. Concurrently, flexibilization should be negatively indirectly related to presenteeism via the health process because it facilitates resource availability and should, thus, reduce health risks.

Overall, the results show that flexibilization acts as a job resource and boundaryless work does so more as a job demand. The results further revealed support for the health impairment path. Contrary to our propositions, the motivational path could not be supported at the within-level. Interestingly, the results demonstrated that flexibilization could reduce presenteeism via well-being and simultaneously could enhance presenteeism via flow at the between-person level. Another finding of the present study

is the high within-person variation in presenteeism, indicating considerably high temporal fluctuations. These results suggest that presenteeism is not a stable behavioural pattern, but rather shaped by dynamic circumstances. Thus, to arrive at an in-depth understanding of the exact decision-making process, daily and weekly diary studies on presenteeism are imperative for future research.

Theoretical implications

Our weekly diary study provides several theoretical implications for knowledge about antecedents of presenteeism. In interpreting the results and drawing conclusions, however, it should be noted that the results remain correlational in nature and can, thus, only be interpreted in this sense. One main finding of our study is that flexibilization and boundaryless work have different relations to motivational and health outcomes as well as to presenteeism and sickness absenteeism. In the literature, the findings regarding the positive and negative consequences of flexible work arrangements on presenteeism are mixed. Some studies report that employees attend work less often while sick if they have flexible work arrangements (e.g., Gisin et al., 2016; Rousculp et al., 2010). Other studies indicate higher rates of presenteeism in flexible work arrangements (e.g., Irvine, 2011; Krause et al., 2012). One reason for these contradictory findings might be that flexibilization is operationalized in very different ways (flextime, flexplace, telework and mobile work, e.g., Konradt et al., 2000) highlighting the need to provide a more clear and concise definition of the flexibilization construct (e.g., flextime and flexplace), as the results of our supplementary analysis indicated different effects for the two facets.

Not only in relation to presenteeism but also to other variables, both advantages and disadvantages of flexibilization are discussed in the literature (e.g., the autonomy paradox, Mazmanian et al., 2013). Hence, there are inconsistencies and mixed findings regarding positive or negative consequences of flexibilization (for an overview see Leslie et al., 2012). On the one hand, flexibilization is conceptualized as beneficial: by using flexible work arrangements, individuals can independently organize their work and private lives according to their individual needs and in the way that best suits them (Gerdenitsch, 2017). On the other hand, flexibilization may bear the risk of working 'anytime and anywhere' because individuals might be constantly connected to work, bringing up the danger of workaholism and technostress (Spagnoli et al., 2019, 2020) as well as high levels of stress and burnout symptoms (Ďuranová & Ohly, 2016; Li et al., 2022). However, these inconsistencies and mixed findings in the literature are likely due to the fact that flexibilization is often conceptually not clearly distinguished from boundaryless work (e.g., permanent accessibility anytime and anywhere—also in non-work time). The findings of our study underline the importance of differentiating between flexibilization and boundaryless work as related but not identical constructs. We argue that when work and professional life are mixed (i.e., when there is a dissociation of these areas), individuals are exposed to negative consequences such as poor recovery from work. According to results, flexibility in the narrow sense is positively, whereas boundaryless work is negatively associated with health and motivational aspects. Thus, organizational strategies (e.g., strictly separate work and leisure time) can support individuals in making optimal use of flexible forms of work.

Contrary to our propositions, the motivational path could not be supported at the within-level. This is in line with past findings regarding the motivational path in previous studies (e.g., Karanika-Murray et al., 2015) and theoretical discussions about distinctions between autonomous and controlled motivation (cf. Ma et al., 2018; Miraglia & Johns, 2016). Our results may also indicate that the motivational pathway should be investigated more thoroughly. In particular, the outcomes of flexibilization might depend on different aspects that are important for motivation (e.g., work autonomy, requirements of self-regulation). Flexibilization could, for example promote autonomous motivation by enabling individuals to work more independently and autonomously under flexible working conditions. At the same time, however, flexibilization may also inhibit controlled motivation, because demands on self-regulation are higher and it might be more challenging to work in this way. Therefore, it could be an interesting area for future research whether flexibilization operates through both, none, or only one of these motivational pathways.

In addition, a *post-hoc* analysis showed that weekly flexibilization exhibited inverted u-shaped relationships with flow experience. This means that it is possible that highly flexible and less flexible arrangements might have negative consequences; however, a medium degree of work time flexibility may be motivation-enhancing. This finding is also in line with previous studies that have found a curvilinear link between flexibilization and, for example job satisfaction (Rice, 2017). Moreover, study results have shown that home-based teleworkers report better work–life balance while 'highly mobile' workers are more at risk of negative health and well-being outcomes (Eurofound, 2017). Therefore, curvilinear links or inverted u-shaped relationships of flexibilization with additional outcomes (e.g., productivity, stress and strain, organizational commitment) or a 'too much' of flexibilization might also be plausible.

Due to our weekly diary design and the multilevel nature of our data, we were able to examine attendance behaviour at both the within- and between-person level offering insights into temporal changes in attendance behaviour (Gabriel et al., 2019; McCormick et al., 2020). Our results indicate that attendance behaviour may be quite dynamic and exhibit a notable degree of variability over time, as the ICCs indicate 63% of within-person variation in presenteeism and 64% of within-person variation in absenteeism. Thus, attendance behaviour may have more variability within individuals over time than at the between-level, rendering static research design (e.g., cross-sectional studies) as less suitable for investigating the dynamic nature of presenteeism (see also Ployhart & Vandenberg, 2010). Accordingly, our within-person findings provide nuanced insight into how job conditions and employees' functioning shape presenteeism on a weekly base. This temporal perspective is also highlighted by COR theory (Halbesleben et al., 2014; Hobfoll et al., 2018) which implies that gains or losses of resources may be better reflected in within-person changes of ubiquitous working behaviour over time, as compared in between-person designs.

However, we also examined the homology of our proposed relationships (Gabriel et al., 2019) by comparing our within and between-person findings. For most relationships, we found similar patterns of results on both levels of analysis, although the relationships were stronger at the between-person level. Accordingly, attendance behaviour could be explained not only by stable between-person differences, but also by within-person changes in flexibilization and boundaryless work via well-being. More specifically, individuals who experience high levels of boundaryless work *in general* likely exhibit more presenteeism overall mediated by their overall well-being. Additionally, individuals who experience higher boundaryless work in a given week, report lower well-being and tend to work while ill in the subsequent week, *regardless* of their general level of boundaryless work. Thus, by considering a time perspective, this pattern of results may allow us to theorize more precisely about the antecedents of attendance behaviour (cf. McCormick et al., 2020) and additionally may highlight the need to study attendance behaviour in longitudinal designs.

Nevertheless, for the relationship between boundaryless work and flow (zero was credible at the between-person level but not at the within-person level) and for the relationship between flow and presenteeism (zero was credible only at the within-person level), the results showed divergent findings across both levels. In detail, the latter seems to be important for attendance behaviour as it highlights a potential dark side of flow. Additionally, this finding indicates a double-edged nature of between-person differences in flexibilization as flexibilization was positively indirectly related to presenteeism via flow experience. Moreover, flexibilization exhibited also a negative indirect relationship with presenteeism via well-being at the between-person level. As mentioned above, this finding emphasizes that the motivational path (Miraglia & Johns, 2016) should be simultaneously examined at the within- and between-person level using longitudinal designs (cf. McCormick et al., 2020).

Practical implications

Our findings demonstrate that work characteristics in modern occupational settings can increase presenteeism. Therefore, a stronger scope on this topic should motivate occupational health management. There may still be managers who assume that sick employees who are present are more productive than those who are absent. Nevertheless, a broad spectrum of research shows that presenteeism is accompanied by

considerable financial and health costs in the long run (Cooper & Dewe, 2008; Stewart et al., 2003). Overall, organizations should support an appreciative organizational climate and create an awareness of presenteeism (i.e., its negative consequences but also that it can support a gradual return to work after long-term illness, e.g., Karanika-Murray & Biron, 2020). Next to clarifying the issue of presenteeism, a supportive organizational climate is relevant in order to deal with presenteeism (Whysall et al., 2018). As practice has already successfully shown during the COVID-19 pandemic, organizations and managers should affirm the legitimacy of using sick leave when necessary and adjust task assignments or provide substitute jobs to reduce perceived pressure on employees to take sick leave (Lu & Cooper, 2022). However, these procedures should be perpetually adopted as recovery research has found that the appropriate use of sick leave and rest as a health-promoting strategy are highly effective (Bakker & Demerouti, 2017).

Furthermore, it seems to be highly relevant for organizations and managers to thoroughly consider the link between flexible working conditions to attendance behaviour when introducing and customizing 'the new ways of working'. This raises the following question: On what factors should organizations focus to ensure good working conditions for employees but not increase the risk of presenteeism (e.g., simplifying work–family balance by allowing employees to work anytime and anywhere)? In our view, it is important for managers not only to have digitization, flexibilization and 'new work' on the agenda but also to keep an eye on organizational attendance cultures (cf. Ruhle & Süß, 2020). As our results demonstrate, organizations should support flexible work arrangements (e.g., working from home or flexible start and end of the workday) as these allow employees to manage and target resources independently, but care should be taken as such flexibilization does not go along with boundaryless work. Organizations should therefore create organizational frameworks that counteract boundaryless work, that is doing work during nonwork time. For example, by limiting the need to process emails on weekends or after work and by establishing working time schedules that explicitly exclude evening hours and weekends, especially when ubiquitous working is not necessary.

Limitations and future directions

In the following, we discuss limitations and potential avenues for future research. First, no causal inferences can be drawn from our correlational results. Nonetheless, our analytical approach allows for reducing endogeneity threats for within-person results (Antonakis et al., 2021) as these results are independent of between-person influences (e.g., omitted variables).

Second, the reliability of flexibilization was rather low in this study because we only used two items of the original version. According to methodological recommendations, shortened versions or even single-item measures for diary studies are appropriate in order to reduce participant burden (Gabriel et al., 2019; Ohly et al., 2010). Our selection derives from conceptual arguments (rather than psychometric aspects) according to which measures should cover most relevant aspects of an underlying construct. In the present case, we focused on the local ('flexplace') and temporal ('flextime') facet as core dimensions of flexibilization (e.g., Allen et al., 2013; Hill et al., 2001; Minssen, 2012). In supplementary analyses, we found that only flextime was indirectly associated with presenteeism and absenteeism. Thus, future studies may distinguish between different conceptual facets of flexibility in predicting attendance behaviour.

Third, the measurement approach of presenteeism needs further consideration. The week-level measure can reduce memory bias compared to cross-sectional designs (see Beal, 2015). Further, we added the remark '"came to work/stay away from work" includes working at home/at freely chosen places' in front of the variables to measure these attendance behaviours. However, the assessment of presenteeism in the context of flexible and blurred work structures might require more attention (see Ruhle et al., 2020). In this context, it might be important to account that individuals are not necessarily either 'sick and working' or 'sick and absent'. Recent daily-diary studies (e.g., Rivkin et al., 2022) have used a more time-sensitive measure to recognize changes over the work day and asked participants on how many hours they worked, even though they did not feel well enough to work. It might further be useful to investigate whether

people with high flexible work arrangement also have the autonomy to work selectively when they feel sick or to reduce their working hours (e.g., working part of the day or doing only certain tasks) and its impact on part-time presenteeism and associations with well-being and health. Hence, future studies may choose a measurement approach of presenteeism that fits to the respective timeframe (i.e., day, week or month) and also elevates the employees' level of autonomy in the configuration of their work time models.

Fourth, boundary conditions of the relationships between flexible work arrangements and presenteeism were not explicitly addressed in our study (e.g., leadership, individual differences and work cultures). For example, Dietz et al. (2020) revealed that leaders act as role models which shape followers' presenteeism. Moreover, Böhm et al. (2016) found leader–member exchange to moderate the positive relationship between job loss anxiety (as an outcome of new technology use at work) and presenteeism. Since high flexibility often implies a loss of facetime with the leader, the role of leaders in the impact of modern working environments on attendance behaviour should be addressed in future research. Future studies might also take more account of individual differences and work cultures in organizations. For example, authors have suggested that employees may have different preferences regarding the tendency to integrate work and home (so-called integrator) or to clearly separate between work and home (so-called separator; e.g., Clark, 2000; Derks et al., 2014; Kossek & Lautsch, 2012). It would also be interesting to examine different work cultures in organizations or clusters of work characteristics. For example, to compare individuals who work in an 'always on culture' (highly flexible and boundaryless), and employees who work highly flexible within strong work boundaries (e.g., at freely chosen work times and locations but having clearly defined time periods for work and leisure) and employees working highly regulated regarding time and place but with blurred boundaries between work and leisure (e.g., a highly regulated '9 to 5' office job, with the obligation to be constantly available in the work-free time).

Fifth, this perspective could also be interesting to investigate flow experiences from different point of views. Experiencing flow is an engrossing state of mind involves high intrinsic motivation. However, research suggests that immersion in a task causes employees to invest more resources in completing that task, even when they feel unwell or sick (see meta-analysis by Clark et al., 2020). Contrarily, there are some studies that show that experiencing flow moments, especially at home, sometimes cannot occur due to unfavourable conditions such as interruptions of work processes by family members or smartphones (e.g., calls and email from colleagues, Jett & George, 2003; Rivkin et al., 2018). Because flow does not occur immediately after the onset of task completion, employees must be able to prevent distractions and interruptions when being fully absorbed in a particular task to eventually reach the peak of the motivational state. Nonetheless, flexibilization is a specific form of autonomy (Malhotra, 2021) that has been repeatedly found to positively predict flow experiences (Peifer & Engeser, 2021; Schüler et al., 2016). According to these and our findings, high flexibilization and autonomy imply that employees can flexibly identify optimal situation for task completion and thus create situational conditions for flow experiences (e.g., preventing distractions and other forms of interruptions). However, future research could focus more on the differences between different locations in the occurrence of flow experiences at work (Gerpott et al., 2022).

CONCLUSION

Overall, our study demonstrates that it is useful to disentangle flexibilization and boundaryless work. As proposed, flexibilization acts more as a job resource, whereas boundaryless work seems to be more a kind of job demand. Moreover, presenteeism was mostly affected via the health-impairment path, as boundaryless work enhanced presenteeism and flexibilization reduced presenteeism via this path. Future studies should follow up on these findings and examine which boundary conditions (e.g., individual differences and work culture) affect the link between flexible work arrangements and presenteeism.

AUTHOR CONTRIBUTIONS

Ute Poethke: Conceptualization; data curation; formal analysis; investigation; methodology; project administration; resources; supervision; validation; visualization; writing – original draft; writing – review and editing. **Kai N. Klasmeier:** Data curation; formal analysis; investigation; methodology; resources; software; validation; visualization; writing – original draft; writing – review and editing. **Elvira Radaca:** Writing – original draft; writing – review and editing. **Stefan Diestel:** Writing – original draft; writing – review and editing.

ACKNOWLEDGEMENTS

Open Access funding enabled and organized by Projekt DEAL.

CONFLICT OF INTEREST STATEMENT

All authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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How to cite this article: Poethke, U., Klasmeier, K. N., Radaca, E., & Diestel, S. (2023). How modern working environments shape attendance behaviour: A longitudinal study on weekly flexibilization, boundaryless work and presenteeism. *Journal of Occupational and Organizational Psychology*, *96*, 524–544. https://doi.org/10.1111/joop.12437