# RESEARCH



# Time Tetris: a longitudinal study on compressed schedules and workplace well-being at IKEA



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# Abstract

**Background** Compressed schedules, where workers perform longer daily hours to enjoy additional days off, are increasingly promoted as a workplace well-being intervention. Nevertheless, their implications for work-related well-being outcomes, such as recovery from work and burnout risk, are understudied. This gap leaves employers with little evidence on whether and how the arrangement contributes to workplace well-being.

**Methods** IKEA Belgium offered its employees the option to enter compressed schedules in the aftermath of a national labour reform aimed at improving well-being and reducing burnout. We collected data on psychological detachment from work, work-related exhaustion, and burnout risk in four waves before and after implementation. We used mixed-effects growth models to estimate the within-subjects changes in these three domains, and two-way fixed effects models to compare changes with those from a non-treated comparison group.

**Results** Workers experienced increased psychological detachment from work in compressed schedules, yet we saw no decrease in work-related exhaustion or burnout risk. While between-subjects analyses confirm that the increase in psychological detachment is related to treatment, they also hint that this association may fade out during summer when all workers take more extended breaks from work.

**Conclusions** While workers in compressed schedules may mentally switch off from work more effectively, this does not translate into decreased burnout risk scores. Consistent with theoretical expectations, policymakers and employers should be cautious in assuming that the arrangements significantly reduce burnout.

Keywords Compressed schedule, Psychological detachment, Exhaustion, Burnout, Well-being

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# Background

The modern workplace has seen a growing prevalence of compressed schedules, which allow workers to perform longer daily hours in return for additional days off [1-3]. Employers and policymakers want to improve workplace well-being and combat rising burnout rates through these schedules [3, 4]. However, although compressed schedules may positively affect workers' work-life balance [5], there is a lack of rigorous longitudinal studies examining the arrangement's relationship with specific work-related well-being outcomes like recovery from work, work-related exhaustion, or burnout risk [1, 3, 6]. The few existing quantitative studies on compressed schedules and workplace well-being are dated, limited in measurement moments, and offer little theoretical integration [1]. Scarce qualitative investigations, on the other hand, are based on very limited sample sizes [7]. This gap leaves employers little valid evidence on whether and how compressed schedules contribute to workplace wellbeing. To fill this gap and take a step forward in internal validity, we report on results from a 2024 trial with compressed schedules conducted at IKEA Belgium. Drawing from four waves of longitudinal data on employees' workrelated well-being, we estimate mixed-effects growth models and two-way fixed effects models concerning three aspects of work-related well-being: (i) psychological detachment from work, (ii) work-related exhaustion, and (iii) burnout risk, integrating findings from key reviews on compressed schedules [1, 8] in the seminal literature on recovery from work [9].

#### Compressed schedules as a detachment strategy

Existing research suggests that employees see compressed schedules as a way to escape the demanding workplace and enjoy clustered leisure time [1, 8]. Through the lens of the recovery literature [9], this proposition implies that compressed schedules may act as a recovery strategy that fosters psychological detachment from work by providing workers with additional uninterrupted time off.

According to the Effort-Recovery Model [10], recovery experiences indeed occur when workers are no longer exposed to work and when the functional systems taxed by work are no longer called upon. Compressed schedules, by condensing work hours into fewer days, can extend the number of consecutive days workers are not exposed to work [8]. Like vacations, these extended periods off may allow workers to psychologically detach from work more effectively than traditional schedules with typical two-day weekends [12].

Based on these indications, we asked our study participants about their motivations to enter compressed schedules. We found that four-fifths of the participants indeed expected that the arrangement would provide them with more opportunities to detach from work <sup>1</sup>. These expectations align with the theoretical expectation that extended periods off from work may leave more room for activities fostering the psychological detachment process than a traditional weekend [12]. Thus, our first research question reads as follows:

**RQ**<sub>1</sub> Do workers report higher levels of psychological detachment from work after transitioning to compressed schedules?

# Link with exhaustion and burnout

However, contrary to popular belief [3, 4], the literature does not suggest any beneficial spillovers on workers' burnout risk [1]. Studies consistently indicate that psychological detachment is not associated with long-term reductions in exhaustion [13–15], which is the core symptom of job burnout [16]. Furthermore, while taking extended periods off might directly relieve exhaustion, associations are small and fade out relatively quickly upon returning to work [9]. Accordingly, burnout experts argue that such arrangements are unlikely to decrease workers' overall risk of burnout [17].

This proposition seems supported by recent evidence that part-time workers, who are typically away from work for more extended periods, are equally prone to developing burnout compared to their full-time counterparts [18]. Moreover, similar dynamics were reported in a recent qualitative investigation of full-time compressed work schedules [7]. Although the arrangement provided employees with more recovery on their days off, they generally reported that they felt equally likely to develop a burnout after entering compressed schedules [7].

In line with this empirical evidence, the Effort-Recovery model emphasizes that full recovery from work requires a balance between demands and recovery opportunities [10]. As compressed schedules merely shift the full workload to longer working days without addressing overall demands, the potentially increased recovery experiences from the extended breaks may be insufficient to mitigate cumulative work-related exhaustion and burnout risk [9].

Taken collectively, we expect no indirect (via psychological detachment) or direct negative associations between compressed schedules and work-related exhaustion or burnout risk.

 $\mathbf{RQ}_2$  Do workers report changes in work-related exhaustion and burnout risk after transitioning to compressed schedules?

<sup>&</sup>lt;sup>1</sup> Results from this attitudinal survey can be found in Supplementary Table 1 in the supplementary material.

#### The potential moderating role of time use

Early research suggested that men and women react differently to compressed schedules, with men enjoying the clustered leisure time in compressed schedules, while women feared adverse effects on their family lives [8]. Nevertheless, the past semi-century has seen a remarkable convergence in economic gender roles [19]. More recent analyses no longer find gendered attitudes toward the arrangement [20]. Similarly, in the current study, men and women were equally likely to believe that a compressed schedule would increase their leisure time<sup>2</sup>.

Nevertheless, while gender may no longer be a significant moderator in the relationship between compressed schedules and workplace well-being, workers' time use on their additional day off might still affect how they experience shorter workweeks [21]. In this context, recovery literature suggests that high-duty activities like household chores or childcare may lead to less recovery and more exhaustion than low-duty activities like hobbies or socializing [9]. Therefore, our last research question reads as follows:

**RQ**<sub>3</sub> How is workers' time use on their additional days off associated with reported changes in psychological detachment and work-related exhaustion after transitioning to compressed schedules?

# The IKEA case

Starting in March 2024, IKEA Belgium introduced the option for employees to condense their total work time into fewer days. This flexible work arrangement followed Belgium's 2022 labour reform, which adjusted daily limits on working hours to allow employees to work compressed [22]. This reform was implemented to enhance employees' work-life balance and, in turn, help employers avoid burnout [4]. IKEA Belgium partnered with the interdisciplinary research consortium UGent @ Work to evaluate its new compressed work schedules in terms of workers' well-being. Nevertheless, IKEA was not

involved in formulating the study's research questions, measures, and design.

In compliance with local occupational health and safety laws [23] and the national ethical code for scientific research [24], we informed applicants about potential risks associated with the schedules before the implementation. To facilitate this process, the research team developed a 'Compressed Schedule Reflection Tool'<sup>3</sup> that linked validated psychosocial scales<sup>4</sup> to recent insights from qualitative risk assessment of compressed schedules in Belgium [7]. Based on individual scale scores, we provided applicants with personalized reports listing potential risks accompanying compressed schedules. Workers could then make an informed decision on whether or not to proceed with their application for a compressed schedule. The link to this 'Compressed Schedule Reflection Tool' was made available through the organisation's internal communication platform. Ultimately, the organisation evaluated all applications, rejecting some due to logistical constraints (e.g., incompatible planning).

# **Data and methods**

As displayed in Fig. 1, we conducted a longitudinal study with four data collection waves before and during the trial. This design allowed us to collect baseline scores (November '23), run a placebo test to check for preexisting trends (February '24), and assess evolutions both three months after implementation (June '24) and six months (August '24) after implementation.

# **Participants**

To answer our research questions, we sent follow-up questionnaires to all workers initially interested in entering the compressed schedules who completed the 'Compressed Schedule Reflection Tool' at baseline (n=559). Thus, we also invited applicants who ultimately did not enter to complete the follow-up questionnaires as a comparison group. Figure 2 illustrates the response rates across the study timeline.



Fig. 1 Study design

 $<sup>^{3}\,</sup>$  The full question naire used for this tool can be found in supplementary material.

 $<sup>^2\,</sup>$  Results from this attitudinal survey can be found in Supplementary Table 2 in the supplementary material.

<sup>&</sup>lt;sup>4</sup> These included the Copenhagen Psychosocial Questionnaire III [29], Psychological Detachment Scale [11], and Burnout.Assessment Tool [16].



**Fig. 2** Participants per wave. *Notes.* The figure displays response rates for each wave of treated individuals ( $n_t$ ), who entered a compressed schedule, and a comparison group ( $n_c$ ) who did not. Abbreviations used:  $n_t$  (sample in treatment group),  $n_c$  (sample size in comparison group)

While a decline in response rates occurred after the baseline measurement, we find no indications of selective attrition related to baseline values<sup>5</sup> and subsequent follow-up questionnaires demonstrate relatively consistent participation. In February 2024, 101 workers ( $n_t = 70$ ,  $n_c = 31$ ) completed the follow-up questionnaire for the placebo test. At the first post-measurement in June 2024, we collected 111 responses ( $n_t = 79$ ,  $n_c = 32$ ). Finally, at the second post-measurement in August '24, 95 workers responded ( $n_t = 64$ ,  $n_c = 31$ ).

#### Variables

In every wave, participants completed validated scales measuring the dependent variables. Psychological detachment was operationalized via the 4-item psychological detachment scale from The Recovery Experiences Questionnaire [11], known for its brevity and reliability. Each of the four items is rated on 5-point Likert scales with values ranging from 1 to 5. We also implemented the 12-item Burnout Assessment Tool [25], which allows the calculation of a factor score for work-related exhaustion as well as a total burnout risk score [16]. These items are also rated on 5-point Likert scales with values ranging from 1 to 5. Population norms are M=2.02 (SD=0.66) for total burnout risk and M=2.26 (SD=0.86) for exhaustion.

For the potential moderator of time use, we included an item on how employees planned to spend their additional days off. We categorized these into activities with a low-duty and high-duty profile. Activities categorized as low-duty included leisure (hobby, sport, shopping and/or cultural activities), relaxing (reading, television, gaming, music and/or going for walks), and social relations (spend time with family and/or friends), while high-duty activities included household work (cleaning and/or grocery shopping), childcare (take care of children and/or grandchildren), take care of another family member (parent or other), work an additional job (flexi-job or independent profession), construction works (e.g. renovating house), and education (additional course or degree).

Finally, we collected information on gender (female, male or other), age (number in years), number of children, commute time (total daily commute time in minutes), job seniority (number of years with current employer), teleworking possibilities (yes or no), management position (yes or no), and having a second job (yes or no) to create control variables.

<sup>&</sup>lt;sup>5</sup> We assessed the potential for selective attrition by examining associations between participation in the follow-up questionnaires and baseline measures of psychological detachment, work-related exhaustion, and burnout risk via a logistic regression analysis and found no significant associations (see supplementary Table 4 in the supplementary material). During the follow-up meetings with IKEA, attrition after the baseline measurement was explained by a general sense of survey overload in the organisation.

A table with full details on the operationalisation of all variables and the accompanying coding schemes, as well as descriptive statistics for all variables at each wave (Supplementary Table 3) can be found in the supplementary material.

# **Model specifications**

First, we estimated mixed-effects growth models [26] for each dependent variable for the within-subjects estimations. These models account for individual variability over time, enabling precise modeling of changes in psychological detachment, exhaustion, and burnout risk while controlling for repeated measures within the same workers. The specifications below represent the full models with control variables and interaction terms. We also estimate these models (A) without control variables and interaction terms and (B) with control variables but without interaction terms.

In the full specifications below,  $det_{it}$  indicates psychological detachment for subject i at time t,  $exh_{it}$ indicates exhaustion for subject i at time t, and  $bat_{it}$ indicates burnout risk for subject i at time t.  $\beta_0$  represents the intercept, while  $\beta_1$  represents the coefficient for the time period and  $\beta_2$  represents the coefficient for low-duty activities on the additional day off for subject *i* at time *t*.  $\beta_3$  indicates the coefficient for the interaction between the time period and low-duty activities on the additional day off. X represents the vector of control variables (cf. variables section) with their coefficients B.  $v_{0i}$  represents the random intercept for subject *i*, while  $v_{1t} \cdot period$  indicates the random slope for the period variable. Finally,  $\in_{it}$  represents the residual error term for subject i at time t. Estimates from these three models are displayed in Table 1 in the results section.

Equation 1. Specifications for within-subjects growth models.

$$det_{it} = \beta_0 + \beta_1 \cdot period_t + \beta_2 \cdot lowduty_{ij} + \beta_3 \cdot (period_t \cdot lowduty_{it}) + X_{it} \cdot \mathbf{B}$$
(1)  
+  $v_{0i} + v_{1t} \cdot period_t + \in_{it}$ 

$$exh_{it} = \beta_0 + \beta_1 \cdot period_t + \beta_2 \cdot lowduty_{ij} + \beta_3 \cdot (period_t \cdot lowduty_{it}) + X_{it} \cdot \mathbf{B} + v_{0i} + v_{1t} \cdot period_t + \in_{it}$$
(2)

$$bat_{it} = \beta_0 + \beta_1 \cdot period_t + \beta_2 \cdot lowduty_{ij} + \beta_3 \cdot (period_t \cdot lowduty_{it}) + X_{it} \cdot \mathbf{B} + v_{0i} + v_{1t} \cdot period_t + \epsilon_{it}$$
(3)

Second, we also adopted the data from the comparison group and established three alternative extended two-way fixed effects models [27] to explore whether the results from the within-subjects growth models are Page 5 of 10

related to treatment. These models absorb time-invariant individual differences (including baseline measurements) and account for time-varying factors [27], which allows us to isolate associations between treatment and workplace well-being. These models tend to offer a relatively robust approach in cases where workers select themselves for treated and comparison groups.

In these specifications,  $det_{it}$  indicates psychological detachment for subject i at time t,  $exh_{it}$  indicates exhaustion for subject i at time t, and  $bat_{it}$  indicates burnout risk for subject i at time t.  $\beta_0$  represents the intercept and  $\beta_1$  indicates the coefficient for the interaction between the time period and the treated group. Xrepresents the vector of control variables (cf. variables section) with their coefficients B.  $\mu_i$  indicates the participant fixed effects,  $\tau_t$  the time fixed effects, and  $\in_{it}$ the idiosyncratic error term for participant i at time t. Results from these three alternative specifications are displayed in Table 2 in the results section.

Equation 2. Specifications for alternative between-subjects models with data from the comparison group.

$$det_{it} = \beta_0 + \beta_1 \cdot (period_t + treated_i) + X_{it} \cdot B + \mu_i + \tau_t + \epsilon_{it}$$
(1)

$$exh_{ij} = \beta_0 + \beta_1 \cdot (period_t + treated_i) + X_{it} \cdot B + \mu_i + \tau_t + \epsilon_{it}$$
(2)

$$bat_{ij} = \beta_0 + \beta_1 \cdot (period_t + treated_i) + X_{it} \cdot B + \mu_i + \tau_t + \epsilon_{it}$$
(3)

# Significance testing

We relied on Wulff and Taylor's Bayesian-frequentist approach [28] to determine the upper alpha threshold to compare p-values against. Specifically, we used their alphaN web tool with a sample size of 353 for the within-subjects growth models (i.e., the sample size of the treated groups across four periods) and a sample size of 509 for the alternative two-way fixed-effects models (i.e., the sample size of the treated and comparison groups combined across four periods), a Bayes factor of 1 (default), and the balanced prior method as input parameters. The balanced prior method attempts to equalize the rates of Type I and Type II errors. This approach is particularly appropriate given our modest sample sizes, by mitigating the risk of failing to reject a false null hypothesis (i.e., Type II error). The procedure yielded an alpha of 0.124 for the within-subjects growth models and 0.111 for the two-way fixed-effects models, which we conservatively rounded to 0.100 in the results tables as this threshold level is regularly used to indicate marginal statistical significance.

#### Results

Table 1 displays coefficient estimates of the within-subjects mixed-effects growth models for psychological detachment, exhaustion, and total burnout risk. In panel A, we first provide uncontrolled estimates for the dependent variable at each point in time. Accordingly, in panel B, we present estimates for the models with control variables. Finally, in panel C, we provide the full models with control variables and interaction terms. Table 2, on the other hand, reports coefficient estimates of the extended two-way fixed effects models using data from our comparison group.

First, as displayed in Table 1, treated individuals' psychological detachment from work significantly increased at post-measurement 1 ( $\beta$ =0.255, p=.003) and post-measurement 2 ( $\beta$ =0.448, p<.001). These results remained stable after including control variables. We found no pre-existing trends for psychological detachment in the placebo test. Moreover, the alternative between-subjects model in Table 2 indicates that treated workers' increased psychological detachment at the first post-measurement is related to treatment ( $\beta$ =0.337, p=.069)<sup>6</sup>. These results support the theoretical expectations outlined in the first research question. Nevertheless, at the second post-measurement in August, both treated and non-treated individuals experienced increased psychological detachment, and we found no additional increase for the treated in this period ( $\beta$ =0.198, *p*=.232).

Second, consistent with theoretical expectations, we find no significant decreases in treated individuals' work-related exhaustion after transitioning to a compressed schedule, nor do we find any differences between treated and comparison groups. However, treated individuals' burnout risk significantly increased in the placebo test ( $\beta$ =0.111 *p*=.034) and post-measurement 2 ( $\beta$ =0.140, *p*=.033). Nevertheless, our between-subjects estimations in Table 2 suggest that this increase at post-measurement 2 is not related to treatment ( $\beta$  = -0.107, *p*=.309). Overall, our data supports theoretical expectations regarding work-related exhaustion and burnout risk.

Finally, as Table 1 shows, we did not identify any interactions between employees' time use on their additional days off and psychological detachment, work-related exhaustion, or burnout risk at different time periods. Thus, our data does not support our theoretical expectations on the potential role of time use.

#### Discussion

In response to the growing prevalence of compressed schedules in the modern workplace and public debate [1-4], we investigated their implications for workplace wellbeing. To this end, we implemented a longitudinal design with four data collection waves before and after IKEA Belgium offered its employees the option to enter the arrangement. Building on propositions from systematic reviews on compressed schedules [1, 8] and their integration in the seminal recovery literature [9], we implemented mixed-effects growth models [26] to estimate changes in three domains of work-related well-being: psychological detachment from work, work-related exhaustion, and burnout risk. We complemented these within-subjects analyses with extended two-way fixedeffects models [27], comparing between-subjects changes using data from a non-treated comparison group.

First, consistent with the proposition that the arrangement provides employees with a means to escape the work environment [1, 8], we found that workers experienced increased psychological detachment in their compressed schedules. This finding implies that the arrangement may help workers refrain from work-related thoughts during non-work time, which is crucial for their well-being [9]. Nevertheless, while estimates from our between-subjects models suggest that this increased psychological detachment is related to treatment, they also hint that this association may disappear during summer when workers typically take more extended breaks from work. Although this would make sense from a recovery perspective [12], we cannot state with certainty that this trend is due to seasonal influences rather than general fading intervention effects. Therefore, we encourage researchers to test the external validity of this proposition in longitudinal designs spanning several years.

Second, contrary to popular belief [3, 4] but consistent with theoretical expectations [9, 13–15], the increased psychological detachment in compressed schedules was not accompanied by long-term decreases in work-related exhaustion or burnout risk. This finding underscores the external validity of a recent qualitative investigation where workers generally reported no decrease in burnout risk after entering compressed schedules [7]. This finding also aligns with recent quantitative evidence that part-time workers, typically away from work for more extended periods, are equally prone to developing burnout compared to their full-time counterparts [18].

Third, in contrast to existing cues [9], we found no evidence that workers' time use on their additional days off was associated with their well-being experiences in compressed schedules. Thus, workers who spent their day off on low-duty activities (like leisure, relaxing, or social relations) did not experience more psychological detachment or less exhaustion in their schedules than

<sup>&</sup>lt;sup>6</sup> As mentioned in the methods section, we relied on Wulff and Taylor's Bayesian-frequentist approach [28] to significance testing to determine the upper alpha threshold to compare p values against. This procedure yielded an upper alpha threshold of 0.111.

	Psychological de	etachment		Exhaustion			Total burnout	risk	
	Model A	Model B	Model C	Model A	Model B	Model C	Model A	Model B	Model C
Period, ref = baseline (Nov'23)									
Placebo test (Feb'24)	-0.063 (0.090)	-0.128 (0.132)	- 0.061 (0.157)	0.081 (0.079)	0.048 (0.158)	-0.025 (0.174)	0.111* (0.053)	- 0.017 (0.106)	-0.019 (0.115)
Post measurement 1 (Jun '24)	0.255** (0.080)	0.270** (0.080)	0.262* (0.112)	0.039 (0.077)	0.035 (0.077)	-0.057 (0.114)	0.078 (0.055)	0.070 (0.054)	0.024 (0.069)
Post measurement 2 (Aug '24)	0.448*** (0.098)	0.452*** (0.096)	0.344** (0.115)	0.103 (0.089)	0.120 (0.089)	0.224 <sup>+</sup> (0.127)	0.140* (0.064)	0.156*(0.063)	0.238* (0.089)
Personal characteristics									
Female		-0.145 (0.136)	- 0.139 (0.137)		0.323* (0.132)	0.322* (0.133)		0.207* (0.092)	0.210* (0.093)
Children		-0.162** (0.061)	- 0.153** (0.062)		- 0.050 (0.060)	-0.054 (0.061)		- 0.077* (0.037)	-0.084* (0.038)
Age		0.025** (0.008)	0.024** (0.008)		- 0.019* (0.007)	-0.019* (0.008)		- 0.013* (0.006)	-0.012* (0.005)
<b>Professional characteristics</b>									
Commute time		-0.004** (0.002)	- 0.004** (0.002)		0.001 (0.001)	0.001 (0.001)		0.001 (0.001)	0.001 (0.001)
Job seniority		0.000 (0.009)	- 0.001 (0.009)		- 0.002 (0.009)	-0.001 (0.009)		0.004 (0.006)	0.004 (0.006)
Telework dummy		0.096 (0.232)	0.068 (0.224)		- 0.124 (0.183)	-0.101 (0.181)		- 0.014 (0.124)	0.012 (0.119)
Manager		-0.416* (0.188)	- 0.443* (0.195)		- 0.073 (0.194)	-0.074 (0.196)		-0.183 (0.134)	-0.164 (0.133)
Second job dummy		0.098 (0.122)	0.101 (0.125)		0.035 (0.148)	0.041 (0.146)		0.157 (0.100)	0.165* (0.101)
Potential moderator									
Low-duty activities on day off			0.134 (0.144)			-0.112 (0.149)			-0.107 (0.094)
Placebo test x low-duty			0.150 (0.169)			0.149 (0.156)			-0.009 (0.107)
Post measurement 1 x low-duty			- 0.015 (0.160)			0.185 (0.153)			0.087 (0.107)
Post measurement 2 x low-duty			0.224 (0.189)			-0.209 (0.171)			-0.169 (0.121)
Random effects parameters									
Random intercept (ID)	0.466 (0.068)	0.379 (0.066)	0.384 (0.067)	0.383 (0.059)	0.332 (0.054)	0.331 (0.054)	0.202 (0.033)	0.170 (0.027)	0.166 (0.027)
Random slope (time)	0.004 (0.011)	0.004 (0.011)	0.004 (0.011)	0.018 (0.013)	0.016 (0.014)	0.016 (0.013)	0.014 (0.008)	0.013 (0.008)	0.012 (0.007)
Notes. Number of observations=353 terms and control variables. Model $1 + \infty - 0.05$ ; $\pm 0.100$ for the significance	. The table displays co 3 represents the mod levels of the coefficie	oefficient estimates fr el with control variab nts. Standard errors ai	om the within-subject bles. Model C represen re clustered at respone	ts growth models tts the full model dent level	with their standard with control variable	errors between pare es and interaction te	ntheses. Model A ri rms. Stars and cros	epresents the model s indicate <i>p</i> -values (*	without interaction ** <i>p</i> <.001; ** <i>p</i> <.01;

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 Table 1
 Results for within-subjects models

Table 2	<b>Results</b> from	alternative	between-sub	iects models
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	Psy. detachment	Exhaustion	Total burnout
			risk
	Estimate (SE)	Estimate (SE)	Estimate (SE)
Period x treated			
Ref. = non-treated x baseline (Nov '23)			
Placebo test (Feb '24)	0.135 (0.175)	-0.203 (0.162)	-0.230+(0.125)
Post measurement 1 (Jun '24)	0.337+ (0.185)	-0.150 (0.165)	-0.162 (0.133)
Post measurement 2 (Aug '24)	0.198 (0.181)	-0.098 (0.156)	-0.107 (0.105)
Time-variant control variables	Number of children, daily c	ommute time, telework, second jo	b
Fixed effects	Respondent, time		

*Notes.* Number of observations=509. The table displays coefficient estimates from extended two-way fixed-effects models with their standard errors between parentheses. Abbreviations used: Nov (November), Feb (February), Jun (June), Aug (August), Psy. detachment (Psychological detachment. Stars and cross indicate p-values (\*\*\* p < .001; \*\* p < .05; + p < .05; + < 0.10) for the significance levels of the coefficients. + indicates p-values below the upper alpha threshold (<0.10). Standard errors are clustered at the respondent level

those who spent it on high-duty activities (like household chores or childcare).

However, it is crucial to note that our study participants deliberately entered this flexible work arrangement after thorough self-reflection. Workers should respond more favourably toward schedules they have requested themselves than those mandated by the organisation [1]. Thus, since this study relies on self-selection for treatment, our findings are not generalizable to settings where compressed schedules are imposed on workers (e.g., shift work). In settings where compressed schedules are imposed on workers, they have been linked to increased exhaustion and burnout risk [30].

Finally, while we found that compressed schedules were associated with increased psychological detachment, our study does not reveal the specific mechanisms behind this association. As highlighted by Bolino et al. [1], we still have limited insight into whether and why certain workers prefer to work in compressed schedules. Future studies should examine how personal characteristics and work environments shape the choice of compressed schedules and their potential for psychological detachment.

#### Conclusion

This longitudinal study at IKEA Belgium adds internal validity and new insights to the debate on compressed schedules and workplace well-being. It indicates that certain domains of work-related well-being may improve in compressed schedules. Our findings reveal that compressed schedules may help employees detach from work psychologically, i.e., mentally switch off [9]. However, the relief offered by psychological detachment was not accompanied with decreased exhaustion and burnout risk in the long term. These findings tie well with the proposition that, although shorter workweeks may be effective for coping with work stressors, they leave the underlying causes of burnout unaddressed [17]. As workers return to their work environments, the stressors that initially contributed to their burnout risk persist [17].

While our findings challenge common assumptions that compressed schedules are a panacea for rising burnout rates, they are also bound by limitations. The selfselection of employees into the compressed schedule trial implies that these results are not generalizable to situations where the schedules are imposed on workers. Furthermore, prior research has indicated that spill-over effects, wherein colleagues of those in compressed schedules experience additional workload, can be a valid concern [7]. While this concern may be less pronounced in hour-based plannings typical of retail environments, we cannot rule out the possibility that our comparison group was affected by the measure. Finally, the modest sample sizes (especially in the comparison group), duration, and scope of this case study suggest that further longitudinal research with larger treated and comparison groups, more measurement moments and multiple organisations is necessary to fully understand the long-term implications of compressed schedules on worker well-being. Meanwhile, policymakers and employers should be cautious in assuming that the arrangements will significantly reduce burnout. Proper prevention requires addressing stressors in the workplace, not just offering temporary relief [17].

#### Supplementary Information

The online version contains supplementary material available at https://doi.or g/10.1186/s12889-025-21323-4.

Supplementary Material 1 Supplementary Material 2 Supplementary Material 3

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#### Author contributions

KD: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Data curation, Writing – Original Draft, Writing – Review & Editing, Visualization, Project administration. SB: Supervision, Funding acquisition, Writing - Review & Editing. LL: Methodology, Software, Formal analysis, Resources, Data Curation, Writing – Review & Editing. ED: Supervision, Funding acquisition, Writing - Review & Editing.

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#### Data availability

By our agreements with IKEA Belgium, anonymized datasets are only available upon request from the corresponding author (Kristen.duBois@UGent.be).

#### Declarations

#### Ethics approval and consent to participate

All study participants explicitly consented to use their data for academic purposes and aggregate analyses before participating in the questionnaires. As this observational survey study relied on prior written informed consent and adhered to the ethical code of the Faculty of Economics and Business Administration, ex ante ethical approval was not required. The research also complied with the national ethical code for scientific research [24] and local occupational health and safety laws [23].

# Consent for publication

IKEA Belgium approved the publication of this case report.

#### **Competing interests**

The authors declare no competing interests.

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