Job-Related Determinants of Employees' Psychological Detachment from Work

Preliminary Draft

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Psychological detachment from work implies mentally disengaging from work during leisure time and is a core mechanism contributing to employee recovery. This study investigates previously neglected job-related determinants of employees' psychological detachment from work during after work hours, namely human resource practices and employee subgroup categories. Using data from the German Socio-Economic Panel and applying fixed-effects estimations, recognition by supervisors is shown to be significantly positively associated to detachment. The use of performance appraisal is significantly negatively related to detachment, in particular for strongly career-minded individuals. Perceived job insecurity partially mediates the relations between employment through a temporary employment agency, employment on a fixed-term contract, as well as recognition by supervisors and detachment. The results provide valuable implications for fostering detachment in organizations.

Keywords: employee recognition, human resource practices, job demands, job resources, performance appraisal, psychological detachment from work

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1. Introduction

Psychological detachment from work means to stop thinking about job-related issues or opportunities during one's leisure time, i.e., 'to switch off' (Sonnentag and Bayer 2005). It does not only involve being physically absent from the workplace but also implies to mentally distance oneself from work (Sonnentag and Bayer 2005). As a core mechanism contributing to employee recovery, it has been shown to be positively related to employees' self-reported mental and physical health, wellbeing, and task performance (Wendsche and Lohmann-Haislah 2017). In light of its broad range of positive employee outcomes, organizations may seek to foster their employees' detachment.

Psychological detachment can occur during longer respites, such as vacations, as well as during shorter respites, such as after-work hours on normal work days (Sonnentag and Bayer 2005). The positive effects of long respite periods on relief from job stress tend to fade out quickly (Fritz and Sonnentag 2006; Westman and Eden 1997). Thus, short-term detachment is necessary to recover from work in between long respite periods and to prevent health impairments caused by insufficient recovery (Sonnentag and Bayer 2005). The inability to switch off from work during after work hours, i.e., low levels of short-term psychological detachment from work, is also referred to as cognitive work-to-home spillover (Lott 2020). This study focuses on short-term psychological detachment from work during after-work hours on normal workdays.

Previous literature points to various determinants of short-term psychological detachment from work which can be categorized in three domains: work characteristics, work-related activities during non-work time, and person characteristics (for an overview, see Wendsche and Lohmann-Haislah 2017).

The domain of work characteristics can be divided into job demands and job resources. Job demands are work-related aspects that require an individual to invest sustained physical or psychological effort (Bakker and Demerouti 2007). As a result of impaired recovery processes such job demands can turn into job stressors (Meijman and Mulder 1998). In contrast, job resources are factors that stimulate personal growth, reduce job demands or the strain-related consequences that may result from job demands, and support goal achievement (Bakker and Demerouti 2007). Wendsche and Lohmann-Haislah (2017) find in their meta-analysis of 86 empirical studies that job resources are significantly positively and job demands significantly negatively associated with detachment on average. In the

literature, several job demands were shown to affect detachment negatively. These include time pressure, social conflicts, role stressors, emotional demands, working hours, shift work, working hour autonomy, situational constraints, cognitive demands, job insecurity, self-control demands, illegitimate tasks, and physical demands. The previously examined job resources that were shown to affect detachment positively include job control, social support, organizational justice, positive affective events, learning and developmental opportunities, cognitive/emotional/physical resources, and task variety. The focus of the second domain of work-related activities is on two measures: Self-reports about time spent on work-related activities during non-work time and self-reports about work-related technology use during non-work time. Previous studies consistently find negative correlations between these two measures and detachment. The third domain is concerned with person characteristics. Gender and age were found to be unrelated to detachment. Heavy work investment and negative affectivity or neuroticism were shown to be negatively related to detachment (Wendsche and Lohmann-Haislah 2017).

The aim of this paper is to identify previously neglected determinants of short-term psychological detachment from work within the domain of work characteristics. In particular, I add to the existing literature by considering human resource practices as potential predictors of psychological detachment from work. These practices include the use of performance appraisals, the degree of recognition by supervisors, the provision of a salary perceived as adequate by the employee, and the perceived availability of promotion opportunities. I also investigate whether the negative effect of performance appraisals on detachment is more pronounced for strongly career-minded individuals and I compare the effects of appraisals with monetary consequences to those without such consequences. Through knowing the impact of these common human resource practices on detachment, organizations can tailor their practices in a way that fosters detachment resulting in various positive employee outcomes.

In addition, I investigate whether some employees are more likely to experience less detachment than others, focusing on four employee subgroups: organizational newcomers, temporary agency workers, workers employed on a fixed-term contract, and leaders. For organizational newcomers, temporary agency workers and workers on fixed-term contracts, I test a potential partially mediating role of perceived job insecurity in the relation between these determinants and psychological detachment. The findings are beneficial for organizations as interventions for improving detachment can then be targeted at the high-risk groups that this study aims to identify.

My empirical analysis is based on data from the German Socio-Economic Panel (SOEP). This data set allows me to combine insights from human resource management and psychology. I adopt a psychological perspective using the Stressor-Detachment Model (SDM) by Sonnentag and Fritz (2015) and apply it to the context of human resource practices. Specifically, I contribute to organizational psychology research by showing how human resource management may affect psychological detachment and which subgroups are most at risk of low detachment levels. Since poor psychological

detachment during leisure time has been shown to impair health and wellbeing (Wendsche and Lohmann-Haislah 2017), I also contribute indirectly to occupational health psychology research.

The study thematically and methodically closest to mine is by Shvartsman and Beckmann (2015). They examine the associations between different human resource practices and employees' stress levels on the basis of data from the SOEP. In their analysis, however, the impact of human resource practices on psychological detachment is not separated from that on other intrinsic stress indicators. Their intrinsic stress index is an aggregate measure consisting of six items, two of which measure detachment. Therefore, the results do not allow us to disentangle the impact that human resource practices have on each of the intrinsic stress indicators, such as psychological detachment. Moreover, I consider additional determinants: Belonging to specific employee subgroups, the consequences of performance appraisals, career-mindedness, recognition by supervisors, and job insecurity.

The remainder of this paper is structured as follows. In the next section, I develop testable hypotheses on the basis of theoretical considerations. Section 3 describes my data set, variables, and methodology. I present my empirical results in Section 4. Section 5 is devoted to robustness checks. In Section 6, I discuss my findings and conclude.

2. Theory and hypotheses

The theoretical basis for this study is the Stressor-Detachment Model (SDM) by Sonnentag (2011), which was later extended by Sonnentag and Fritz (2015). This model assumes that psychological detachment has a mediating and moderating role in the relation between job stressors and strain as well as impaired health (Sonnentag 2011). I expand the SDM (Sonnentag and Fritz 2015) in several ways, following Wendsche and Lohman-Haislah (2017). Instead of focusing on job stressors only, I additionally consider job-related resources as work-related determinants of detachment (Kinnunen et al. 2011). I further expand the model by taking person characteristics and leisure time activities as potential determinants of detachment into account. In addition, I investigate which employee subgroups have the most trouble in psychologically detaching from work.

2.1 Employee subgroups and detachment

2.1.1 Organizational newcomers

I analyze whether detachment is especially hard for organizational newcomers. In the literature on job change, the initial time spent in a new organization is referred to as the entry stage (Bernstrom 2013). Within this stage, newcomers must adapt to the circumstances present in the new organization. According to Adams (1976), transitions are always followed by a stress response. Indeed, it has been shown that a recent job change causes stress and health impairments for employees (Nicholson and West 1988; Adams 1976; Holmes and Rahe 1967). Job change can thus be regarded as an acute job stressor (Werbel 1983). The SDM (Sonnentag and Fritz 2015) assumes that job stressors impede psychological

detachment from work. Therefore, organizational newcomers might find it difficult to detach from work in the evenings. The entry stage is followed by the normalization stage, which is characterized by employees getting used to the new circumstances (Ashforth and Kreiner 2002). During this stage, the new becomes ordinary and employees gradually settle in (Ashforth 2001), such that job change is no longer a relevant job stressor.

Hypothesis 1 (H1): Employees who recently changed their job have more trouble psychologically detaching from work in the evening than those who did not.

In Germany, jobs often have a six-month probation period which allows the employer to screen the employee. The period of notice is often shorter during this period. During the probation period, the organizational newcomer may feel greater job insecurity due to this relatively low legal protection.

Hypothesis 2 (H2): The relation between being an organizational newcomer and psychological detachment in the evening is partially mediated by perceived job insecurity.

2.1.2 Temporary employed workers

Common forms of temporary employment in Europe include fixed-term contract and temporary agency work. Fixed-term contract workers are employed for a limited amount of time, which is in contrast to the open-ended nature of permanent employment (De Cuyper, Notelaers, and De Witte 2009). Temporary agency workers are hired by a work organization via a temporary employment agency (Koene, Paauwe, and Groenewegen 2004). They are typically consecutively placed at several user companies for a short period of time (Koene, Paauwe, and Groenewegen 2004). Thus, frequent job change is inherent to temporary employment. Temporary employed workers are first in the entry stage and might leave the user organization before reaching the normalization stage. With job change as a job stressor (Werbel 1983) and the SDM (Sonnentag and Fritz 2015) assuming that job stressors impede detachment, one might expect temporary agency workers to be at more risk of low detachment than permanent or fixed-term employed individuals who typically stay in one organization for a longer period of time.

Job insecurity refers to the subjectively perceived likelihood of involuntary losing the current job in the future (Sverke, Hellgren, and Näswall 2002). Job insecurity is widely recognized as a job stressor in the literature (Ashford, Lee, and Bobko, 1989; De Witte, 2005). According to Beard and Edwards (1995), job insecurity is one key feature in which temporary workers are disadvantaged in comparison to permanent workers. Thus, I expect temporary workers to experience greater job insecurity than permanent workers and on the basis of the stressor-detachment model I expect job insecurity to affect psychological detachment negatively. Therefore, I hypothesize job insecurity to have a mediating role in the relation between temporary employment (i.e., temporary agency work and employment on a fixed-term contract) and detachment.

Hypothesis 3 (H3): The relation between work on a fixed-term contract and psychological detachment in the evening is partially mediated by perceived job insecurity.

Hypothesis 4 (H4): The relation between temporary agency work and psychological detachment in the evening is partially mediated by perceived job insecurity.

2.1.3 Leaders

I investigate whether leaders are at particular risk of experiencing low detachment. In the literature on the leadership-stress link, possessing a leadership position is a widely reported cause for stress. Leaders are exposed to several sources of stress, such as long working hours, attending several meetings, and work overload (Cooper and Marshall 1978; Day, Sin, and Chen 2004; Hunter, Tate, Dzieweczynski, and Bedell-Avers 2011). Again according to the SDM (Sonnentag and Fritz 2015), exposure to such job stressors can hinder detachment. In contrast, Sherman et al. (2012) show that leadership is associated with lower levels of stress. They ascribe this result to the heightened sense of control experienced by leaders (Fast et al. 2009) which is a psychological resource that has a stress-buffering effect (Weiss 1968). Johnston and Lee (2013), however, find that despite an increase in job control, employees' stress levels nevertheless increase following a promotion. In a survey from the Center of Creative Leadership, 88% of leaders reported work as the primary source of stress in their lives (Campbell, Baltes, Martin, and Meddings 2007). Due to the great responsibilities and high job demands that leaders face, leaders may ruminate more about work during leisure time than non-leaders.

Hypothesis 5 (H5): Leaders have more trouble psychologically detaching from work in the evening than non-leaders.

2.2 Human resource practices and detachment

2.2.1 Recognition by supervisors

Recognition is a basic need of employees (Maslow 1943). It has been shown to be positively related to employee health and wellbeing (Grawitch et al. 2006). Moreover, Brun et al. (2003) find that a lack of recognition is a risk factor for psychological distress of workers. Thus, a lack of recognition by supervisors can be interpreted as a job stressor. On the basis of the SDM (Sonnentag and Fritz 2015), I expect greater recognition by supervisors to affect detachment positively.

Hypothesis 6 (H6): Recognition by supervisors is positively related to psychological detachment from work in the evening.

Recognition can also serve as a signal for job security. Great recognition could be interpreted by employees as a signal that the supervisor is satisfied with their work and not willing to terminate the employment contract.

Hypothesis 7 (H7): The relation between work on a recognition by supervisors and psychological detachment in the evening is partially mediated by perceived job insecurity

2.2.2 Promotion opportunities and adequate salary

Good promotion prospects and the provision of an adequate salary reflect high job rewards (Shvartsman and Beckmann 2015). For employees in a high job reward situation psychological detachment from work may be easier than for employees in a low job reward situation. This expectation is grounded in psychological contract theory (Rosseau 1989). Psychological contracts entail reciprocal obligations between the employer and employee. These expectations are implicit and thus not formally agreed to by both parties (Rosseau 1989). Receiving an adequate salary and having adequate promotion opportunities are implicit expectations that are likely to be part of employees' psychological contract. Psychological contract breach is present, in case these expectations are not met (Robinson 1996). This may hinder detachment, such that the following is hypothesized:

Hypothesis 8 (H8): Individuals with bad promotion prospects job have more trouble psychologically detaching from work in the evening than those with good promotion prospects.

Hypothesis 9 (H9): Individuals who perceive their salary as adequate have less trouble psychologically detaching from work in the evening than those who perceive their salary as inadequate.

2.2.3 Performance appraisals

Performance appraisals serve many purposes in organizations. They can be used for between-person decisions, such as promotion, termination, or salary adjustment. In addition, appraisals can help to make within-person decisions, through the provision of feedback on employees' strengths and weaknesses and the identification of training needs. Employees' performance may also be appraised for personnel planning or documentation purposes (Cleveland, Murphy, and Williams 1989). The achievement of previously set goals may be evaluated by way of performance appraisals often accompanied by financial or career-related consequences for the employees. This may induce employees that face performance appraisals to perceive increased job pressure (Shvartsman and Beckmann 2015). Given the many consequences that appraisals may have for employees, appraisals may be a potential source of stress for them (Rout and Rout 2002). Running a cross-sectional OLS regression, Shvartsman and Beckmann (2015) find that performance appraisal is significantly positively associated with work-related stress. The SDM (Sonnentag and Fritz 2015) suggests that detachment may affect the relation between job stressors, here performance appraisals, and impaired health. Indeed, Gabris and Ihrke (2001) show that performance-appraisals may contribute to burnout and health issues in employees.

Hypothesis 10a (H10a): The use of performance appraisals is negatively related to psychological detachment from work in the evening.

Moreover, it is reasonable to assume that performance appraisals do not affect detachment levels of all employees equally. The detachment of employees who set great value on their career may be affected more negatively.

Hypothesis 10b (H10b): The negative relation between performance appraisal and psychological detachment from work in the evening is more pronounced for strongly career-minded individuals.

Performance appraisals can have monetary consequences for the evaluated employee. Performance appraisals affecting future earnings and promotion can be defined as having long-term consequences, whereas performance appraisals affecting an annual bonus or the gross monthly wage can be defined as having short-term consequences (Heywood et al. 2016). I expect that if short- or long-term consequences result from performance appraisals, more job pressure and stress is experienced leading to lower detachment levels compared to performance appraisals without monetary consequences.

Hypothesis 10c (H10c): The detachment levels of employees whose performance appraisal is with monetary consequences are lower than the detachment levels of employees whose performance is without monetary consequences.

3. Data, variables, and methodology

3.1 Dataset

For my research purpose, information on different areas of life for each individual is necessary, including work-related and mental-health-related aspects. The SOEP is a very suitable database for this purpose. My empirical analysis is therefore based on data from the SOEP, which is representative of people living in Germany. In the SOEP, about 15,000 households and 30,000 individuals participate on a yearly basis (Goebel et al. 2019).

I use data from 2006, 2011, and 2016, as the relevant constructs were assessed in these waves. My sample consists of workers in full- or part-time employment aged between 18 and 65 years with at least 15 working hours per week. If there is missing information of individuals on at least one of the variables used in this study, I exclude these individuals from my sample.

Table 1 shows the descriptive statistics for my dependent and main explanatory variables. When considering all three waves, my sample consists of 15,644 individuals (21,821 observations). The mean value of psychological detachment (average value of two items, each item rated on a scale from 1 to 4) is 2.81. 64% of my sample perceive the recognition by their supervisors as adequate and 49% perceive their salary as adequate. The promotion prospects were considered as bad from 63% of my sample. The average value for career-mindedness (rated on a scale from 1 to 4) is 2.23.

2% of my sample are temporary agency workers, 9% are employed on a fixed-term contract, and 16% are organizational newcomers. Employees who hold a leadership position make up 21% of my sample.

Performance appraisal was assessed in 2011 and 2016. 39% of my sample from these two waves report that their performance is regularly assessed by a superior (13,768 observations). Performance appraisal is without consequences for 68% of those individuals who also reported the consequences that come with their performance appraisal (12,219 observations). Performance appraisal affects the wage of 25%, bonus of 41%, future raises of 39%, and promotion of 45% individuals whose performance is appraised (4,626 observations).

Table 1. Descriptive statistics of main variables

Variable	Mean	SD	Min. - Max.	n	Survey years
Dependent variable					
Psychological detachment from work index	0,04	0.99	-2.31 - 1.67	21,821	2006, 2011, & 2016
Psychological detachment from work	2.81	0.79	1 - 4	21,821	2006, 2011, & 2016
Explanatory variables					
Career-mindedness	2.23	0.95	1 - 4	21,821	2006, 2011, & 2016
Recognition by supervisors	0.64	0.48	0 - 1	21,821	2006, 2011, & 2016
Bad promotion prospects	0.63	0.48	0 - 1	21,821	2006, 2011, & 2016
Adequate salary	0.49	0.50	0 - 1	21,821	2006, 2011, & 2016
Temporary agency worker	0.02	0.15	0 - 1	21,821	2006, 2011, & 2016
Fixed-term contract	0.09	0.29	0 - 1	21,821	2006, 2011, & 2016
Organizational newcomer	0.16	0.36	0 - 1	21,821	2006, 2011, & 2016
Leadership position	0.21	0.40	0 - 1	21,821	2006, 2011, & 2016
Performance appraisal	0.39	0.49	0 - 1	13,768	2011, 2016
Appraisal without consequences	0.68	0.46	0 - 1	12,219	2011, 2016
Appraisal affects wage	0.25	0.43	0 - 1	4,626	2011, 2016
Appraisal affects bonus	0.41	0.49	0 - 1	4,626	2011, 2016
Appraisal affects raises	0.39	0.49	0 - 1	4,626	2011, 2016
Appraisal affects promotion	0.45	0.50	0 - 1	4,626	2011, 2016

Note. SD=standard deviation. Min.=minimum. Max.=maximum. Psychological detachment from work is the average of the values from the answers to both detachment items.

3.2 Variables

The dependent variable in my empirical analysis is psychological detachment from work. Two items are used to measure individuals' levels of psychological detachment from work in the evening: 1) "When I come home, it is very easy to switch off from thinking about work" (EASYSO) and 2) "Work seldom lets go of me; it stays in my head all evening" (EVENING). Each item is answered on a four-point scale including the categories "strongly disagree", "disagree", "agree", and "strongly agree".

I combine the information of both items by building a single variable. For this purpose, I apply the double standardization approach which has been frequently used in empirical studies (Bresnahan et al. 2002; Bloom et al. 2011; Shvartsman and Beckmann 2015). In a first step, I standardize the individual items, before standardizing the sum of these items in a second step. Note that the responses to the first

item on detachment (EASYSO) are reversed prior to this standardization procedure. Standardization is achieved through subtracting the mean and then dividing by the standard deviation. The double standardization approach for the psychological detachment index can be summarized as

$$detachment_{it} = STD[STD(EASYSO_{it}) + STD(EVENING_{it})]$$

where the term $detachment_{it}$ is the psychological detachment index for individual i at time t, which is a standardized variable with mean 0 and variance 1. Double standardization makes the interpretation of estimation results convenient, since a one-unit change in an explanatory variable is then associated with a change in the dependent variable that can be expressed in standard deviations (Shvartsman and Beckmann 2015).

The explanatory variables are performance appraisal, recognition by supervisors, bad promotion prospects, adequate salary, temporary agency work, fixed-term contract, organizational newcomer, and leadership position, which are all dummy variables.

I control for age, gender, years of schooling, place of residence in eastern Germany (i.e., in one of the "new" federal states of Germany) or in western Germany (i.e., in one of the "old" federal states of Germany), existence of at least one child in the household, marital status, German nationality, job type, firm size, leadership position, conflicts with colleagues, conflicts with supervisors, flexibility of working time arrangements, perceived job insecurity, weekly contracted working hours, hours of overtime per week, public sector, log gross hourly wage, number of hours spent on a typical weekday doing hobbies, number of hours spent on a typical weekday engaging in household and care activities, self-reported health, career-mindedness, and survey year. Table A1 in the Appendix provides detailed information about how the explanatory and control variables are defined in my study.[1]

3.3 Methodology

Despite my rich set of control variables, OLS estimations may suffer from omitted variable bias due to unobserved individual characteristics. For example, in OLS estimations I cannot control for time-invariant individual characteristics, such as an individual's resistance to stress (Shvartsman and Beckmann 2015). To eliminate the problem of unobserved time-invariant heterogeneity, I apply the following fixed-effects estimation:

$$detachment_{it} = \beta^* JRD_{it} + \gamma^* X_{it} + \alpha_i + \eta_t + \varepsilon_{it}$$

The dependent variable $detachment_{it}$ is the detachment index for individual *i* in year *t*, JRD_{it} is a vector of job-related determinants, X_{it} is a vector of control variables including year dummies, α_i is the

[1] Adequate salary, bad promotion prospects, recognition by supervisors and perceived job insecurity were assessed in 2016 on a four-point Likert scale ranging from "strongly disagree" to "strongly agree", whereas in 2006 and 2011 yes-or-no questions were used. For consistency reasons, the answers from 2016 were transformed into binary variables with the answers "strongly disagree" and "disagree" taking a value of 0 and "agree" and "strongly agree" taking a value 1.

individual-specific time-invariant effect, η_t is a time fixed effect, and ε_{it} is the error term. For my fixed-effects estimations that include performance appraisal, data from the panel waves 2011 and 2016 is used. In my fixed-effects estimations without the performance appraisal variable, observations from the panel waves 2006, 2011, and 2016 are included. I use the Hausman test to determine whether to apply fixed-effects. If the Hausman test yields Prob>chi2 < 0.05 (i.e., significant), then I choose fixed-effects, which is the case for all of my models.

4. Results

The results of my fixed-effects estimations based on data from all three waves (i.e., 2006, 2011, and 2016) are given in Model 1 of Table 2. Note that this model does not include the performance appraisal variable because performance appraisal was not assessed in 2006. The results show that recognition by supervisors ($p<0.01$) is positively associated with psychological detachment from work, which is in line with H6. Furthermore, the coefficients of adequate salary, bad promotion prospects, fixed-term contract, organizational newcomer, and leadership position are insignificant. H1, H5, H8, and H9 are not supported.

I also investigate the relation between performance appraisal and psychological detachment from work using data from 2011 and 2016. Table 2 displays the results from my fixed-effects estimations. In Model 2, the coefficient of the performance appraisal variable ($p<0.01$) as well as the interaction of career-mindedness and performance appraisal ($p<0.05$) are negative and statistically significant. These results are in line with H10a and H10b.

Moreover, in Model 3 I differentiate between the types of consequences that come with performance appraisal. The reference group for the performance appraisal variables consists of individuals whose performance is appraised but without the specific consequence. The results reveal no significant difference in the detachment levels of individuals whose performance appraisal comes with monetary consequences and individuals whose performance appraisal is without monetary consequences. Thus, H8c is not supported. In Model 4, I again differentiate between the types of consequences that come with performance appraisal, but I choose individuals whose performance is not appraised as the reference group. The results show that individuals whose performance appraisal affects their annual bonus have significantly lower levels of detachment compared to individuals whose performance is not appraised ($p<0.10$).

Table 2. Job-related determinants of psychological detachment from work

Dependent variable	**Psychological detachment from work index**			
	(1) FE	(2) FE	(3) FE	(4) FE
Recognition by supervisors	0.132*** (0.022)	0.137*** (0.037)	0.128 (0.080)	0.135*** (0.041)
Bad promotion prospects	0.031 (0.023)	0.004 (0.038)	0.029 (0.080)	0.036 (0.041)
Adequate salary	0.036 (0.023)	-0.022 (0.038)	0.084 (0.081)	-0.052 (0.042)
Temporary agency work	0.188** (0.085)	0.323** (0.154)	0.037 (0.247)	0.266 (0.179)
Fixed-term contract	-0.012 (0.049)	0.044 (0.079)	-0.212 (0.197)	0.081 (0.088)
Leadership position	-0.031 (0.042)	-0.129* (0.074)	-0.119 (0.120)	-0.122 (0.087)
Organizational newcomer	0.043 (0.033)	0.002 (0.051)	-0.059 (0.126)	0.018 (0.057)
Performance appraisal	—	-0.246*** (0.092)	—	—
Career-mindedness	-0.213*** (0.014)	-0.257*** (0.028)	-0.183*** (0.046)	-0.219*** (0.026)
Career-mindedness*performance appraisal	—	0.086** (0.037)	—	—
Performance appraisal affects the monthly gross wage	—	—	0.117 (0.095)	-0.120 (0.113)
Performance appraisal affects the annual bonus	—	—	-0.067 (0.084)	-0.147* (0.075)
Performance appraisal affects future wage growth	—	—	-0.077 (0.102)	-0.111 (0.093)
Performance appraisal affects potential promotion	—	—	0.082 (0.093)	-0.052 (0.065)
Controls	Yes	Yes	Yes	Yes
Observations	21,821	13,768	4,626	12,219
R-squared (overall)	0.149	0.164	0.187	0.161
Number of individuals	15,644	11,531	4,136	10,386

Note. Results from fixed-effects (FE) estimations. Robust standard errors in parentheses. ***p < .01. ** p < .05. *p < .10.

H2, H3, H4, and H7 propose mediating effects. Since the dependent variable is ordinal, I conduct the mediation analyses using general structural equation modelling (GSEM), which delivers the relevant estimated path coefficients.[2] To assess the significance of the path coefficients, I use bootstrapping with 100 replications.

As shown in Figure 1, the relationship between fixed-term contract and psychological detachment is highly significant ($p<0.01$) without the mediator. Once the mediator is added, the coefficient of fixed-term contract becomes smaller and insignificant. The indirect effect is highly statistically significant ($p<0.01$). Fixed-term contract has a significant direct relationship with perceived job insecurity ($p<0.01$) and perceived job insecurity has a significant direct relationship with psychological detachment ($p<0.01$). Thus, perceived job insecurity partially mediates the link between fixed-term contract and psychological detachment (Baron and Kenny, 1986). The results indicate indirect-only mediation and therefore support H2.

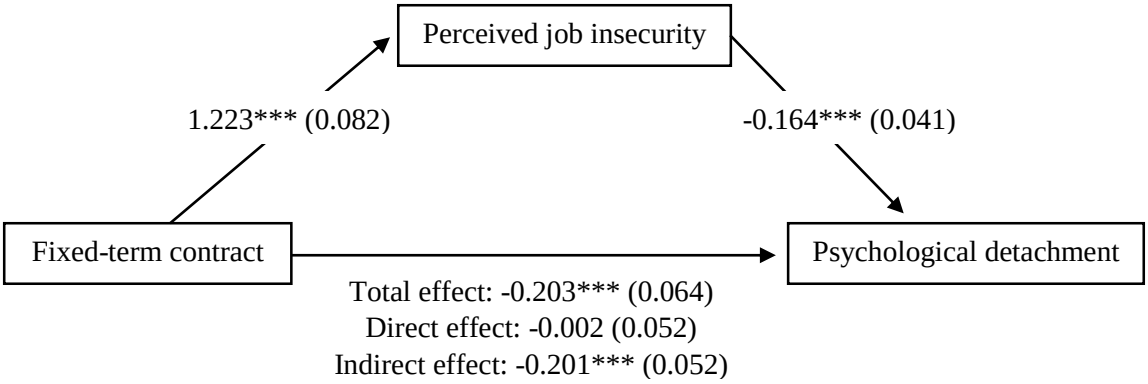

Figure 1: Perceived job insecurity as a partial mediator between employment on a fixed-term contract and the psychological detachment from work index (21,821 observations). GSEM with 100 bootstrap replications is applied. The same controls as in Model 1 from Table 2 are used. Bootstrap standard errors in parentheses. ***p < .01. ** p < .05. *p < .10.

In Figure 2, the direct effect of temporary agency work on psychological detachment is statistically insignificant with (i.e., direct effect) as well as without the mediator (i.e., total effect). The indirect link between temporary agency work and psychological detachment is highly significant ($p<0.01$). Temporary agency work has a significant direct relationship with perceived job insecurity ($p<0.01$) and perceived job insecurity has a significant direct relationship with psychological detachment ($p<0.01$).

[2] I do not use a longitudinal mediation model because the lag, i.e. the length of time between adjacent measurements, is five years in my dataset, as the relevant constructs were assessed in 2006, 2011, and 2016. The dangers of poorly choosing lags in longitudinal mediation analyses are highlighted in the literature (see for instance Collins and Graham 2002, Cole and Maxwell 2003). The lags of five years would yield biased results as the relevant effects are likely to have faded over this long period of time. An employee with a fixed-term contract may five or ten years later not be employed on a fixed-term contract anymore. Employees employed through a temporary employment agency may not be employed through a temporary employment agency anymore. Organizational newcomers would at the measurement time of the dependent variable not be identified as newcomers at the organization anymore (i.e., their tenure would equal 10 years) or may have left the organization.

The results indicate a small mediation effect of temporary agency work on psychological detachment via perceived job insecurity and therefore yield support for H3.

Figure 2: Perceived job insecurity as a partial mediator between employment through a temporary employment agency and the psychological detachment from work index (21,821 observations). GSEM with 100 bootstrap replications is applied. The same independent variables as in Model 1 from Table 2 are used. Bootstrap standard errors in parentheses. ***p < .01. ** p < .05. *p < .10.

H4 is not supported since being an organizational newcomer is not significantly related to perceived job insecurity and the total, direct as well as indirect effects are statistically insignificant, see Figure 3.

Figure 3: Perceived job insecurity as a partial mediator between being an organizational newcomer and the psychological detachment from work index (21,821 observations). GSEM with 100 bootstrap replications is applied. The same independent variables as in Model 1 from Table 2 are used. Bootstrap standard errors in parentheses. ***p < .01. ** p < .05. *p < .10.

The results shown in Figure 4 provide support for H7. There is not only a highly significant direct effect ($p<0.01$), but also a highly significant indirect effect ($p<0.01$) via perceived job insecurity. The magnitude of the effect from recognition by supervisors on psychological detachment diminishes when the mediator is added to the model, indicating a partially mediating role of perceived job insecurity.

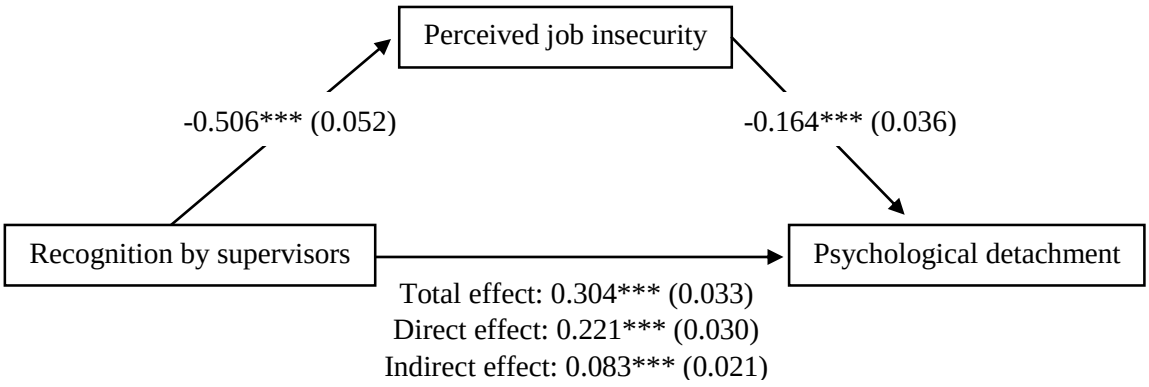

Figure 4: Perceived job insecurity as a partial mediator between recognition by supervisors and the psychological detachment from work index (21,821 observations). GSEM with 100 bootstrap replications is applied. The same independent variables as in Model 1 from Table 2 are used. Bootstrap standard errors in parentheses. ***p < .01. ** p < .05. *p < .10.

5. Robustness checks

For the employee subgroup of leaders, the data allow me to investigate the impact of leaders' span of control, i.e. the number of people working under a leader's direction, on their level of detachment. I can also differentiate between four types of leadership positions: Top, middle, and lower management as well as highly qualified specialist positions (f.e. project head). Leaders' experienced job demands increase with the number of subordinates they are responsible for (Wallin, Pousette and Dellve 2014). Thus, one may expect leaders with more people working under their direction to ruminate more about work during free-time. Furthermore, top managers make decisions with far-reaching consequences that affect not only the hierarchical level directly below top management, but rather all lower hierarchical levels. Therefore, top managers may find it more difficult to detach from work than leaders from lower hierarchical levels. Note that data on the span of control and type of leadership position was collected in one of the three waves only, in particular in 2011. Therefore, I use OLS instead of fixed-effects. To obtain a dataset which is continuously representative for the German workforce, I use the weighting variables of the SOEP in my OLS estimations (Frick, Haisken-DeNew, Spiess, and Wagner 2005). The results indicate that there is no statistically significant association between leaders' span of control or the type of leadership position and detachment.

6. Discussion and conclusion

This study explores job-related determinants of short-term psychological detachment from work. These include human resource practices, in particular the use of performance appraisals, the degree of

recognition given by supervisors, the provision of a salary perceived as adequate by the employee, and the perceived availability of promotion opportunities. In addition, I analyze whether some employees are more likely to experience less detachment than others, focusing on four employee subgroups: organizational newcomers, temporary agency workers, fixed-term contract workers, and leaders. I find evidence that recognition by supervisors is significantly positively related to detachment. The use of performance appraisal is significantly negatively related to detachment, in particular for strongly career-minded individuals. Perceived job insecurity partially mediates the effects of fixed-term contract, employment through a temporary employment agency, and recognition by supervisors on detachment.

This study has some limitations and opens some potentially fruitful avenues for further investigation. Through using fixed-effects, I control for unobservable characteristics of individuals that are constant over time, but there may be time-variant heterogeneity that I cannot control for. Furthermore, I find evidence for a negative association between performance appraisal and detachment. Within the time period between two performance appraisals, the detachment levels of an evaluated individual may vary. Shortly before and shortly after the appraisal, detachment levels are likely to be affected the most. Before the appraisal, individuals might ruminate about what to expect. After the appraisal, individuals might ruminate about the reasons for or the perceived fairness of the evaluation results they received. With my data, I cannot evaluate at which points in time performance appraisal affects detachment the most and at which points in time the impact is negligible. My data also do not reveal whether the performance appraisals are based on objective measures or subjective assessment. I also find that recognition by supervisors is positively associated with detachment. However, I cannot differentiate between the different forms of employee recognition defined by Brun and Dugas (2008), which include personal recognition, recognition of results, recognition of work practice, and recognition of job dedication. Future research should analyze which type of recognition by supervisors is the most effective in fostering detachment. Moreover, recognition can not only be given by supervisors but also by colleagues or clients, which I cannot analyze due to the lack of data.

Several valuable implications for corporate practice can be derived from the generated insights. Due to the limited financial budget for human resource-related interventions, such interventions should be targeted at individuals for whom they are the most beneficial. For instance, workshops aimed at fostering detachment might not be offered to all employees, but instead to those who are at high risk of experiencing less detachment than others. According to my empirical results, career-minded individuals are at high risk of low detachment levels. This study further identifies recognition by supervisors as an effective tool to foster detachment. In organizations, supervisors should be made aware of the importance of giving recognition and should be taught and encouraged to recognize their subordinates. Furthermore, performance appraisal is negatively associated with detachment and this negative relation is more pronounced for strongly career-minded individuals. In particular, performance appraisal that affects an annual bonus should be implemented with caution as it may affect detachment adversely.

References

Adams, J. D. (1976). *Stress and the risk of illness*. In J. D. Adams, J. Hayes, & B. Hopson (Eds.), Transition: Understanding & managing personal change (pp. 43−53). London: Martin Robertson & Company.

Ashford, S., Lee, C., & Bobko, P. (1989). Content, causes, and consequences of job insecurity: A theory-based measure and substantive test. Academy of Management Journal, 32(4), 803-829. https://doi.org/10.5465/256569

Ashforth, B. E., & Kreiner, G. E. (2002). Normalizing emotion in organizations: Making the extraordinary seem ordinary. *Human Resource Management Review*, 12(2), 215-235. https://doi.org/10.1016/S1053-4822(02)00047-5

Ashforth, B. E. (2001). *Role Transitions in Organizational Life: An Identity-based Perspective*. Lawrence Erlbaum Associates Publisher.

Bakker, A. B., & Demerouti, E. (2007). The Job-Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309-328. https://doi.org/10.1108/02683940710733115

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182. https://doi.org/10.1037/0022-3514.51.6.1173

Beard, K. M., & Edwards, J. R. (1995). Employees at risk: Contingent work and the psychological experience of contingent workers. In Cooper, C. L., & Rousseau, D. M. (Eds.), Trends in organizational behavior (2) (pp. 109–126). John Wiley & Sons.

Bernstrom, V. H. (2013). The relationship between three stages of job change and long-term sickness absence. *Social Science & Medicine*, 98, 239-246. https://doi.org/10.1016/j.socscimed.2013.10.001

Bloom, N., Kretschmer, T., & Van Reenen, J. (2011). Are family-friendly workplace practices a valuable firm resource? *Strategic Management Journal*, 32, 343-367. https://doi.org/10.1002/smj.879

Bresnahan, T. F., Brynjolfsson, E., & Hitt, L. M. (2002). Information technology, workplace organization, and the demand for skilled labor: Firm-level evidence. *The Quarterly Journal of Economics*, 117, 339-376. https://doi.org/10.1162/003355302753399526

Brun, J.-P., Biron, C., Martel, J., & Ivers, H. (2003). *Evaluation of mental health: an analysis of practices of human resources management*. Montreal: Institute for Research Robert-Sauve.

Campbell, M, Baltes, J. I., Martin, A., & Meddings, K. (2007). *The Stress of Leadership*. Center for Creative Leadership white paper.

Cleveland, J. N., Murphy, K. R., & Williams, R. E. (1989). Multiple uses of performance appraisal: Prevalence and correlates. *Journal of Applied Psychology*, 74, 130-135. https://doi.org/10.1037/0021-9010.74.1.130

Cole, D. A., & Maxwell, S. E. (2003). Testing meditational models with longitudinal data: Questions and tips in the use of structural equation modeling. *Journal of Abnormal Psychology*, 112(4), 558–577. https://doi.org/10.1037/0021-843X.112.4.558

Collins, L. M., & Graham, J. W. (2002). The effect of the timing and spacing of observations in longitudinal studies of tobacco and other drug use: Temporal and design considerations. *Drug and Alcohol Dependence*, 68, S85–S96. https://doi.org/10.1016/S0376-8716(02)00217-X

Cooper, C.L., & Marshall, J. (1978). *Understanding Executive Stress*. The Macmillan Press Ltd.

Day, D. V., Sin H.-P., & Chen, T. T. (2004). Assessing the burdens of leadership: Effects of formal leadership roles on individual performance over time. *Personnel Psychology*, 57(3): 573-605. https://doi.org/10.1111/j.1744-6570.2004.00001.x

De Cuyper, N., Notelaers, G., & De Witte, H. (2009). Job insecurity and employability in fixed-term contractors, agency workers, and permanent workers: Associations with job satisfaction and affective organizational commitment. *Journal of Occupational Health Psychology*, 14(2), 193–205. https://doi.org/10.1037/a0014603

De Witte, H. (2005): Job insecurity: review of the international literature on definitions, prevalence, antecedents and consequences. *SA Journal of Industrial Psychology*, 31 (4), 1-6.

Fast N. J., Gruenfeld D. H., Sivanathan N., & Galinsky A. D. (2009). Illusory control: A generative force behind power's far-reaching effects. *Psychological Science*, 20 (4), 502–508. https://doi.org/10.1111/j.1467-9280.2009.02311.x

Frick, J. R., Haisken-DeNew, J. P., Spiess, M., & Wagner, G. G. (2005). *Overview of the SOEP*. In J. P. Haisken-DeNew & J. R. Frick (Eds.), Desktop Companion to the German Socio-Economic Panel (pp. 15-60).

Fritz, C., & Sonnentag, S. (2006). Recovery, well-being, and performance-related outcomes: The role of workload and vacation experiences. *Journal of Applied Psychology*, 91, 936-945. https://doi.org/10.1037/0021-9010.91.4.936

Gabris, G. T., & Ihrke, D. M. (2001). Does performance appraisal contribute to heightened levels of employee burnout? The results of one study. *Public Personnel Management*, 30, 157-172. https://doi.org/10.1177/009102600103000203

Gill, M. J., & Sypher, B. D. (2009). *Workplace incivility and organizational trust*. In P. Lutgen-Sandvik & B. D. Sypher (Eds.), Destructive organizational communication: Processes, consequences, and constructive ways of organizing (pp. 53–73). New York, NY: Taylor & Francis.

Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The German Socio-Economic Panel (SOEP). *Journal of Economics and Statistics*, 239, 345-360. https://doi.org/10.1515/jbnst-2018-0022

Grawitch, M., Gottschalk, M., & David, M. (2006). The path to a healthy workplace: A critical review linking healthy workplace practices, employee well-being, and organizational improvements. *Consulting Psychology Journal: Practice and Research*, 58, 129–147. https://doi.org/10.1037/1065-9293.58.3.129

Heywood, J. S., Jirjahn, U., & Struewing, C. (2017). Locus of control and performance appraisal. *Journal of Economic Behavior & Organization*, 142, 205-225. https://doi.org/10.1016/j.jebo.2017.06.011

Holmes, T., & Rahe, R. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11(2), 213-218. https://doi.org/10.1016/0022-3999(67)90010-4

Hunter, S. T., Tate, B. W., Dzieweczynski, J. L, & Bedell-Avers, K. E. (2011). Leaders make mistakes: A multilevel consideration of why. *The Leadership Quarterly*, 22, 239-258. https://doi.org/10.1016/j.leaqua.2011.02.001

Johnston, D. W., & Lee, W.-S. 201., Extra status and extra stress: are promotions good for us? *Industrial and Labor Relations Review*, 66(1), 32-54.

Kinnunen, U., Feldt, T., Siltaloppi, M., & Sonnentag, S. (2011). Job demands–resources model in the context of recovery: Testing recovery experiences as mediators. *European Journal of Work and Organizational Psychology*, 20, 805–832. https://doi.org/10.1080/1359432X.2010.524411

Koene, B., Paauwe, J., & Groenewegen, J. (2004). Understanding the development of temporary agency work in Europe. *Human Resource Management Journal*, 14, 53-73. https://doi.org/10.1111/j.1748-8583.2004.tb00126.x

Lott, Y. (2020). Does flexibility help employees switch off from work? Flexible working-time arrangements and cognitive work-to-home spillover for women and men in Germany. *Social Indicators Research*, 151, 471-494. https://doi.org/10.1007/s11205-018-2031-z

Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review*, 50(4), 370-396. https://doi.org/10.1037/h0054346

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In Drenthand, P. J. D., & de Wolff, C. J. (Eds.) Handbook of Work and Organizational Psychology (pp.2-33). Psychology Press.

Nicholson, N., & West, M. A. (1988). *Managerial job change: men and women in transition*. Cambridge University Press.

Robinson, S. (1996). Trust and Breach of the Psychological Contract. *Administrative Science Quarterly*, 41(4), 574-599. https://doi.org/10.2307/2393868

Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal*, 2: 121-139. https://doi.org/10.1007/BF01384942

Rout, U. R., & Rout, R. S. (2002): *Occupational Stress*. In Rout, U. R., & Rout, R. S. Stress (Eds.), Management for Primary Health Care Professionals (pp. 25-39). Springer. https://doi.org/10.1007/0-306-47649-5_3

Sherman, G. D., Lee, J. J., Cuddy, A. J. C., Renshon, J., Oveis, C., Gross, J. J., Lerner, J. S. (2012). Leadership is associated with lower levels of stress. *Proceedings of the National Academy of Sciences* ,109 (44), https://doi.org/17903-17907. 10.1073/pnas.1207042109

Shvartsman, E., & Beckmann, M. (2015). Stressed by your job: Does personnel policy matter? *Schmollers Jahrbuch*, 135, 429-464. http://dx.doi.org/10.3790/schm.135.4.429

Sonnentag, S., & Fritz, C. (2015). Recovery from job stress: The stressor-detachment model as an integrative framework. *Journal of Organizational Behavior*, 36, S72-S103. https://doi.org/10.1002/job.1924

Sonnentag, S. (2012). Psychological detachment from work during leisure time: The benefits of mentally disengaging from work. *Current Directions in Psychological Science*, 21, 114-118. https://doi.org/10.1177/0963721411434979

Sonnentag, S. (2011). *Recovery from fatigue: The role of psychological detachment*. In P. L. Ackerman (Ed.), Cognitive fatigue: The current status and future for research and application (pp. 253–272). Washington, DC: American Psychological Association.

Sonnentag, S., & Bayer, U.-V. (2005). Switching off mentally: Predictors and consequences of psychological detachment from work during off-job time. *Journal of Occupational Health Psychology*, 10, 393–414. https://doi.org/10.1037/1076-8998.10.4.393

Sverke, M., Hellgren, J., & Näswall, K. (2002). No security: A meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, 7(3), 242-264. https://doi.org/10.1037/1076-8998.7.3.242

Wallin, L., Pousette, A., & Dellve, L. (2014). Span of control and the significance for public sector managers' job demands: A multilevel study. *Economic and Industrial Democracy*, 35, 455-481. https://doi.org/10.1177/0143831X13488002

Weiss, J. M. (1968). Effects of coping responses on stress. *Journal of Comparative and Physiological Psychology*, 65(2), 251–260. https://doi.org/10.1037/h0025562

Wendsche, J., & Lohmann-Haislah, A. (2017). A meta-analysis on antecedents and outcomes of detachment from work. *Frontiers in Psychology*, 7, 1-24. https://doi.org/10.3389/fpsyg.2016.02072

Westman, M., & Eden, D. (1997). Effects of a respite from work on burnout: Vacation relief and fade-out. *Journal of Applied Psychology*, 82, 516-527. https://doi.org/10.1037/0021-9010.82.4.516

Werbel, J. D. (1983). Job change: A study of an acute job stressor. *Journal of Vocational Behavior*, 23, 242-250. https://doi.org/10.1016/0001-8791(83)90038-6

Table A1. Variable definitions

Variable	**Description**
Explanatory variables	
Performance appraisal	Dummy equals 1 if the employee's performance is regularly assessed by a superior.
Career-mindedness	Ordinal variable indicating how strongly the employee agrees that those closest to the him say he sacrifices himself too much for his career (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree).
Recognition by supervisors	Dummy equals 1 if the employee perceives that he receives the recognition he deserves from his supervisors.
Bad promotion prospects	Dummy equals 1 if the employee perceives that the chances of promotion are bad where he works.
Adequate salary	Dummy equals 1 if the employee perceives that when he thinks about all his accomplishments, his pay seems appropriate.
Temporary agency worker	Dummy equals 1 if the employee is employed through a temporary employment agency.
Fixed-term contract	Dummy equals 1 if the employee is employed on a fixed-term contract.
Leadership position	Dummy equals 1 if the employee holds a leadership position.
Top management position	Dummy equals 1 if the employee holds a leadership position in top management (for example, executive board, business director, division manager).
Middle management position	Dummy equals 1 if the employee holds a leadership position in middle management (for example, department head, regional director).

Lower management position	Dummy equals 1 if the employee holds a leadership position in lower management (for example, group supervisor, section head, management of a small branch office / small business).
Highly qualified specialist position	Dummy equals 1 if the employee holds a highly qualified specialist position (for example, project head).
Span of control	Metric variable indicating how many people work under a leader's direction.
Job change	Dummy equals 1 if the employee has changed jobs or started a new one since the start of the previous year.
Control variables	
Female	Dummy equals 1 if the employee is female.
Age	Employee's age in years (metric variable).
Marital status	Dummy equals 1 if the employee is married.
Child(ren)	Dummy equals 1 if the employee has (a) child(ren) in the household.
German	Dummy equals 1 if the employee possesses German citizenship.
Eastern Germany	Dummy equals 1 if the employee lives in eastern Germany (including Berlin).
Years of schooling	Employee's years of schooling (metric variable).
Job type	10 job type dummies based on the German Classification of Occupations 2010.
Survey year	Year dummies for each year (2006, 2011, and 2016).
Overtime	Mismatch between actual and agreed working hours (metric variable).
Hours of household and care activities per day	Employee's hours of household work and person care activities per normal workday (metric variable).
Hours for hobbies and other leisure-time activities per day	Employee's hours for hobbies and other leisure-time activities per normal workday (metric variable).
Time pressure	Ordinal variable indicating the employee's perceived time pressure (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree).

Firm size	Ordinal variable indicating the size of the firm that the employee works for (1=less than 20 employees, 2=20-199 employees, 3=200 or more employees).
Conflicts with colleagues	Dummy equals 1 if the employee occasionally has arguments or conflicts with colleagues.
Conflicts with supervisors	Dummy equals 1 if the employee occasionally has arguments or conflicts with supervisors.
Flexibility of working time arrangements	Ordinal variable ranking different types of working hours by their flexibility from the point of view of the employee (1=working hours fixed by employer, which may vary from day to day, 2=fixed daily working hours, 3=flexitime within a working hours account and a certain degree of self-determination of daily working hours within this account, 4=no formally fixed working hours, decide my own working hours).
Weekly contracted working hours	Working hours stipulated per week in the employee's contract (excluding overtime) (metric variable).
Public sector	Dummy equals 1 if the employee works for a public sector employer.
Log gross hourly wage	Logarithm of the employee's gross hourly wage (metric variable).
Perceived job insecurity	Dummy equals 1 if the employee perceives the job to be at risk.
Self-reported health	Categorical variable indicating the employee's current self-reported health (1=bad, 2=poor, 3=satisfactory, 4=good, 5=very good).