Editorial: Organizational health interventions – Advances in evaluation methods

Maria Karanika-Murray, Caroline Biron and Per Øystein Saksvik

Maria Karanika-Murray, Division of Psychology, Nottingham Trent University, Burton Street, Nottingham, NG1 4BU, Great Britain; Tel: +44 (0)115 8482425; Email: maria.karanika-murray@ntu.ac.uk

Caroline Biron, Département de management, Faculté des sciences de l'administration, Pavillon Palasis-Prince, 2325, rue de la Terrasse, Local 1511, Université Laval (Québec, Canada) G1V 0A6, Canada; Tel: +1 418 656 2131; Email: caroline.biron@fsa.ulaval.ca

Per Øystein Saksvik, Psykologisk institutt, NTNU, Dragvoll, Edvard Bulls veg 1, Bygg 12 * 579, Norway; Tel: 73550330; Email: peros@svt.ntnu.no

Corresponding author: Maria Karanika-Murray

Editorial: Organizational health interventions – Advances in evaluation methods

"He that would perfect his work must first sharpen his tools" (Confucius)

In 2010, while receiving an award for his outstanding career achievements, Cary L. Cooper stated that “we have enough science on what causes people to get ill in the workplace… we know the problems, what we now have to do is get the solutions” (EA-OHP newsletter, 2010). Despite an increasing number of theoretical frameworks on how to create healthy workplaces and promote employee health well-being and guidelines on how to implement organizational health interventions (see for example Biron & Karanika-Murray, 2014; Karanika-Murray & Biron, 2015; Nielsen & Abildgaard, 2013; Randall & Nielsen, 2012), there is still a great divide between what organizations do to promote workplace health and well-being, on one hand, and what researchers know in terms of what causes ill-health at work, on the other. We often lack the sound evidence from intervention studies in real-life settings, although we know, from other types of research studies, what should work in practice. One of the reasons explaining this gap is that little attention has been paid to the tools required to adequately evaluate organizational health interventions.

Calls have been made for an increased focus on evaluating the way in which interventions are implemented and how this affects their outcomes (Biron & Karanika-Murray, 2014; Egan, Bambra, Petticrew & Whitehead, 2009; Nielsen & Abildgaard, 2013). However, evaluation methodology in organizational interventions for psychosocial issues is still in its infancy. As any young and developing field, intervention science has necessarily borrowed tools from other fields. With a few exceptions, traditional evaluation methodologies can be criticized as limiting. Such methodologies include, for example, the RCT, which is considered as the gold standard in psychological research but is not adequate in applied settings (Cox, Karanika-Murray, Griffiths,

& Houdmont, 2007). Egan and Bond (2015) highlighted the need to overcome our reliance on the RCT design as the only way to evaluate interventions, and to find rigorous alternatives to evaluate complex and un-controlled interventions, involving multiple components and several stakeholders, within changing and dynamic work contexts.

Having the wrong tools for the job may result in a number of scenarios, such as providing the wrong answers to the right questions, assessing an intervention as unsuccessful in targeting the criterion outcomes when in fact it may have been successful in changing other important outcomes, being unable to preclude alternative explanations for the observed effects, or failing inform evidence-based practice, may all be outcomes of using tools that are not adequate for the field.

For example, we have many examples of interventions that have derailed, many of which do not see the publication light and therefore fail to provide invaluable learnings to move the field forward (Karanika-Murray & Biron, 2015). Although research has shown that organizational interventions developed to address work-related psychosocial issues such as stress and well-being can indeed have positive effects on a range of outcomes (Dahl-Jørgensen & Saksvik, 2005; Gilbert-Ouimet et al., 2011), there are still many inconsistencies and gaps in our knowledge of when interventions can be successful (Graveling, Crawford, Cowie, Amati, & Vohra, 2008; Richardson & Rothstein, 2008). A good toolbox is essential for understanding what works for whom and under what circumstances.

Similarly, although we know, based on the hierarchy of control principle in occupational health (Halperin, 1996) that organizational-level interventions should be more effective than individual-level interventions, several primary studies and systematic reviews have yielded mixed results on their effectiveness (Montano, Hoven, & Siegrist, 2014; Bhui et al., 2012). More

comprehensive interventions (integrating several components) appear to be more successful (Lamontagne, Keegel, Louie, Ostry, & Landbergis, 2007; Montano et al., 2014). Perhaps as a result of this uncertainty, there is a tendency for organizations to invest their efforts in individual-level interventions but remain shy on organizational-level interventions targeting the psychosocial work environment, improving job design, work contents, career opportunities, and working conditions (Bhui et al., 2012). Ideally, interventions should be targeting both the individual workers and the organization, thus taking into account their needs and capacities (Nielsen, Taris, & Cox, 2010). This is a missed opportunity, because the convincing evidence on the effects of organizational-level intervention foci such as psychosocial constraints and poor leadership (in other words "bad jobs") on workers' mental and physical health (Kivimaki et al., 2012; Kuoppala, Lamminpaa, Liira, & Vainio, 2008; Stansfeld & Candy, 2006) may not see the light of evidence-based intervention practice.

As reflective and effective researchers and practitioners we need to consider the adequacy and usefulness of our tools. Borrowing is useful in the short term as a field develops its own methods, but can be counterproductive in the longer term as knowledge in the field consolidates and methods appropriate to the task at hand are required for more fine-grained examinations. Any scientific field of inquiry needs a methods toolbox that is fit-for-purpose. In the field of organizational health interventions, appropriate purposeful evaluation methods seem to be lacking. However, the field's toolbox is evolving. Intervention evaluation has progressed from a sole focus on evaluating changes in criterion outcomes, to acknowledging the importance of paying attention to the implementation process, to identifying process variables that can act as moderators or mediators of any effects of the intervention on observed change, and considering how process and outcome evaluation can work together (e.g., for examples see Biron, Karanika-

Murray, Cooper, 2012; Biron & Karanika-Murray, 2014; Nielsen & Randall, 2012; Saksvik, Nytrø, Dahl-Jorgensen & Mikkelsen, 2002; Tvedt, Saksvik, & Nytrø, 2009). Intervention evaluation is progressing to being deterministic and explanatory of why things happen. It is achieving this while also developing its own toolbox.

This special issue aims to showcase advancements in evaluation methods that can provide reliable and valid answers to 'what works' questions in the field of organizational health interventions. The papers selected aim to illustrate innovative ways and different research designs to achieve this. It was heartening to receive a total of 18 expressions of interest from around the world, highlighting researchers' growing activity in evaluation science more broadly. The final five papers presented here represent the most comprehensive of those submissions which focussed on advances in evaluation methodology in organizational-level interventions targeting psychosocial work-related issues.

The first paper, by von Thiele Schwarz, Lundmark, and Hasson, presents an evaluation model what uses a participatory approach when conducting and evaluating interventions. Their so-called Dynamic Integrated Evaluation Model allows to consider the process and context of an intervention, integrate the intervention into daily organizational practice, in order to improve and adapt it whilst it is being implemented and in this way increasing the likelihood of successful implementation and sustainable change.

The second paper presented here, by Biron, Ivers, and Brun, describes a method for evaluating interventions on the basis of participants' exposure to the intervention. By creating artificial control and intervention groups, adapted study designs allow to combine process and outcome evaluation and to strengthen the design of the study when it is not possible to control exposure levels, thus providing an alternative to RCTs.

The third paper, by Hasson, von Thiele Schwarz, Nielsen, and Tafvelin, presents perceptual difference, or (dis)agreement between leaders and their team's perceptions, as a process variable that influences intervention outcomes and therefore one that deserves a place at the core of accurate intervention evaluation. Analytically, this work also presents a useful approach to visualising change using polynomial regression analysis with response surface analysis.

The fourth paper, by Sørensen, describes an alternative to the RCT design and a practical approach to designing, implementing, and evaluating organizational health interventions. Specifically, it discusses the Regression Discontinuity Design as an approach more appropriate to interventions in organizational settings because it allows to identify and target workgroups that experience the most salient problems and tailor evaluation accordingly.

Finally, the paper by Saksvik and Lien, presents a method for evaluating interventions that relies on a diary method for process evaluation. This, combined with action research and feedback loops offers an understanding of how attitudes towards change and the implementation process develop over time and how they also inform a more nuanced evaluation of organizational interventions.

Although a growing body of evidence supports the importance of organizational interventions for improving work-related health, there are many methodological challenges relating to their evaluation. Good tools are essential for clearing some of the uncertainties around what works, for whom, and under what circumstances. The five papers presented here are important contributions to evaluation methodology in organizational health interventions. This is even more so because developing new methods in a field that is often restricted or governed by the practical constraints of conducting research in organisational settings is an extremely difficult

endeavour. We hope that the selected group of papers in this special issue will help to move the field onwards and upwards, by offering more rigorous evaluations of how interventions affects target outcomes, building evidence-based practice, strengthening the business case for developing and implementing organizational health interventions, and advancing intervention science.

References

Bhui, K. S., Dinos, S., Stansfeld, S. A., & White, P. D. (2012). A Synthesis of the Evidence for Managing Stress at Work: A Review of the Reviews Reporting on Anxiety, Depression, and Absenteeism. *Journal of Environmental & Public Health, 2012,* 1-21. doi: 10.1155/2012/515874

Biron, C., & Karanika-Murray, M. (2014). Process evaluation for organizational stress and well-being interventions: Implications for theory, method, and practice. *International Journal of Stress Management, 21*(1), 85-111. doi: 10.1037/a0033227

Biron, C., Karanika-Murray, M., & Cooper, C. L. (2012). *Improving organizational interventions for stress and well-being: Addressing process and context*. New York, London: Routledge.

Cox, T., Karanika-Murray, M., Griffiths, A., & Houdmont, J. (2007). Evaluating organizational-level work stress interventions: Beyond traditional methods. *Work & Stress, 21*(4), 348-362.

Dahl-Jørgensen, C., & Saksvik, P. O. (2005). The impact of two organizational interventions on the health of service sector workers. *International journal of health services: Planning, administration, evaluation, 35*, 529-549. doi: 10.2190/P67F-3U5Y-3DDW-MGT1

EA-OHP newsletter (2010). Editorial. Available online at:

http://www.eaohp.org/uploads/1/1/0/2/11022736/eaohp_newsletter_vol_7_issue_3.pdf, Accessed 11 July 2016.

Egan, M., & Bond, L. (2015). The 'best available evidence' could be better: evidence from systematic reviews of organizational interventions. In M. Karanika-Murray & C. Biron (Eds.), *Derailed organizational health and well-being interventions - Confessions of failure, solutions for success* (pp. 245-251). Dordrecht: Springer Science+Business Media.

Egan, M., Bambra, C., Petticrew, M., & Whitehead, M. (2009). Reviewing evidence on complex social interventions: Appraising implementation in systematic reviews of the health effects of organizational-level workplace interventions. *Journal of Epidemiology and Community Health, 63*(1), 4-11. doi: 10.1136/jech.2007.071233

Gilbert-Ouimet, M., Brisson, C., Vézina, M., Trudel, L., Bourbonnais, R., Masse, B., Baril-Gingras, G., & Dionne, C.E. (2011). Intervention Study on Psychosocial Work Factors and Mental Health and Musculoskeletal Outcomes. *HealthcarePapers, 11*(Sp), 47-66. doi:10.12927/hcpap.2011.22410

Graveling, R. A., Crawford, J. O., Cowie, H., Amati, C., & Vohra, S. (2008). *A review of workplace interventions that promote mental wellbeing in the workplace*. Edinburgh: Institute of Occupational Medicine.

Halperin, W. (1996). The role of surveillance in the hierarchy of prevention. *American Journal of Industrial Medicine, 29*, 321 - 323.

Karanika-Murray, M., & Biron, C. (2015). *Derailed organizational health and well-being interventions - Confessions of failure, solutions for success*. Dordrecht: Springer Science+Business Media

Kivimaki, M., Nyberg, S. T., Batty, G. D., Fransson, E. I., Heikkila, K., Alfredsson, L., & Consortium, I. P.-W. (2012). Job strain as a risk factor for coronary heart disease: a collaborative meta-analysis of individual participant data. *Lancet, 380*(9852), 1491-1497. doi: 10.1016/S0140-6736(12)60994-5

Kuoppala, J., Lamminpaa, A., Liira, J., & Vainio, H. (2008). Leadership, Job Well-Being, and Health Effects-A Systematic Review and a Meta-Analysis. *Journal of Occupational & Environmental Medicine, 50*(8), 904-915.

Lamontagne, A. D., Keegel, T., Louie, A. M., Ostry, A., & Landbergis, P. A. (2007). A Systematic Review of the Job-stress Intervention Evaluation Literature, 1990–2005. *International Journal of Occupational and Environmental Health, 13*, 268-280.

Montano, D., Hoven, H., & Siegrist, J. (2014). Effects of organizational-level interventions at work on employees' health: a systematic review. *BMC Public Health, 14*(1), 135.

Nielsen, K., & Abildgaard, J. S. (2013). Organizational interventions: A research-based framework for the evaluation of both process and effects. *Work & Stress, 27*(3), 278-297. doi: 10.1080/02678373.2013.812358

Nielsen, K., & Randall, R. (2012). Opening the black box: Presenting a model for evaluating organizational-level interventions. *European Journal of Work and Organizational Psychology,* 1-17. doi: 10.1080/1359432x.2012.690556

Nielsen, K., Taris, T. W., & Cox, T. (2010). The future of organizational interventions: Addressing the challenges of today's organizations. *Work & Stress, 24*(3), 219-233. doi: Doi 10.1080/02678373.2010.519176

Randall, R., & Nielsen, K. (2012). Does the intervention fit? An explanatory model of intervention success and failure in complex organizational environments. In C. Biron, M.

Karanika-Murray & C. L. Cooper (Eds.), *Improving organizational interventions for stress and well-being: Addressing process and context*. New York, London: Routledge.

Richardson, K. M., & Rothstein, H. R. (2008). Effects of occupational stress management intervention programs: a meta-analysis. *Journal of Occupational Health Psychology, 13*(1), 69.

Saksvik, P., Nytrø, K., Dahl-Jorgensen, C., & Mikkelsen, A. (2002). A process evaluation of individual and organizational occupational stress and health interventions. *Work & Stress, 16*, 37 – 57. doi: 10.1080/02678370110118744

Stansfeld, S., & Candy, B. (2006). Psychosocial work environment and mental health--a meta-analytic review. *Scandinavian Journal of Work, Environment & Health, 32*(6), 443-462.

Tvedt, S. D., Saksvik, P. Ø., & Nytrø, K. (2009). Does change process healthiness reduce the negative effects of organizational change on the psychosocial work environment? *Work & Stress, 23*(1), 80-98.