Work & Stress: Thirty years of impact

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EDITORIAL

Work & Stress: Thirty years of impact

With this edition, *Work & Stress,* the longest established journal in occupational health psychology (OHP), enters its 30th anniversary volume. Whereas after the first 20 years of its existence the journal had "come of age" (Cox & Tisserand, 2006), the third decade of its existence has been a time of maturation, consolidation and extension. The journal has *matured* in that it has further developed its identity as a journal in OHP. In doing so, it has helped to define and shape OHP as a discipline at the intersection of social, industrial and clinical psychology on the one hand, and occupational medicine on the other.

It has *consolidated* its position as one of the leading journals in OHP, as evidenced by receiving a continuous – and increasing – flow of submissions (authors are obviously eager to publish their work with us) as well as by achieving consistently sound impact factors over the years. Indeed, with its two-year impact factor of 2.39 (December 2015) the journal now ranks 11/76 in the ISI category of Applied psychology, and since 2010 its five-year impact factor has been the highest in the field of OHP, attesting to its scientific impact.

Finally, it has *extended* its coverage of topics. In the beginning, *Work & Stress* mainly focused on work-related stress and safety at work. However, as the area of OHP developed and unfolded, so did the journal. At present it publishes research on the interactions among work, health and organizations in a broad sense. It has become a natural home for research on the work–family interface, social relations at work (including topics such as bullying and conflict at work, leadership and organizational support), workplace interventions and reorganizations, and positive and negative dimensions and outcomes of worker stress and well-being (including stress, burnout, performance and the positive concepts of work motivation and engagement). Of course, we also welcome submissions addressing other topics in OHP.

A bibliometric analysis of impact and interest

Since the first issue appeared in 1987, the editorial team of *Work & Stress* has produced 115 issues, in which 736 papers have been published. When reflecting on the development of the journal it is interesting to see which of these papers *really* grabbed our readership's attention. This is of interest, and not only to the authors of those papers. That is, those papers are likely to mirror our readership's interest over the years and thus reveal which topics have been considered most important in OHP. Therefore, examining which papers have attracted most attention during various periods of time will provide an overview not only of *Work & Stress* but also of the course of OHP in general.

It is not particularly easy to identify the papers that have attracted most attention, if only because it is unclear how "attracting attention" should be measured. We do not know how often papers published in *Work & Stress* were noticed, read or used by readers, whether they met their approval or were considered interesting. Further, since many of these papers appeared before the internet made it possible to access them online, counting the number of downloads of papers would not be a valid approach to measuring reader interest either. However, we can focus on the number of citations received by these papers. Several current

scientific search engines (such as Scopus, Web of Science and Google Scholar) provide information on citations. If the number of citations received by a paper is a reasonable (but admittedly imperfect) indicator of its interest rate (or *impact*), this allows for a relatively straightforward bibliometric approach to examining the degree to which particular papers and, by implication, particular subjects, have attracted attention.

One important issue with this approach is that papers that have been around for a longer time have had more opportunity to have been cited than other papers. Conversely, few recent papers will yet have received many citations. Thus, in order to level the playing field, we computed citation scores for five- to six-year time intervals (see Table 1). Apart from the most recent group, articles published within each of these intervals have had roughly the same opportunity to receive citations. Citation scores were computed for all papers published in the journal within each interval, using the Google Scholar database (which has a larger and more complete coverage of academic documents than other databases, Khabsa & Giles, 2014) and Harzing's (2015) *Publish or Perish* citation analysis programme. Table 1 presents the three most cited papers published in *Work & Stress* for each of the five time periods.

In total, the 15 most cited papers had received 6,704 citations by December 2015. On average each paper had been cited 447 times since its publication, with especially the most recent (naturally) and oldest papers receiving fewer citations than others. Since findings may vary across databases, results were cross-validated using the Scopus database (results available upon request). Although the Scopus database revealed substantially lower citation rates than Google Scholar (with the average number of citations per paper being 205), the ranking of the papers in Table 1 was virtually identical across both databases ($r = .98$), attesting to the robustness of the rank order of these 15 publications.

One interesting point is that whereas some authors are involved in two of the top-cited papers (often as co-authors), no single (cluster of) author(s) dominates the papers in Table 1. All 15 top-cited papers originated from Western countries, with 5 of these originating from the UK (papers 10–14, all of which were published before 1999). Three papers came from Scandinavia (numbered 2, 5 and 6), another three from The Netherlands (4, 7 and 9), two from the USA (1 and 15), and one from Australia (8). Insofar as these figures are meaningful considering the very small sample of only 15 papers, they do show an increasing shift from having predominantly European authors to the present international source of contributions.

Regarding the content of these 15 most cited papers, it is interesting to see that four of them (papers 7, 9, 14 and 15) were largely based on Robert Karasek's (1979) familiar Job Demands-Control (JDC) model. Papers 14 by Peter Warr and 15 by Paul Spector presented early empirical tests of the non-linear and interactive effects of job demands and job control (issues that then began to attract the interest of researchers). Paper 7 by Margot van der Doef and Stan Maes was at the time one of the first, but certainly the most comprehensive review of the JDC model; this is also the paper in *Work & Stress* that has been cited most often overall. Paper 9 by Annet de Lange and colleagues extended study 7 by reviewing longitudinal research on the JDC model, thus providing stronger evidence for the possibly causal effects of demands and control on worker stress and health than study 7 could.

Three other of the 15 papers presented theoretical frameworks that are to some degree intellectually indebted to Karasek's work. Study 11 by (again) Peter Warr focused on the non-linear relationships between various types of job characteristics and outcomes, leading to the development of the Vitamin model. Studies 4 by Jari Hakanen and colleagues and 6 by Arnold Bakker and colleagues were based on the Job Demands-Resources model that relates two broad categories of job characteristics (job demands on the one hand, and job resources such as control and support on the other) to worker well-being and motivation. Study 4 was one of the first longitudinal studies in this area, whereas study 6 presented an overview

Table 1. The 15 most frequently cited papers in *Work & Stress* during 1987–2015, grouped according to period in which published.

Period in which published	Paper number	Authors (publication year)	Total number of citations*	Description of topic
2011–2015	(1)	Nixon et al. (2011)	146	Meta-analysis of the associations between work stressors and physical symptoms
	(2)	Nielsen and Einarsen (2012)	88	Meta-analysis of the outcomes of workplace bullying
	(3)	Kelloway et al. (2012)	60	Two studies on the (longitudinal) associations among leadership, well-being, and trust
2005–2010	(4)	Bakker, Schaufeli, Leiter, and Taris (2008)[2]	831	Introduction to a special issue: narrative review of conceptualization and correlates of work engagement
	(5)	Kristensen et al. (2005)[3]	628	Psychometric study on the Copenhagen Burnout Inventory
	(6)	Hakanen et al. (2008)[4]	525	Empirical study testing the longitudinal associations between job demands, job resources, engagement and burnout
1999–2004	(7)	Van der Doef and Maes (1999)[1]	1391	Quantitative review of Karasek's Demand-Control (-Support) model
	(8)	Gillespie et al. (2001)	367	Empirical study among academic staff on the causes, consequences and moderators of occupational stress
	(9)	De Lange et al. (2004)	348	Study on the longitudinal associations between demands, control, support and health, testing various types of causation
1993–1998	(10)	S. Cox and Flin (1998)[5]	487	Introduction to a special issue: narrative review of the conceptualization and measurement of safety culture, plus overview of key questions to be addressed
	(11)	Warr (1994)	417	Conceptual discussion of the Vitamin model, relating work characteristics to occupational well-being
	(12)	Reason (1998)	388	Conceptual paper that links accidents at work to organizational safety culture
1987–1992	(13)	S. Cox and T. Cox (1991)	415	Empirical study that presents a framework for the structure of employee attitudes towards safety
	(14)	Warr (1990)	343	Empirical test of the non-linear and interactive relations in Karasek's Demand-Control model; distinction between two dimensions of well-being
	(15)	Spector (1987)	270	Empirical test of the Demand-Control interaction in Karasek's Demand-Control model

Note: Papers are numbered 1–15 for reference to the text. *The total numbers of citations received since publication, as retrieved at 2 December 2015; calculations were based on the Google Scholar database. [1-5]These publications were the five most-cited papers out of all the papers that have been published in *Work & Stress* (1987–2015), in rank order. For instance, Kristensen et al.'s (2005) paper was the third most-cited paper published during the entire period (1987–2015) and the second most cited paper published in the period 2005–2010.

of job demands and resources as antecedents of work engagement, which has since then become one of the most frequently examined concepts in OHP. Interestingly, an instrument to measure the antipode of engagement (that is, burnout) was presented in study 5 by Tage Kristensen and colleagues. This paper presented what proved to be a seminal psychometric evaluation of the Copenhagen Burnout Inventory, possibly the most important alternative to the well-known Maslach Burnout Inventory for measuring employee burnout.

Two further papers also address the associations between work characteristics and outcomes, but without referring to one theoretical framework in particular. Study 8 by Gillespie and colleagues presented an exploratory but exhaustive mapping of the causes, consequences and moderators of job stress in the jobs of academic staff. Study 1 by Ashley Nixon and colleagues provided a review of various work characteristics and physical well-being, going beyond well-known stressors such as workload and lack of control.

Two recent papers shown in Table 1 focused on relatively new concepts in OHP as antecedents of work outcomes. Study 2 by Morten Nielsen and Stahle Einarsen presented two reviews on the outcomes of workplace bullying, providing robust evidence for the detrimental effects of workplace bullying on outcomes such as physical health, burnout, satisfaction and commitment. Paper 3 by Kevin Kelloway and colleagues examined various forms of leadership and well-being in two empirical studies, showing that trust in the leader mediates the associations between leadership and worker well-being. Both papers 2 and 3 clearly extend current knowledge in their respective areas, addressing novel research questions using strong research designs.

Finally, all three of the remaining top-cited papers focus on aspects of safety and safety culture. Paper 13 by Sue Cox and Tom Cox presented an empirical test of a novel theoretical framework for the structure of employee reactions towards safety at work. Paper 10 by Sue Cox and Rhona Flin discussed the conceptualization of safety culture and provided an agenda of questions to be addressed in future research. In paper 12, James Reason linked his influential "Swiss cheese" model of individual and organizational accidents to safety culture at work, providing a conceptual model for the linkages between these two sets of concepts.

All in all, this overview on the one hand shows that many of the often-cited papers published in *Work & Stress* deal with the effects of work characteristics on worker well-being, with especially Karasek's seminal work on the effects of job demands and job control on worker health being a major source of inspiration for researchers in OHP. On the other hand it also shows that the journal is broadening its scope, and publishing work on relatively new concepts such as bullying, work engagement and trust in leadership, next to research on traditional topics in OHP such as stress, sickness absence, job demands and safety at work. However, what all these studies have in common is that they advance our knowledge of worker health, well-being and health-related behaviour in the context of work and organizations.

Looking back, looking forward

This, then, is what has most interested our readership over the years: reviews on the work-related antecedents of stress, health and well-being, including job burnout and job engagement, and studies presenting and testing novel theoretical frameworks, conceptualizations and ideas. In a sense this is not surprising. Not only has *Work & Stress* come of age, but so has the discipline of OHP. Research in this area has by now generated a very substantial body of knowledge, and it is both possible and desirable every now and then to look back to see what ground we have covered and where we stand now. Reviews and meta-analyses serve that function very well (see the much cited editorial, Taris, 2006) and constitute firm bases for future research to build on. The journal will therefore persist in actively seeking this type of contribution.

In addition, *Work & Stress* will continue to look for papers that present fresh ideas, address new issues and encourage new thinking. Obviously, not all papers that present new perspectives and challenge old ones will automatically end up in the list of well-cited papers, and publishing such work may well weaken our impact factor. However, for the progress of knowledge it is important that discussion is encouraged and also that ideas that at variance with current insights or that present findings that do not support existing theories be published. Thus, in

conjunction with empirical rigour, theoretical relevance and practical usefulness, aspects such as novelty and a certain degree of adventure will continue to be key to us in evaluating submissions.

The current edition

The present issue of *Work & Stress* includes four review studies and one empirical study. In the first paper Shani Pindek and Paul Spector (2016) present a review and meta-analysis of the associations between organizational constraints (also known as "hindrance stressors)" and various work outcomes. Many empirical studies have examined these associations, so it is now an appropriate time to quantitatively summarize what we have learned about the role of organizational constraints as a job stressor. Pindek and Spector's review of the findings of 119 studies encompassing almost 34,000 participants clearly shows that organizational constraints relate to many variables that are commonly studied in occupational stress, such as somatic symptoms, emotions, job satisfaction and counterproductive work behaviour. They therefore recommend that, as a unique stressor, organizational constraints be more often the centre of empirical research and theoretical development.

The second paper in this issue, by David Martínez-Inigo and Peter Totterdell (2016), is a longitudinal study on the associations among emotion regulation strategies, perceptions of distributive justice (fairness in interactions with clients) and emotional exhaustion. Drawing on a sample of 233 primary care workers, they show that the relationship between emotion regulation (deep acting and surface acting) and emotional exhaustion was mediated by perceptions of distributive justice.

The third paper reviews the stability of various types of well-being across time. In a review of forty studies, Mäkikangas, Kinnunen, Feldt, and Schaufeli (2016) show that although well-being is usually considered to be very stable across time, considerable changes in mean level of well-being across time may be observed. Moreover, this change was larger for younger workers and for workers changing jobs. Apparently, the change in well-being across time may be sufficiently large to relate it meaningfully to explanatory variables.

In the fourth paper, Sara Leitao and Birgit Greiner (2016) review the associations between the degree to which an organization can be characterized as having a good psychological safety climate and the number of accidents and injuries in that organization. Although 15 of the 17 studies included in their paper supported the idea that a good psychological safety climate results in lower accident and injury rates, they argue that the quality of these studies is insufficient to conclude that this relationship can be interpreted causally. They conclude that more work, especially longitudinal and intervention studies, remains to be done.

The final contribution to this issue is also a review. Tanja de Jong and colleagues (2016) present a narrative review of the findings of 39 longitudinal studies on the impact of restructuring on employee well-being. They found that in the majority of cases restructuring, both with and without staff reductions, affects well-being negatively, although employees in time also show signs of recovery.

The papers in this current issue of *Work & Stress* tick all the boxes. They summarize and extend current knowledge on OHP-relevant issues such as worker safety, health and well-being, examine the associations between work and organizational characteristics on the one hand and outcomes on the other, focus on societally important issues such as the impact of restructuring, and employ strong designs where applicable. Overall, these contributions underline the significance of our discipline: hopefully they will not only spark new research on the issues that interest us, but will also have a practical impact on the daily lives of workers. By continuing to publish high-quality, scientifically interesting and practically relevant research,

we hope that this journal will serve the discipline of OHP well, and, by doing so, that it will benefit all who are concerned with the interplay between work, health and organizations.

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