

The Dark Side of Job Control: A Cross-Lagged Panel Study on the Interplay of Quantitative Workload, Emotional Dissonance, and Job Control

Anne-Kathrin KONZE¹, Wladislaw RIVKIN^{1,2}, Klaus-Helmut SCHMIDT¹

¹ Leibniz Research Centre for Working Environment and Human Factors at the Technical University Dortmund, Dortmund 44139, Germany

² Aston University, Birmingham B4 7ET, UK

Abstract: Previous meta-analytic findings have provided ambiguous evidence on job control as a buffering moderator of the adverse impact of job demands on indicators of strain. To disentangle these mixed findings, we examine the moderating effect of job control on the adverse effects of quantitative workload and emotional dissonance on emotional exhaustion over time. Drawing on the job demands – control model and the limited strength model of self-control, we propose that job control can facilitate coping with work-related demands but at the same time also requires employees' self-control. Consequently, we argue that job control buffers the adverse effects of quantitative workload while it reinforces the adverse effects of emotional dissonance, which also necessitates self-control. We examine the proposed relations among employees ($N = 139$) in a cross-lagged panel study. Our data indeed provides evidence for the contrasting moderating effects of job control and is one of the first studies to demonstrate that there is a dark side of job control.

Keywords: job demands – control model, quantitative workload, emotional dissonance, job control, emotional exhaustion, cross-lagged panel

1. Introduction

Over the past decades, work environments have undergone significant changes caused by fast developing technologies, an increasing focus on service orientation and highly competitive conditions. Due to these changes, time pressure and high levels of work volume, in other words, high *quantitative workload* has continuously increased in advanced industrialized societies (Sonnentag & Frese 2003). Furthermore, due to the increase of service sector occupations, employees increasingly face high emotional demands, as they are required to display emotions and behaviours that are in line with organizational rules or expectations, even if this means “faking” emotions and suppressing true feelings (referred to as *emotional dissonance*, Grandey 2000). So far, research has provided convincing evidence that high levels of these job demands can cause impairments in employees' psychological well-being (Häusser et al. 2010; Van der Doef & Maes 1999), such as burnout. Therefore, investigating the interplay between job characteristics and employees' well-being has become of central interest in research in the field of occupational health (Häusser et al. 2010).

One of the most influential models guiding this research is the *Job Demand–Control (JD-C) model* (Karasek 1979; Karasek & Theorell 1992). In his seminal model, Karasek (1979) identified two crucial job characteristics that trigger well-being. On the one hand, *job demands* refer to psychological stressors, which require expending psychological effort. On the other hand, *job control* is defined as the extent to which an

employee has potential control over decisions concerning when, where, and how to perform work tasks. According to the JD-C model (Karasek 1979; Karasek & Theorell 1992), impairments in psychological well-being are most likely to arise in jobs with high job demands and low job control. This prediction suggests that job control buffers the adverse impact of job demands and thus, mitigate their detrimental consequences on employees' psychological well-being. Despite its dominant prevalence in occupational health research, empirical evidence for the validity of the JD-C model has been mixed. In particular, empirical evidence for the buffering effect of job control is only weak. Several meta-analyses found support for the interaction of job demands and job control in less than half of the studies (only 30-48% of studies supported the buffer hypothesis; de Lange et al. 2003; Häusser et al. 2010; Van der Doef & Maes 1999).

In the present study, we aim to shed light on the inconsistent findings by analysing the moderating effect of job control on the adverse consequences of quantitative workload and emotional dissonance as two distinct job demands that have been shown to be of great importance in today's industrialized society. We propose that prior research on the JD-C model has adopted a one-sided, biased view of job control by focusing solely on its potential favourable consequences. Supplementing this view, and drawing from notions of the strength model of self-control (Muraven & Baumeister 2000), we argue that coping with high job control requires employees' self-regulation and therefore, might as well have adverse consequences for employees' psychological well-being.

Hypotheses development

In line with the predictions of the buffer hypothesis, the JD-C model suggests that impairments in psychological well-being result from *joint effects* of job demands and job control (Karasek 1979). Consistently, in the present study, we expect that employees, who face high quantitative workload and thus, feel pressured by challenging deadlines and excessive workloads, will benefit from the opportunities of high job control. More specifically, when confronted with time pressure, timing control offers the possibility to adjust the scheduling of work. When facing excessive workloads, method control offers the opportunity to choose how to perform the task. Therefore, when facing high quantitative workload, employees with high levels of job control can control the conduct of their work tasks, they can decide on the pacing and timing, and they can choose the methods involved in how to accomplish their work (Luchman & González-Morales 2013). Therefore, they will feel less exhausted than employees with low levels of job control, who face the same amount of quantitative workload. Hence, we hypothesize:

Hypothesis 1: *Job control moderates (i.e., buffers) the positive effect of quantitative workload on the development of emotional exhaustion: The relation is attenuated as a function of job control.*

On the contrary, we propose that high job control in combination with high emotional dissonance might even intensify the adverse effects on psychological well-being. This assumption is derived by drawing from research on decision-making and self-regulation. While job control offers several favorable opportunities, it also requires thoughtful decision-making. The freedom to decide when and how to accomplish work tasks and the expectation to choose wisely between different options and strategies can render psychological costs. In several studies, Vohs and colleagues (2014) demonstrated that making choices is depleting and that this depletion results from thinking about and comparing different options. The contemplation of alternative strategies and the selection among them is an effortful internal act that requires more

than habitual behavioral patterns (Vohs et al. 2014). The view of decision-making as an executive control process implies that choosing between different strategies to accomplish a work task draws on and depletes a common, limited regulatory resource (Baumeister et al. 2008). Hence, in line with the strength model of self-control, we argue that on the one hand; coping with emotional dissonance puts high demands on volitional self-control (Diestel et al. 2015), because portraying emotions contrary to one's genuinely felt emotions requires continual monitoring of genuine and required emotions, effortful suppression of genuine emotions, and a continuous modification of the required emotional expression (Schmidt & Diestel 2014). On the other hand, if dealing with high job control consumes the same limited regulatory resource, we expect that these two job characteristics will exert interactive effects on job strain. Thus, in jobs that are characterized by high levels of emotional dissonance and high levels of job control, employees have to exert higher amounts of self-control, which draws on the common limited resource, resulting in disproportionate levels of regulating resource depletion. Therefore, we hypothesize:

Hypothesis 2: *Job control moderates (i.e., reinforces) the positive effect of emotional dissonance on the development of emotional exhaustion: The relation is reinforced as a function of job control.*

2. Methods

A complete two-wave panel survey was conducted among employees from Germany. Invitations to the online surveys were sent to the employees' email addresses who were able to complete the surveys during working hours. Participation was anonymous, voluntary and not motivated by any incentives. The self-report surveys were sent via e-mail on two occasions with a six-month time lag. In total, 139 participants responded to the questionnaire on both occasions. Of these participants, 34.5% were female, 16.2% worked part-time, and the majority of participants (62.0%) were at least 46 years old. On average, employees had been working in the company for 20.0 years ($SD = 10.7$) at the first measurement point.

We designed the study as a complete two-wave cross-lagged panel. Therefore, questionnaires at both occasions were identical and comprised of the same scales.

Quantitative workload was measured with three items that were based on the *Short Questionnaire for Job Analysis* (Prümber et al. 1995). *Emotional dissonance* was assessed with five items from the *Frankfurt Emotion Work Scale* (Zapf et al. 1999). *Job control* was measured by combining items from the *timing control* (three items) and *method control* (four items) subscales developed by Jackson and colleagues (Jackson et al. 1993). And, finally, *Emotional Exhaustion* as the focal dimension of burnout was assessed with eight items from the German translation (Büssing & Perrar 1992) of the *Maslach Burnout Inventory* (Maslach et al. 1986).

3. Results

Hypothesis 1 and 2 proposed moderation effects of job control. We tested these hypotheses by specifying a cross-lagged path model that included all job characteristics and emotional exhaustion at both occasions. Within this path model, autoregressive effects of all variables and their causal relations were included. This model provided a good fit to the data ($\chi^2_{(9)} = 11.46$, *n.s.*; $CFI = 0.996$; $TLI = 0.987$; $RMSEA = .044$). Parameter estimates of this model are displayed in Table 1. As a next step, the

interaction terms were added to the path model. Again, this model fitted the data well ($\chi^2_{(12)} = 11.92, n.s.; CFI = 1.000; TLI = 1.000; RMSEA = .000$).

Table 1: Parameter estimates of path models

	<i>Causality Model</i>		<i>Moderation Model</i>	
	γ	SE	γ	SE
Predicting Emotional Exhaustion T2				
Quantitative workload (T1)	0.07	0.05	0.08	0.05
Emotional dissonance (T1)	0.18**	0.05	0.17**	0.05
Job control (T1)	0.14**	0.05	0.09	0.06
Quantitative workload x job control (T1)			-0.09*	0.05
Emotional dissonance x job control (T1)			0.11**	0.04

Note: $N = 139$; * $p < 0.05$; ** $p < 0.01$.

Hypothesis 1 suggested that job control moderates (buffers) the adverse impact of quantitative workload on the development of emotional exhaustion. In line with this hypothesis, the results reveal that the interaction of job control and quantitative workload was negatively related to the change of emotional exhaustion over time ($\gamma = -.09, p < .05$), thereby providing first support for Hypothesis 1. Furthermore, Hypothesis 2 proposed that job control moderates (reinforces) the adverse effect of emotional dissonance on the development of emotional exhaustion. The results support this hypothesis, as indicated by the positive interaction effect of job control and emotional dissonance on the change of emotional exhaustion ($\gamma = .11, p < .01$). As shown in Figure 1, both interactions correspond to Hypotheses 1 and 2. Taken together, high levels of job control buffer the adverse effect of quantitative workload, while they reinforce the adverse effect of emotional dissonance on emotional exhaustion over time.

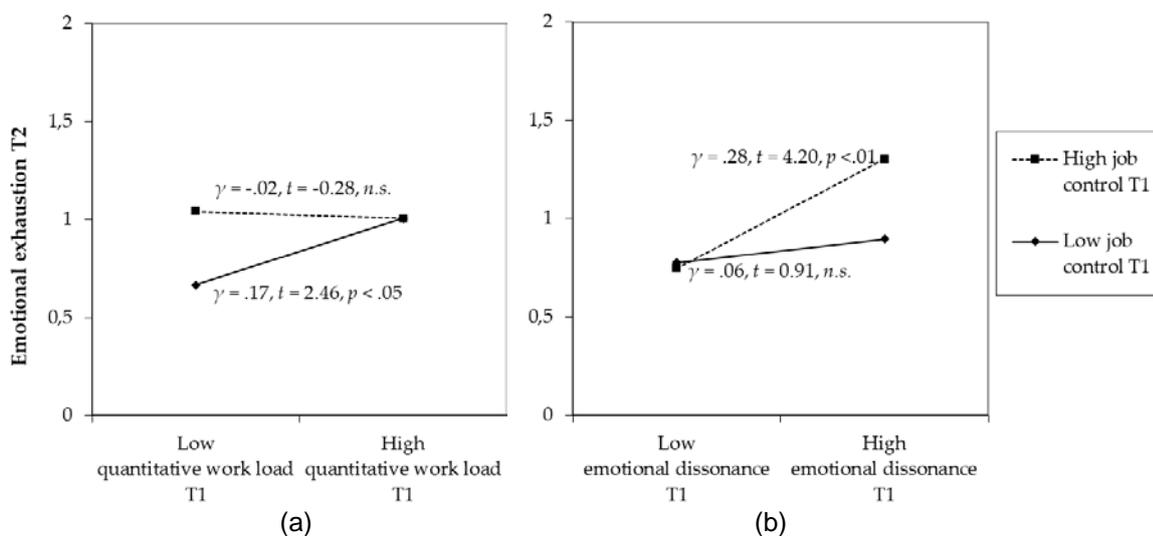


Figure 1: Interaction effects of job control and (a) quantitative workload and (b) emotional dissonance on emotional exhaustion. High and low values were operationalized by one standard deviation above and below the mean.

4. Discussion

In the present study, we investigated the JD-C model longitudinally, thereby analyzing the development of emotional exhaustion over time within a two-wave cross-lagged panel design. Thus, we conducted a more specific test of the JD-C model by (a) shedding light on the causality of effects, by (b) examining quantitative workload and emotional dissonance as separate job demands that are expected to operate differently, by (c) providing a refined theoretical notion for prior ambiguous evidence on the buffer hypothesis, and by (d) being one of the first studies to demonstrate that there is a dark side to job control.

Data obtained from employees of a German energy supplying company reveal that (1) job control buffers the adverse effect of quantitative workload; and (2) job control reinforces the adverse effect of emotional dissonance on emotional exhaustion. Thus, the results provide strong support for Hypothesis 1 and 2. Integrating all results into a common framework, we find that whether job control is beneficial or harmful for an employee in the longer run depends on the type of job demand, the employee faces. Overall, the differential patterns of interactions between job demands and job control confirm the assumption that job control exerts beneficial, as well as harmful effects on employees' psychological well-being.

The current study offers several important implications for managers and organizations on how to improve employees' psychological well-being. Specifically, in jobs with high levels of quantitative workload, it is beneficial to enhance the employees' job control. When being confronted with tight deadlines and a huge amount of workload, employees will benefit from the opportunity to decide on the scheduling and pacing of their work. However, the findings also substantiate the importance of considering other types of job demands, apart from quantitative workload. In particular, the results reveal that job control, as timing and method control, will not support employees when coping with emotional dissonance. On the contrary, the current study points out that enhancing job control will harm employees' psychological well-being when their jobs are characterized by high levels of emotional dissonance. In these jobs, implementing specific routines and habitual strategies might contribute to employees' psychological well-being by reducing the amount of effortful choices. For example, by providing precise recommendations on how to structure and schedule a workday, and by recommending some specific methods to accomplish work tasks, the amount of necessary decisions the employee has to make can be reduced.

5. References

- Baumeister RF, Sparks EA, Stillman TF, & Vohs KD (2008) Free will in consumer behavior: Self-control, ego depletion, and choice. *Journal of Consumer Psychology* 18(1):4–13.
- Büssing A, & Ferrar K-M (1992) Die Messung von Burnout. Untersuchung einer deutschen Fassung des Maslach Burnout Inventory (MBI-D). *Diagnostica* 38: 328-353.
- de Lange AH, Taris TW, Kompier MAJ, Houtman ILD, & Bongers PM (2003) The very best of the millennium: Longitudinal research and the demand-control-(support) model. *Journal of Occupational Health Psychology* 8(4): 282–305.
- Diestel S, Rivkin W, & Schmidt K-H (2015) Sleep quality and self-control capacity as protective resources in the daily emotional labor process: Results from two diary studies. *Journal of Applied Psychology* 100(3): 809–827.
- Grandey AA (2000) Emotion Regulation in the Workplace: A new way to conceptualise emotional labor. *Journal of Occupational Health Psychology* 5(1): 95–110.
- Häusser JA, Mojzisch A, Niesel M, & Schulz-Hardt S (2010) Ten years on: A review of recent research on the Job Demand–Control (-Support) model and psychological well-being. *Work & Stress* 24: 1-35.
- Jackson PR, Wall TD, Martin R, & Davids K (1993) New measures of job control, cognitive demand, and production responsibility. *Journal of applied psychology* 78(5): 753–762.
- Karasek R (1979) Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign. *Administrative Science Quarterly* 24(2): 285-308.
- Karasek R, & Theorell T (1992) *Healthy work: stress, productivity, and the reconstruction of working life*. Basic books.

- Luchman JN, & González-Morales MG (2013) Demands, control, and support: A meta-analytic review of work characteristics interrelationships. *Journal of Occupational Health Psychology* 18(1): 37–52.
- Maslach C, Jackson SE, & Leiter MP (1986) *Maslach Burnout Inventory* (2nd ed.). Palo Alto: CA: Consulting psychologists press.
- Muraven M, & Baumeister RF (2000) Self-regulation and depletion of limited resources: Does self-control resemble a muscle? *Psychological Bulletin* 126(2): 247–259.
- Prümer J, Hartmannsgruber K, & Frese M (1995) KFZA. Kurzfragebogen zur Arbeitsanalyse. *Zeitschrift für Arbeits- u. Organisationspsychologie* 39: 125–131.
- Schmidt KH, & Diestel S (2014) Are emotional labour strategies by nurses associated with psychological costs? A cross-sectional survey. *International Journal of Nursing Studies* 51(11): 1450–1461.
- Sonnentag S, & Frese M (2003) Stress in Organizations. *Handbook of Psychology* 12: 453–491.
- Van der Doef M, & Maes S (1999) The Job Demand-Control (-Support) Model and psychological well-being: A review of 20 years of empirical research. *Work & Stress* 13(2): 87–114.
- Vohs KD, Baumeister RF, Schmeichel BJ, Twenge JM, Nelson NM, & Tice DM (2014) Making choices impairs subsequent self-control: A limited-resource account of decision making, self-regulation, and active initiative. *Motivation Science* 1(S): 19–42.
- Zapf D, Vogt C, Seifert C, Mertini H, & Isic A (1999) Emotion work as a source of stress: The concept and development of an instrument. *European journal of work and organizational psychology* 8(3): 371–400.



Gesellschaft für
Arbeitswissenschaft e.V.

ARBEIT(s).WISSEN.SCHAF(F)T
Grundlage für Management & Kompetenzentwicklung

64. Kongress der
Gesellschaft für Arbeitswissenschaft

FOM Hochschule für
Oekonomie & Management gGmbH

21. – 23. Februar 2018

GfA Press

Bericht zum 64. Arbeitswissenschaftlichen Kongress vom 21. – 23. Februar 2018

FOM Hochschule für Oekonomie & Management

Herausgegeben von der Gesellschaft für Arbeitswissenschaft e.V.

Dortmund: GfA-Press, 2018

ISBN 978-3-936804-24-9

NE: Gesellschaft für Arbeitswissenschaft: Jahresdokumentation

Als Manuskript zusammengestellt. Diese Jahresdokumentation ist nur in der Geschäftsstelle erhältlich.

Alle Rechte vorbehalten.

© **GfA-Press, Dortmund**

Schriftleitung: Matthias Jäger

im Auftrag der Gesellschaft für Arbeitswissenschaft e.V.

Ohne ausdrückliche Genehmigung der Gesellschaft für Arbeitswissenschaft e.V. ist es nicht gestattet, den Kongressband oder Teile daraus in irgendeiner Form (durch Fotokopie, Mikrofilm oder ein anderes Verfahren) zu vervielfältigen.

Die Verantwortung für die Inhalte der Beiträge tragen alleine die jeweiligen Verfasser; die GfA haftet nicht für die weitere Verwendung der darin enthaltenen Angaben.

USB-Print:

Prof. Dr. Thomas Heupel, FOM Prorektor Forschung, thomas.heupel@fom.de

Screen design und Umsetzung

© 2018 fröse multimedia, Frank Fröse

office@internetkundenservice.de · www.internetkundenservice.de