



Job Control and Autonomy

How does Job Control and Autonomy Impact
Workplace Health and Wellbeing?

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Organisations are more than meets the eye. Obvious things such as organisational charts, processes, reporting lines and IT-systems are embedded in a complex and dynamic network of communication, organizational culture, power and politics. CQ Research conducts studies and analysis that unveil those hidden elements of organisations. Based on a rigorous scientific foundation, those studies act as valuable starting point for improvement intervention strategies and Team Consulting & Learning groups.

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1. INTRODUCTION

The world of work has undergone a tremendous transformation since the end of the 18th century. During four industrial revolutions, labour intensive manual work has been gradually replaced by knowledge and service driven occupations (Nini, 2011; Grant and Parker, 2009; Drucker, 1999). Ever since, occupational health and safety concerns have accompanied this transformation. These concerns were mainly related to risks arising from physical, chemical, and biological hazards (Houdmont and Leka, 2010) until, in the 1970s, practitioners, scholars, and governmental institutions started to recognize the increasing relevance of psychosocial hazards of work on wellbeing (Sauter and Hurrell, 1999). A recent survey, conducted among managers in the European Union, revealed that work related stress is of some or of major concern to them ranked on third place behind accidents and musculoskeletal disorders (Eurofound and EU-OSHA, 2014). One aspect of work that has been identified as a stress related hazard is work, specifically participation in decision making, with only a limited amount of control (Leka and Jain, 2012; Leka et al., 2003). This essay will draw on theory and evidence to examine the impact of participation and control on workplace health. In a second step, recommendations for future research, policy, and practice

will be presented, and in later sections, how this relationship looks in more detail, its direction, and what implications can be drawn for the practical domain will be discussed.

2. FRAMING THE CONCEPT OF JOB CONTROL AND AUTONOMY

The relevance of job control as a psychosocial hazard has been widely recognized (O'Driscoll and Brough, 2010; Spector, 1986). This is reflected in the prominent position of job control and related sources of job strain in different taxonomies of psychosocial hazards (Leka and Cox, 2010; Leka et al., 2003) and the vast amount of research conducted in this area. Even though almost a century of research has shed some light on the mechanism underlying job control, as a psychosocial hazard, many open questions still remain. Given the complexity and breadth of job control as a concept, this situation is not surprising. Many different definitions of job control exist (Troup and Dewe, 2002), and make it difficult to draw on a unified body of research that solely addresses job control and its impact on workplace health. Thus, the concept of job control underlying this essay refers to work related stress theories applied in occupational health psychology on the one hand (Cox and Griffiths, 2010). On the other hand, research in the field of participative management and job redesign (Spector, 1986) is considered to provide additional insights on the impact of autonomy and job control on workplace health.

3. WHAT RESEARCH TELLS US ABOUT THE RELATIONSHIP OF CONTROL AND WORKPLACE HEALTH

Even though there is no single theory to understanding the relationship between control and workplace health, there is clear evidence that such a relationship exists. Starting with the Job Demand and Control (Karasek, 1979) as well as Job Demand Control and Social Support

Model, two of the prominent work related stress theories will be critically examined based on their explanatory power and related evidence, regarding the impact of work control and autonomy on workplace health and wellbeing. In a second step, the theory of basic psychological needs and self-determination theory (Gagné and Deci, 2005) will be critically examined. Finally, Hackmann and Oldmann's (1976) job characteristic model and job crafting representing job design theories that explicitly address work autonomy as relevant for workplace health and wellbeing will be discussed.

3.1 Job Demand Control Model: Buffering mental strain by increasing decision latitude

Karasek's (1979) job strain model, that later led to the formulation of the Job-Demand-Control (JDC) model, states an immediate interaction between job demands, decision latitude, and wellbeing. Drawing on empirical data from the United States and Sweden, Karasek (1979) came to the conclusion that the negative impact on health and wellbeing of high workload task and time pressures (job demands) can be buffered with an increase in decision authority and intellectual discretion (job control). Consequently, a combination of high job demands with low job control is considered to have a significant negative impact on workplace health in the JDC model (Häusser et al., 2010). This finding has been confirmed by different epidemiological studies that found a connection between high job strain and increased risk of cardiovascular disease (van der Doef and Maes, 1999; Landsbergis et al., 1994).

However, research on the causal relationship between job demands and job control as predictors of job strain has led to mixed results with two hypotheses currently under discussion (Häusser et al., 2010; van Vegchel et al., 2005; van der Doef and Maes, 1999). The strain hypothesis assumes that an additive relationship between job demands, job control, and job

strain exists. Thus, job strain is understood as a linear function of job demands and job control, whereas increased job demands translates into higher job strain and an increase in job control reduced job strain (van Vegchel et al., 2005). A special case of the strain hypothesis, called buffer hypothesis, assumes that job control moderates the relationship between job demands and job strain. Such a multiplicative or interactive relationship positions job control as “protective factor” in the job demands and job strain equation, which would have a considerable impact for research and practice as well. While the additive relationship could be confirmed by recent meta studies, there is still no clear conclusion on whether the buffer hypothesis exists (Häusser et al., 2010). However, there is some evidence that a buffering mechanism could be dependent on a matching of job demands and job control (Troup and Dewe, 2002) as well as the differentiation between job control as hindering or challenging stressor (Podsakoff et al., 2007). While the simplicity of the JDR model is appealing, it is a major point of criticism (Rodríguez et al., 2010). Contingencies, context dependencies, as well as the moderating role of individual differences (Connor-Smith and Flachsbar, 2007) are not sufficiently addressed. This leads to limitations of the applicability of the model in the research and practical domain as mentioned earlier. In order to overcome these limitations, more sophisticated models, such as the Job-demand-control-support model, were developed.

3.2 Autonomy as basic psychological need with immediate impact on wellbeing

Another explanation of the impact of job control on workplace health and wellbeing is attributed to basic psychological needs. The underlying assumption of theories within this tradition is that every human being has a fundamental and universal need for autonomy,

competency, and relatedness (Sheldon and Gunz, 2009; Deci and Ryan, 2000; Deci and Ryan, 1985). Consequently, a workplace, and its environment, that undermines autonomy, as one of the three basic psychological needs, has an immediate negative impact on the worker's health and wellbeing. In contrast, work situations that consider autonomy as one of the basic psychological needs of human beings go hand in hand with workplace health and emotional wellbeing. Various studies underpin this deterministic relationship of autonomy and wellbeing. Reis et al. (2000) and Sheldon et al. (1996) found that a higher level of autonomy has a positive effect on emotional wellbeing, independent of trait differences between study participants. This effects seems to be especially relevant on weekends, when people can engage in more intrinsically rewarding activities compared to weekdays where external factors such as appointments, schedules, etc. undermine autonomy and as a consequence emotional wellbeing (Reis et al., 2000 p. 432). However, undermining the basic need of autonomy seems to have additional impacts on psychological health. Recently, Igic et al., (2013) analysed the impact of job control on spinal shrinkage during work and non-workday and came to the conclusion that a "lack of job control potentially accelerates spinal shrinkage while working" (p. 476).

From a theoretical point of view, the relevance of basic psychological needs including autonomy has been addressed in a more general setting in early motivation theories such as Maslow's (1943) hierarchy of needs and Guterman and Alderfer's (1974) Existence, Relatedness and Growth (ERG) Theory.

3.3 Self Determination Theory: Autonomy drives intrinsic motivation and wellbeing

A better understanding of the impact of autonomy on workplace health provides additional insights for practice and policy. One prominent theory that is capable of explaining the underlying mechanisms is Self Determination Theory (SDT) (Gagné and Deci, 2005; Deci and Ryan, 1985). SDT is based on the basic psychological needs of autonomy, relatedness, and competency and asks the question whether specific tasks are in line with those needs. The correlation is achieved by drawing on Cognitive Evaluation Theory (CET) and perceived locus of causality (PLOC). CET, a SDT subtheory introduced by Deci and Ryan (1985), assumes that work settings that involve external control, in terms of surveillance (Lepper and Greene, 1975), financial rewards (Weibel et al., 2010), and other interventions outside the sphere of influence of the worker, undermine the basic psychological need of autonomy because of the perceived locus of causality shifting towards external control (Gagné and Deci, 2005). As a consequence, intrinsic motivation diminishes (Promberger and Marteau, 2013; Frey and Oberholzer-Gee F., 1997) and shifts towards extrinsic motivation. (Weinstein and Ryan, 2011). In a recent study, Niemiec et al. (2009) found evidence that intrinsic aspirations were positively related to wellbeing and negatively related to ill-health (p. 303). In line with basic psychological needs theory, extrinsic aspirations did not relate to wellbeing and had a positive impact on ill-health (Niemiec et al. 2009, p. 303) measures in terms of affect, physical symptoms, and anxiety (p. 294). Similar results could be confirmed in a study by Malka and Chatman (2003).

3.4 Job control and autonomy as integral part of job design and characteristics research

The design of workplaces and their environments has an immediate impact on workplace health and worker wellbeing. Job design and characteristics research takes a holistic stance on the interplay of job control and other job characteristics. Hackman and Oldham's (1976) job characteristic model incorporates autonomy as one of five core job dimension. In an empirical study validating the model, they found a significant positive relationship between autonomy and wellbeing measures such as internal motivation and growth satisfaction (Hackman and Oldham, 1976 p. 263). Absenteeism, which is considered to be a strong indicator of work related stress (Cooper and Dewe, 2008), was negatively correlated with autonomy (Hackman and Oldham, 1976 p. 263). This, again, confirms the relevance of control and autonomy as important concept for psychosocial risk management.

4. RECOMMENDATIONS FOR PRACTICE

Undermining job control and autonomy does not only impair workplace health at the individual level but also the workplace as an organization. Based on a survey conducted in 1999, the European Commission estimated the yearly cost of work related stress at €20 billion a year (Hassard et al., 2014). Taking into consideration the role of job control and autonomy as a source of work related stress, it is safe to say that that addressing this particular stressor will have a positive impact on individuals, organisations, and society as a whole. Drawing on the findings presented in this essay, the next section will present recommendation for different practices. First, primary interventions will be discussed as means to address the psychosocial hazard job control and autonomy at its root in order to prevent negative effects from the very

beginning. In a second step, secondary interventions will be presented that can be applied in job situations where a certain risk of job control and autonomy cannot be avoided entirely.

4.1 Increase awareness of job control and autonomy as psychosocial hazards

Even though the negative impact of work related stress is well known in the practical domain, there is still a lack of awareness regarding its magnitude and sources in many organisations. This is particularly relevant for psychosocial hazards, job controls, and autonomy as specific stressors. Cooper and Dewe (2008) support this claim by raising concerns that the awareness employers and managers have of the impact of mental ill-health is not yet sufficient. This observation is also confirmed by Eurofound and EU-OSHA's (2014) study about psychosocial risks in Europe. Thus, this essay claims that specific interventions that address this lack of awareness should be considered. More specifically, such interventions should include training programs for managers, as primary target audiences, and employees, as secondary target audiences. Besides conveying basis knowledge about the relationship of job control and autonomy on work health and wellbeing, the training should introduce the primary and secondary interventions mentioned in this essay. Taking into consideration findings from SDT, such training will not only increase workplace health but also increase employee motivation (Gillet et al., 2013) and well-being (Reis et al., 2000). As a result, improved workplace health will go hand in hand with an increase in productivity on an individual level and an increase in competitiveness on an organisational level.

4.2 Design jobs in a way such that job control and autonomy is supported

Another preventive intervention targets designing a job, and its surroundings, in a way conducive to mitigating the psychosocial risks arising from a lack of job control and autonomy

from the very beginning. In addition, proper job design will positively impact motivation, job engagement, and performance (Brenninkmeijer and Hekkert-Koning, 2015; Tims et al., 2014). One job design approach that addresses job control and autonomy, as one of its building blocks, is job-crafting (Wrzesniewski and Dutton, 2001). Job-crafting breaks with the dominant, top down job design approach prevalent in traditional theories, such as the job characteristics model, and instead, allows the employee to decide “how and when to shape job tasks and interactions” (Wrzesniewski and Dutton, 2001, p. 187). In a recent study, Slemp and Vella-Brodrick (2014) found evidence for a positive impact of job-crafting on employee mental health and wellbeing. Drawing on SDT and its underlying basic psychological needs, they conclude that job-crafting correlates with autonomy, relatedness, and competence, which in turn increases mental health, wellbeing, and motivation. Besides mitigating psychosocial risks related to job control and autonomy, job-crafting acts as buffer for organisations to cope with a dynamic and changing environment.

4.3 Foster management practices that support job control and autonomy

The third and last primary intervention strategy presented in this essay directly addresses the role of management as integral part of a workplace’s psychosocial environment (of workplace interaction). Management does not only shape the structural design of a specific workplace, but has also an immediate impact on whether job control and autonomy emerges as psychosocial risk or opportunity in daily interaction with subordinates (Gilbreath and Benson, 2004). Gillet et al. (2013)

found that managers that interact in an autonomy supportive way with their subordinates increase their autonomous work motivation which in turn has a positive impact on job

satisfaction. One specific characteristic of a autonomy supportive management style is the usage of “noncontrolling language” (Hardré and Reeve, 2009, p. 5) which is in line with interventions to minimize to risk of job control and autonomy as psychosocial hazard. More specifically, this involves communicating with subordinated without putting pressure on them and drawing on their intrinsic motivation rather than external rewards, deadlines or incentives.

5. SUPPORT PRIMARY INTERVENTIONS BY INTRODUCING THAT INCREASE AWARENESS

Introduction and enforcement of regulatory frameworks constitute another strategy to manage psychosocial risks in the work environment. On a European level two different regulatory approaches can be distinguished. On the one hand “hard policies” (Leka and Jain, 2012) with legally binding directives have to be adopted by European member countries in case national legislation that covers the same level of regulation is not yet in place. Leka and Jain (2012) reviewed the European and national regulatory landscape and came to the conclusion that psychosocial risks “such as work control and work organisation, preventing unreasonably intense work pace and repetitive work” (p. 19) are not yet adequately addressed. On the other hand non legally binding “soft policies” (Leka and Jain, 2012; Ertel et al., 2010) such as the European social dialogue on psychosocial risks at work provide guidance for member countries and facilitate best practice sharing on how to mitigate psychosocial risks. However, adoption of the “framework agreement on work-related stress” in the European member countries and its impact on the practical domain was rather weak as Ertel et al. (2010) pointed out in a recent study. Taking this into consideration, policies that strengthen awareness and expert knowledge in the area of psychosocial risks in general and job control

and autonomy in particular are expected to have a positive impact on workplace health. A specific intervention on a regulatory level could require managers to acquire some expert knowledge on job control and autonomy. Implementation could take place as a soft policy strongly emphasising the positive impact of job control and autonomy on workplace health, motivation and job performance. This approach would support the primary interventions mentioned earlier in this essay and could easily be integrated into training sessions for managers. Being responsible for people in an organisation requires appropriate knowledge about the effect of job control and autonomy on workplace health.

6. FUTURE RESEARCH AREAS & CONCLUSION: STRATING THE PRACTICE TURN IN STRESS MANAGEMENT

Even though considerable research has been conducted on the impact of job control and autonomy on workplace health, many open questions remain. This essay arguments that future research should be in line with the general development in social sciences to a more context sensitive and holistic approach also called "social shift" (Whittington, 2006) or "practice turn" (Carroll et al., 2008). Models and theories such as the JDC model (Karasek, 1979) or Hackmann and Oldmann's (1976) job characteristics model that explain the impact of job control and autonomy on workplace health on a generic level have to be broken down to specific work contexts embedded in their local structural and social environment. This approach has the potential to unveil new relationships patterns between job control and autonomy not yet considered to its full extend. Some of those relationships could shed light on different concepts of control and autonomy (Troup and Dewe, 2002), the relationship between the basic psychological needs autonomy and belongingness and the role of personality as a moderating factor (Connor-Smith and Flachsbart, 2007). Starting a practice turn in stress

management is expected to go hand in hand with an increase in qualitative research, which would complement the strong quantitative tradition of the stress management school.

7. REFERENCES

- Brenninkmeijer, V. and Hekkert-Koning, M. (2015) 'To craft or not to craft', *Career Development International*, vol. 20, no. 2, pp. 147–162.
- Carroll, B., Levy, L. and Richmond, D. (2008) 'Leadership as Practice: Challenging the Competency Paradigm', *Leadership*, vol. 4, no. 4, pp. 363–379.
- Connor-Smith, J. K. and Flachsbart, C. (2007) 'Relations between personality and coping: A meta-analysis', *Journal of Personality and Social Psychology*, vol. 93, no. 6, pp. 1080–1107.
- Cooper, C. and Dewe, P. (2008) 'Well-being--absenteeism, presenteeism, costs and challenges', *Occupational Medicine*, vol. 58, no. 8, pp. 522–524.
- Cox, T. and Griffiths, A. (2010) 'Work-Related Stress A Theoretical Perspective', in Stavroula Leka, J. H. (ed) *Occupational Health Psychology, Second Edition*, West Sussex, United Kingdom, Blackwell Publishing Ltd, pp. 31–56.
- Deci, E. L. and Ryan, R. M. (1985) *Intrinsic Motivation and Self-Determination in Human Behavior*, Boston, MA, Springer US.
- Deci, E. L. and Ryan, R. M. (2000) 'The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior', *Psychological Inquiry*, vol. 11, no. 4, pp. 227–268.
- Drucker, P. F. (1999) *Management Challenges for the 21st Century*, New York, HarperCollins.
- Ertel, M., Stilianow, U., Iavicoli, S., Natali, E., Jain, A. and Leka, S. (2010) 'European social dialogue on psychosocial risks at work: Benefits and challenges', *European Journal of Industrial Relations*, vol. 16, no. 2, pp. 169–183.

- Eurofound and EU-OSHA (2014) *Psychosocial risks in Europe: Prevalence and strategies for prevention : a joint report from the European Foundation for the Improvement of Living and Working Conditions and the European Agency for Safety and Health at Work.*
- Frey, B. S. and Oberholzer-Gee F. (1997) 'The Cost of Price Incentives: An Empirical Analysis of Motivation Crowding- Out', *The American Economic Review*, vol. 87, no. 4, pp. 746–755.
- Gagné, M. and Deci, E. L. (2005) 'Self-determination theory and work motivation', *Journal of Organizational Behavior*, vol. 26, no. 4, pp. 331–362.
- Gilbreath, B. and Benson, P. G. (2004) 'The contribution of supervisor behaviour to employee psychological well-being', *Work & Stress*, vol. 18, no. 3, pp. 255–266.
- Gillet, N., Gagné, M., Sauvagère, S. and Fouquereau, E. (2013) 'The role of supervisor autonomy support, organizational support, and autonomous and controlled motivation in predicting employees' satisfaction and turnover intentions', *European Journal of Work and Organizational Psychology*, vol. 22, no. 4, pp. 450–460.
- Guterman, S. S. and Alderfer, C. P. (1974) 'Existence, Relatedness, and Growth: Human Needs in Organizational Settings', *Contemporary Sociology*, vol. 3, no. 6, p. 511.
- Hackman, J. and Oldham, G. R. (1976) 'Motivation through the design of work: Test of a theory', *Organizational Behavior and Human Performance*, vol. 16, no. 2, pp. 250–279.
- Hardré, P. L. and Reeve, J. (2009) 'Training corporate managers to adopt a more autonomy-supportive motivating style toward employees: An intervention study', *International Journal of Training and Development*, vol. 13, no. 3, pp. 165–184.
- Hassard, J., Teoh, K., Cox, T., Dewe, P., Cosmar, M., van den Broek, K., Gründler, R. and Flemming, D. (2014) *Calculating the costs of work-related stress and psychosocial risks: Literature review*, Working environment information.

- Häusser, J. A., Mojzisch, A., Niesel, M. and 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*, vol. 24, no. 1, pp. 1–35.
- Houdmont, J. and Leka, S. (2010) 'An Introduction to Occupational Health Psychology', in Stavroula Leka, J. H. (ed) *Occupational Health Psychology, Second Edition*, West Sussex, United Kingdom, Blackwell Publishing Ltd, pp. 1–30.
- Ilgic, I., Ryser, S. and Elfering, A. (2013) 'Does work stress make you shorter?: An ambulatory field study of daily work stressors, job control, and spinal shrinkage', *Journal of Occupational Health Psychology*, vol. 18, no. 4, pp. 469–480.
- Johnson, J. V. and Hall, E. M. (1988) 'Job Strain, Work Place Social Support, and Cardiovascular Disease: A Cross-Sectional Study of a Random Sample of the Swedish Working Population', *American Journal of Public Health*, vol. 78, no. 10, pp. 1336–1342.
- Karasek, R. A. (1979) 'Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign', *Administrative Science Quarterly*, vol. 24, no. 2, p. 285.
- Landsbergis, P. A., Schnall, P. L., Warren, K., Pickering, Thomas G. and Schwartz Joseph E. (1994) 'Association between ambulatory blood pressure and alternative formulations of job strain', *Scandinavian Journal of Work, Environment & Health*, vol. 20, no. 5, pp. 349–363.
- Leka, S. and Cox, T. (2010) 'Psychosocial Risk Management at the Workplace Level', in Stavroula Leka, J. H. (ed) *Occupational Health Psychology, Second Edition*, West Sussex, United Kingdom, Blackwell Publishing Ltd, pp. 133–156.
- Leka, S., Griffiths, A. and Cox, T. (2003) *Work Organisation & Stress: Systematic Problem Approaches for Employers, Managers and Trade Union Representatives*, Institute of Work, Health & Organisations.

Leka, S. and Jain, A. (2012) *Drivers and barriers for psychosocial risk management:: an analysis of the findings of the European Survey*, European Agency for Safety and Health at Work.

Lepper, M. R. and Greene, D. (1975) 'Turning play into work: Effects of adult surveillance and extrinsic rewards on children's intrinsic motivation', *Journal of Personality and Social Psychology*, vol. 31, no. 3, pp. 479–486.

Malka, A. and Chatman, J. A. (2003) 'Intrinsic and Extrinsic Work Orientations as Moderators of the Effect of Annual Income on Subjective Well-Being: A Longitudinal Study', *Personality and Social Psychology Bulletin*, vol. 29, no. 6, pp. 737–746.

Maslow, A. H. (1943) *A theory of human motivation*.

Niemiec, C. P., Ryan, R. M. and Deci, E. L. (2009) 'The path taken: Consequences of attaining intrinsic and extrinsic aspirations in post-college life', *Journal of Research in Personality*, vol. 43, no. 3, pp. 291–306.

Nini, M. (2011) *Systemisches Dienstleistungsmanagement*, Wiesbaden, Gabler.

Podsakoff, N. P., LePine, J. A. and LePine, M. A. (2007) 'Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: A meta-analysis', *Journal of Applied Psychology*, vol. 92, no. 2, pp. 438–454.

Promberger, M. and Marteau, T. M. (2013) 'When do financial incentives reduce intrinsic motivation?: Comparing behaviors studied in psychological and economic literatures', *Health Psychology*, vol. 32, no. 9, pp. 950–957.

- Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J. and Ryan, R. M. (2000) 'Daily Well-Being: The Role of Autonomy, Competence, and Relatedness', *Personality and Social Psychology Bulletin*, vol. 26, no. 4, pp. 419–435.
- Rodríguez, I., Bravo, M. J., Peiró, J. M. and Schaufeli, W. (2010) 'The Demands-Control-Support model, locus of control and job dissatisfaction: A longitudinal study', *Work & Stress*, vol. 15, no. 2, pp. 97–114.
- Sauter, S. L. and Hurrell, J. J. (1999) 'Occupational health psychology: Origins, context, and direction', *Professional Psychology: Research and Practice*, vol. 30, no. 2, pp. 117–122.
- Sheldon, K. M. and Gunz, A. (2009) 'Psychological Needs as Basic Motives, Not Just Experiential Requirements', *Journal of Personality*, vol. 77, no. 5, pp. 1467–1492.
- Sheldon, K. M., Ryan, R. and Reis, H. T. (1996) 'What Makes for a Good Day?: Competence and Autonomy in the Day and in the Person', *Personality and Social Psychology Bulletin*, vol. 22, no. 12, pp. 1270–1279.
- Slemp, G. R. and Vella-Brodrick, D. A. (2014) 'Optimising Employee Mental Health: The Relationship Between Intrinsic Need Satisfaction, Job Crafting, and Employee Well-Being', *Journal of Happiness Studies*, vol. 15, no. 4, pp. 957–977.
- Spector, P. E. (1986) 'Perceived Control by Employees: A Meta-Analysis of Studies Concerning Autonomy and Participation at Work', *Human Relations*, vol. 39, no. 11, pp. 1005–1016.
- Tims, M., Bakker, A. B. and Derks, D. (2014) 'Job crafting and job performance: A longitudinal study', *European Journal of Work and Organizational Psychology*, vol. 24, no. 6, pp. 914–928.

- Troup, C. and Dewe, P. (2002) 'Exploring the nature of control and its role in the appraisal of workplace stress', *Work & Stress*, vol. 16, no. 4, pp. 335–355.
- van der Doef, M. and Maes, S. (1999) 'The Job Demand-Control (-Support) Model and psychological well-being: A review of 20 years of empirical research', *Work & Stress*, vol. 13, no. 2, pp. 87–114.
- van Vegchel, N., Jonge, J. de and Landsbergis, P. A. (2005) 'Occupational stress in (inter)action: The interplay between job demands and job resources', *Journal of Organizational Behavior*, vol. 26, no. 5, pp. 535–560.
- Weibel, A., Rost, K. and Osterloh, M. (2010) 'Pay for Performance in the Public Sector-- Benefits and (Hidden) Costs', *Journal of Public Administration Research and Theory*, vol. 20, no. 2, pp. 387–412.
- Weinstein, N. and Ryan, R. M. (2011) 'A self-determination theory approach to understanding stress incursion and responses', *Stress and Health*, vol. 27, no. 1, pp. 4–17.
- Whittington, R. (2006) 'Completing the Practice Turn in Strategy Research', *Organization Studies*, vol. 27, no. 5, pp. 613–634.
- Wrzesniewski, A. and Dutton, J. E. (2001) 'CRAFTING A JOB: REVISIONING EMPLOYEES AS ACTIVE CRAFTERS OF THEIR WORK', *Academy of Management Review*, vol. 26, no. 2, pp. 179–201.