



<http://www.diva-portal.org>

This is the published version of a paper published in *European Journal of Work and Organizational Psychology*.

Citation for the original published paper (version of record):

Tafvelin, S., Stenling, A., Lundmark, R., Westerberg, K. (2019)

Aligning job redesign with leadership training to improve supervisor support: a quasi-experimental study of the integration of HR practices

European Journal of Work and Organizational Psychology, 28(1): 74-84

<https://doi.org/10.1080/1359432X.2018.1541887>

Access to the published version may require subscription.

N.B. When citing this work, cite the original published paper.

Permanent link to this version:

<http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-156602>



Aligning job redesign with leadership training to improve supervisor support: a quasi-experimental study of the integration of HR practices

Susanne Tafvelin, Andreas Stenling, Robert Lundmark & Kristina Westerberg

To cite this article: Susanne Tafvelin, Andreas Stenling, Robert Lundmark & Kristina Westerberg (2019) Aligning job redesign with leadership training to improve supervisor support: a quasi-experimental study of the integration of HR practices, European Journal of Work and Organizational Psychology, 28:1, 74-84, DOI: [10.1080/1359432X.2018.1541887](https://doi.org/10.1080/1359432X.2018.1541887)

To link to this article: <https://doi.org/10.1080/1359432X.2018.1541887>



© 2018 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 01 Nov 2018.



[Submit your article to this journal](#)



Article views: 301



[View Crossmark data](#)

Aligning job redesign with leadership training to improve supervisor support: a quasi-experimental study of the integration of HR practices

Susanne Tafvelin^a, Andreas Stenling^a, Robert Lundmark^{a,b} and Kristina Westerberg^a

^aDepartment of Psychology, Umeå University, Umeå, Sweden; ^bDepartment of Learning, Informatics, Management and Ethics Karolinska Institutet, Medical Management Centre, Stockholm, Sweden

ABSTRACT

In this quasi-experimental study, we examine the alignment of a job redesign initiative with leadership training aimed at increasing supervisors' opportunities for providing support to employees. In addition, we examine intervention-mediated effects on climate for innovation through increases in perceived supervisor support. To test the hypothesized process, we used employee ratings ($N = 524$) of perceived supervisor support and climate for innovation collected at three time points over 2 years in the home help services in seven Swedish municipalities. Results of latent growth curve analyses showed that employees in the intervention group had a stronger and positive slope of perceived supervisor support relative to the comparison group. Further, the growth trajectories of perceived supervisor support were positively associated with climate for innovation at the 24-month follow-up. The study contributes to the human resource management literature by showing that alignment of employment practices such as training with work practices such as job redesign may be a promising strategy for achieving positive outcomes at multiple levels in organizations.

ARTICLE HISTORY

Received 26 February 2018
Accepted 23 October 2018

KEYWORDS

HR practices; job redesign; leadership training; supervisor support; intervention mediated effects

One central aspect related to employee growth and development at work is the amount of support employees receive from their supervisors (Amabile, Schatzel, Moneta, & Kramer, 2004). Perceived supervisor support includes the degree to which supervisors value employees' contributions and care about their well-being (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002; Kottke & Sharafinski, 1988), and it has been related to a number of favourable employee outcomes, including creativity, motivation, and well-being (Amabile et al., 2004; Gillet, Gagné, Sauvagère, & Fouquereau, 2013; Skakon, Nielsen, Borg, & Guzman, 2010). Given the importance of supervisor support, strategies to improve supervisors' abilities to provide support are essential. One common strategy employed by organizations is to send supervisors to training to help them develop desirable and supportive leadership behaviours. However, lack of supervisor support may not always be due to a leader's personal inability to provide support, but rather due to the way work is organized and the conditions under which the supervisor is working. For example, supervisory roles with large amounts of administrative tasks offer leaders little time for interacting with employees and few opportunities for providing support (Tafvelin, Isaksson, & Westerberg, 2017). Therefore, combining training with job redesign interventions where supervisory work tasks are redefined to create opportunities for meeting and supporting employees may offer more appropriate strategies for enhancing supervisor support.

Although job redesign interventions have been recommended in the literature (EU-OSHA, 2014, 2016; Nielsen, Randall, Holten, & Rial González, 2010), few studies have

examined their usefulness in relation to enhancing supervisor support. Additionally, a recent review of job redesign initiatives to improve employee well-being and performance suggested that combining redesign interventions with training may be fruitful, but few studies have examined outcomes of such efforts (Daniels, Gedikli, Watson, Semkina, & Vaughn, 2017). This is in line with suggestions in the human resource management (HRM) literature, where calls have been made to further our understanding of how the combination of different HR practices may impact employees (Boxall & Macky, 2009). Arguments have been made that organizations may benefit from aligning employment and work practices, such as training and job redesign, to impact employee and organizational outcomes (Boxall & Macky, 2009). However, the benefits of such integration remain more or less unexplored (see Christina, Dainty, Daniels, Tregaskis, & Waterson, 2017 for an exception).

The purpose of the present study was to examine the impact of integrating employment and work practices, in terms of aligning training with job redesign, on employee outcomes. We examined this in the context of an intervention aimed at increasing supervisors' opportunities for providing support to employees. The job redesign initiative was implemented to change leadership roles by reducing the amount of administrative tasks, thus providing supervisors with more time for interacting with employees. Supervisors also attended leadership training to practice skills related to providing employees with support.

This study contributes to the current literature in two important ways: First, although previous research has

indicated that alignment of HR practices contributes to organizational outcomes, calls have also been made for a greater nuancing of the theory of alignment in terms of the link between HRM and how work is organized (Boxall, 2012; Christina et al., 2017). Beer, Boselie, and Brewster (2015) also call for further understanding of how internal alignment of HRM can impact employees. In light of these theoretical weaknesses, we examine how supervisor support may be increased by aligning employment practices (training) and work practices (job redesign). In doing so, we unpack the process linking HRM to employees' perception of supervisor support.

Second, the field of HRM has been hampered by research using cross-sectional research designs, and additional intervention studies are urgently needed (Tregaskis & Brewster, 2006). Further, intervention studies have, by tradition, used statistical models that are not well suited for studying intraindividual change. Therefore, our study makes a methodological contribution by using latent growth curve modelling (LGCM) and explicitly model change in supervisor support as the primary outcome, and not just level, as in more traditional analyses, such as ANOVA or cross-lagged panel models (Selig & Preacher, 2009). We also extend the LGCM to include mediated effects of the intervention through supervisor support on a more distal outcome: climate for innovation. This is of interest, given the suggestion that HR practices should affect collective-level outcomes, such as the climate at work (Boxall & Macky, 2009). Mediation analysis using LGCM provides a test of the interventions effect beyond assessing change only in the outcome and allows for identifying underlying mechanisms concerning how the intervention achieved its effects (Cheong, MacKinnon, & Toon Khoo, 2003). Although mediation implies a process over time, tests of mediation are often conducted with cross-sectional data (MacKinnon, Cox, & Baraldi, 2012). Previous research shows that mediated effects based on cross-sectional data are severely biased when compared to mediated effects based on longitudinal data (e.g. Aguinis, Edwards, & Bradley, 2017). In addition, relying on longitudinal data greatly enhances power to detect mediated effects and allows for the measure of change in response to an intervention (MacKinnon et al., 2012).

The importance of supervisor support

Supervisor support is considered vitally important in organizations. It often refers to the relational aspects of leader–follower interactions; that is, to what extent subordinates perceive their supervisor gives help and support at work. Supervisor support encompasses both instrumental and socioemotional support (Amabile et al., 2004), such as helping employees when their workloads increase and assisting employees with the fulfilment of their duties (Shanock & Eisenberger, 2006). According to the Job Demands–Resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) and empirical research (e.g. Ng & Sorensen, 2008), supervisor support is a resource at the interpersonal level and can also represent an important factor for connecting employees to the resources and supports they need, both in general and in particular, for the implementation of creative ideas.

Empirical studies suggest that supervisor support is positively related to subordinate performance (Bhanthumnavin, 2003), creativity (Amabile et al., 2004; Sellgren, Ekvall, & Tomson, 2008), commitment (Guest, Isaksson, & DeWitte, 2010; Rhoades & Eisenberger, 2002), work motivation (Gillet et al., 2013), and affective well-being and lower degree of stress (Skakon et al., 2010).

Supervisor support and climate for innovation

A specific area of interest in previous research has been the support a supervisor can offer to create a positive climate for learning, innovation, and creativity. A positive climate for innovation, which is the focus of the current study, has been defined as the extent to which employees perceive that the values and norms of an organization emphasize innovation (Anderson & West, 1996; West & Wallace, 1991). It includes employees' perceptions of support and encouragement provided by the organization to enable them to take initiative and explore innovative approaches (Sarros, Cooper, & Santora, 2008). A number of empirical studies have examined the impact supervisors have on learning, innovation, and creativity. Mumford, Scott, Gaddis, and Strange (2002) conducted a review on leadership behaviours that contribute to organizational innovation and creativity. Based on their review, the authors suggest that supervisor support focusing on employee competence and feelings of efficacy promotes better performance and creativity in an organization. Supervisor support, including instrumental as well as emotional support, has been identified as an important component of workplace creativity (Amabile et al., 2004). Furthermore, employees who perceive their supervisor as caring, supportive, reliable, and loyal exhibit higher levels of innovative behaviours (Schermyly, Meyer, & Dämmer, 2013). In sum, previous studies suggest that supervisor support is associated with employees' perception of positive climate for innovation. This assumption, however, is yet to be tested in intervention studies, where supervisor support is manipulated and a stronger test of this assumption can be performed.

Improving supervisor support by aligning employment and work practices

HRM may be defined as the process of managing people and work in organizations (Boxall, Ang, & Bartram, 2011), a process all organizations need to survive and grow (Watson, 2005). Consequently, HR systems can be understood as involving two broad types of practices: employment practices and work practices (Godard, 2004; Whitfield & Poole, 1997). Employment practices include strategies to, for example, recruit, motivate, develop, and retain employees, while work practices have to do with the way work is organized. HR systems, including both employment and work practices, are suggested to affect performance at multiple levels in organizations (Boxall & Purcell, 2008; Lepak, Liao, Chung, & Harden, 2006) and also a range of variables on a more collective level, such as the social and psychological climate in an organization (Boxall & Macky, 2009). However, arguments have been made that to develop a more fine-grained understanding of HR systems, we need to move beyond the fascination with

counting practices and instead focus on identifying the critical process that links intended practices to outcomes (Boxall & Macky, 2009; Paawe, 2009). Numerous factors may determine if a change in HR practices in fact translates into change in manager and employee behaviour, but one factor that has proven to be important in shaping the pattern of interaction between managers and employees is the horizontal integration of HR practices (Boxall & Mackey, 2009).

Horizontal integration refers to the internal alignment of HR practices with each other in a manner that supports organizational goals (Guest, 1997). The internal alignment of HR practices is important for obtaining a desired change in employee attitudes or behaviours, which in turn may impact attaining organizational goals (Beer et al., 2015). While previous studies have focused on examining the benefits of internal alignment of employment practices, including training, performance management, and recruitment, less attention has been given to work practices. One exception is a study by Cristina et al. (2017) who found that aligning job redesign with performance management systems and training was successful in reducing energy consumption in an organization. Thus, the alignment of employment practices to how the work is organized may offer additional benefits beyond just aligning employment practices, and additional studies that examine how employment practices and work practices can be aligned have been suggested as an important next step in the HRM literature (Boxall & Macky, 2009; Christina et al., 2017). In the present study, alignment of employment and work practices translate into the alignment of leadership training with job redesign.

Strategies to improve supervisor support often include leadership training, where leaders are given opportunities to practice desired leadership behaviours (e.g. Barling, Loughlin, & Kelloway, 2002), and such training has, in general, been found to be effective (e.g. Avolio Reichard, Hanna, Walumbwa, & Chan, 2009). However, recent studies suggest that the lack of supervisor support may not only be due to personal capabilities of leaders but also structural aspects of their jobs, such as lack of time to interact with employees (Tafvelin et al., 2017), a large amount of administrative tasks (Wolmesjö, 2005), and too many employees to manage effectively (Björk & Härenstam, 2016; Wallin, Pousette, & Delve, 2014). Therefore, we argue that combining employment practices, such as leadership training, with work practices, such as job redesign, may be beneficial. Job redesign initiatives are usually focused on improving work environments by providing additional resources and reducing demands with the aim of improving working conditions through job restructuring, job tasks, or making changes to roles. So far, job redesign initiatives have primarily focused on making changes to improve working conditions directly on an employee level (LeBlanc, Hox, Schaufeli, Taris, Peeters, 2007). More studies are needed to shed light on job redesign initiatives at the managerial level to increase employee resources, such as supervisor support.

We argue that the alignment of employment and work practices, in terms of leadership training and job redesign, may be beneficial because enabling change on one organizational level may require related changes on other levels (von

Thiele Schwarz, Lundmark, & Hasson, 2016). Further, intervening on the managerial level (e.g. by redesigning supervisors' job tasks to enable provision of support) may be an important prerequisite for successful initiatives at the employee level. Therefore, to provide both the possibility to act in a new way (through the redesign) and acquire new skills (through training) in performing new behaviours, horizontal integration is more efficient than implementing the two HR practices in isolation.

The purpose of the present study was to examine how supervisor support may be increased by aligning HR practices, such as training with job redesign (how the work is organized). Based on the literature on the benefits of aligning HR practices (Boxall & Macky, 2009) we expect that the combination of leadership training and job redesign will improve supervisor support. We therefore propose:

Hypothesis 1. Employees' perception of supervisor support in the intervention group will increase over time compared to the comparison group.

Also, grounded in the literature and previous studies of the benefits of supervisor support for employee learning and development, we expect increases in supervisor support to be related to increases in employees' perception of a positive climate for innovation. This is in line with the Job Demands–Resources model (Demerouti et al., 2001), which suggests that increases in a resource, such as supervisor support, positively impacts employees' perception of their work environment. It is also in line with the HRM literature and theories of alignment, which suggest that alignment is important not only for employee performance, but also for the psychological and social climate at work (Boxall & Macky, 2009). We therefore propose:

Hypothesis 2. The positive effects of the intervention on climate for innovation will be mediated by increases in supervisor support.

Method

The intervention

The social services in an average-size Swedish municipality initiated group discussions among its employees to improve work processes within the organization. The aim was to detect areas that need improvement, and one area was elder care, specifically home help services. In home help services, assistant nurses conduct care and service in the homes of elderly clients in a given geographical area. The assistant nurses mostly work alone but typically have an office where they meet colleagues and attend staff meetings. The employees expressed a need for more contact with their supervisors and opportunities for enhancing their competencies.

Because the supervisors had many administrative tasks that occupied their time—including staffing, budgeting, planning, and follow-up activities—the management redesigned the supervisors' work roles into two main functions: administration

and leadership. Three supervisors chose to work solely within administration, and nine supervisors chose to work as first-line leaders, which includes direct contact with employees and clients. All 12 supervisors met with their manager and a management developer every fortnight for management team meetings designed to sharpen and reach consensus on a shared mental model of the new work roles. These meetings continued throughout the first year of the changes, and the supervisors sometimes described them as conflicting and intense (for detailed information of the changes and the supervisors' views, see [Reference omitted for review]). In addition to supervisor role modifications, the geographical boundaries for the assistant nurses changed over the first year to better fit a closer relation to the first-line leader. In total, the first-line leaders were supervising 217–250 employees in 21 work groups. The number of employees increased over the years as the need of eldercare increased, and more employees got permanent positions. On average, each leader was responsible for about 24 assistant nurses the first year.

Before launching the work role changes, the nine first-line leaders specializing in the relational role were sent to leadership training. The training focused on developing the first-line leaders' communicative, relational, and coaching skills to facilitate employees' learning and development, characteristics that are also stressed in the leadership literature (Ellinger et al., 2013; Moen & Federici, 2012). Both theoretical and practical elements were included in the training. The theoretical elements were based on reading and discussing coaching literature (e.g. Berg, 2004). The practical elements included role play and training in communicative strategies with a focus on how to create conditions for a positive and creative work environment. The training consisted of five days of group seminars scheduled over four months. Between the group seminars, the first-line leaders were given three, individual 45-minute sessions. One-hour individual follow-up meetings were held at 6 and 12 months after the last seminar. In the three individual and follow-up sessions, the consultants supported growth of the leaders' confidence and self-esteem.

Participants and procedure

Given the naturalistic setting of the project, we employed a quasi-experimental design that Shadish, Cook, and Campbell (2002) refer to as a non-equivalent comparison group design. An invitation to participate was sent to the nine municipalities situated in the same county as the intervention group. Nine organizations in six municipalities representing different organizational sizes in urban and rural contexts agreed to participate. In these organizations, first-line leaders held traditional managerial roles, including administrative and leadership functions. The same questionnaire was distributed to employees (assistant nurses) in the home help services in the intervention and comparison group at the first, second, and third year of the change (March–April 2012, 2013, and 2014) to assess their perception of supervisor support and climate for innovation. The questionnaires and prepaid envelopes addressed to the researchers were distributed by the supervisor in each organization. All participants received written information about the research project and were informed

that data would always be presented on a group level and that participation was voluntary.

The final sample included 524 employees: 245 in the intervention group and 279 in the comparison group. All participants were nursing assistants in home help services and had permanent positions or were long-term employed substitutes; see Table 1 for demographics and response rates for the intervention and comparison groups. Overall, the two groups displayed similar demographics, with the exception of a higher percentage of permanent positions in the comparison group (94%, compared to 87% in the intervention group). Response rates were also similar, with the exception of a lower response rate for the comparison group at the third-year follow-up (48%, compared to 70% for the intervention group).

Measures

Given the focus of the job redesign initiative to enable leaders to more closely support employees, we included supervisor support as our primary outcome measure. We also included a secondary, or more distal, outcome measure in terms of climate for innovation to achieve a more rigorous test of the relationship between supervisor support and climate for innovation demonstrated in previous research.

Perceived supervisor support

We measured supervisor support on a three-item scale derived from earlier research (e.g. Dallner, Elo, & Gamberale et al., 2000; Karasek & Theorell, 1990). The items were, "If I need, I get help and support from my next manager", "It is easy for me to get access to my immediate superior", and "My next manager encourages me to take part in important decisions". Five response alternatives were graded from 1 (very seldom or never) to 5 (very often or always). Internal consistency (ω) of the scale at the different time points is reported in Table 1.

Climate for innovation

We measured employees' perception of climate for innovation with a three-item scale from the QPS Nordic (Dallner et al., 2000). The items were, "Do the employees at your workplace take initiatives of their own?", "Are the employees at your workplace encouraged to make improvements?", and "Is there enough communication at your workplace?" Five response alternatives were graded from 1 (very seldom or never) to 5 (very often or always). Internal consistency (ω) of the scale at baseline and 24 months are reported in Table 1.

Table 1. Demographics and response rates for intervention and comparison group.

| | Intervention | Comparison |
|---------------------|---------------|---------------|
| Mean age | 44 years old | 43 years old |
| Male (%) | 14% male | 16% male |
| Tenure | 9.8 years | 11 years |
| Permanent position | 86.5 % | 94% |
| Response rate, 2012 | 140/217 (65%) | 169/262 (65%) |
| Response rate, 2013 | 128/238 (54%) | 149/267 (56%) |
| Response rate, 2014 | 174/250 (70%) | 124/254 (48%) |

Intervention variable

The intervention group was coded as 1 and the comparison group as 0.

Analysis

Mplus version 8.1 was used to perform the statistical analyses (Muthén & Muthén, 1998–2017). First, we examined longitudinal measurement invariance in the perceived supervisor support scale and the climate for innovation scale to ensure that the same construct was measured across time (Widaman, Ferrer, & Conger, 2010). A series of nested, longitudinal, confirmatory factor analysis (CFA) models with equality constraints on the factor loadings (metric invariance), item intercepts (scalar invariance), and perceived social support scale. Additionally, residual variances (strict invariance) were estimated and compared using model fit indices. Following Chen's (2007) recommendations, a change in CFI (Δ CFI) of less than 0.01 and a change in RMSEA (Δ RMSEA) of less than 0.015 or a change in SRMR (Δ SRMR) of less than 0.030 would support metric invariance. For scalar and strict invariance, a change in CFI (Δ CFI) of less than 0.01 and change in RMSEA (Δ RMSEA) of less than 0.015 or a change in SRMR (Δ SRMR) of less than 0.010 would indicate invariance across time. In the longitudinal CFA models the residuals of the same items were allowed to covary over time because indicator-specific variance that is reliable is likely to correlate over time (Little, 2013).

Second, we estimated LGCM (e.g. Duncan, Duncan, Strycker, & Chaumeton, 2007; Duncan, Duncan, Strycker, Li, & Alpert, 1999) to examine the growth trajectory (curve) of perceived supervisor support over time and the longitudinal relations among the study variables. Scores for supervisor support at baseline, 12 month follow-up, and 24 month follow-up were used as observed variables in a first-order LGCM. The latent intercept variable was centred relative to scores at the first time-point (i.e. baseline), so that the intercept represented the initial status of the growth curve. The linear slope represented the functional form of the growth trajectory of supervisor support across the time-points. A linear slope could not be fit to the climate for innovation measure. For this reason, climate for innovation at the 24 month follow-up was assessed as the target distal outcome, and a latent variable was created at both baseline and at the 24 month follow-up.

To determine the growth trajectory for supervisor support, we first tested an unconditional linear growth model. Second, a conditional growth model (i.e. the intervention mediated

effects LGCM) was evaluated with the intervention variable predicting the supervisor support growth trajectory, which in turn predicted climate for innovation at 24 months while controlling for climate for innovation at baseline. This model was specified to examine if the growth trajectory of supervisor support mediated the relationship between the intervention variable and climate for innovation at the 24-month follow-up. Climate for innovation was specified as a longitudinal CFA model with equality constraints imposed on the factor loadings and item intercepts. To account for missing data, we used full information maximum likelihood estimation, which is superior to other methods of handling missing data, such as listwise deletion or pairwise deletion, when data are missing at random (Enders & Bandalos, 2001). We used conventional fit indices to evaluate model fit: the comparative fit index (CFI), the Tucker-Lewis Index (TLI), the standardized root mean residual (SRMR), and the root mean square error of approximation (RMSEA). Traditional cut-off criteria (CFI and TLI > 0.90, SRMR and RMSEA < 0.08) were used to indicate acceptable fit (Kline, 2015), whereas Hu and Bentler's (1999) more restrictive criteria (CFI and TLI > 0.95, SRMR and RMSEA < 0.06) were used to indicate very good fit. We estimated 95% Monte Carlo confidence intervals (CI_{MC} ; Falk & Biesanz, 2016; Preacher & Selig, 2012) to determine if the mediated effect was statistically significant. A mediated effect was supported if the 95% CI_{MC} did not contain zero. In all analyses, we accounted for the hierarchical structure of the data (employees were nested within 21 supervisors) by adjusting the standard errors and goodness-of-fit model testing using Muthén and Satorra's (1995) aggregated analysis (termed TYPE = COMPLEX in Mplus).

Results

Descriptives and preliminary analysis

Means and standard deviations for all study variables are presented in Table 2. We performed an attrition analysis to examine potential selection bias in the sample. Independent sample *t*-tests were used to examine differences in age, perceived supervisor support, and climate for innovation at the first measurement point between dropouts (defined as those responding only at the first measurement point) and stayers in the study. No statistically significant differences (all *p*s > 0.05, Cohen's *d*s < 0.15) were observed. We also performed a chi-square test of independence to examine the association between sex and dropout, and no

Table 2. Descriptive statistics, reliability coefficients, and correlations between study variables (*N* = 524).

| Scale | M | SD | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. |
|-----------------|-------|-------|--------|-------|------|--------|-------|-------|-------|-------|-------|
| 1. Age | 43.75 | 13.21 | | | | | | | | | |
| 2. Gender | 1.15 | 0.36 | -.13** | | | | | | | | |
| 3. Tenure | 10.37 | 8.64 | .52** | -.15* | | | | | | | |
| 4. Intervention | 0.47 | 0.50 | -.05 | .04 | .06 | | | | | | |
| 5. PSS, T1 | 3.26 | 1.08 | -.02 | .04 | .02 | -.38** | (.85) | | | | |
| 6. PSS, T2 | 3.33 | 0.99 | -.09 | -.05 | -.06 | .02 | .39** | (.85) | | | |
| 7. PSS, T3 | 3.54 | 0.96 | -.10 | .11 | -.03 | .03 | .28** | .45** | (.88) | | |
| 8. CFI, T1 | 3.32 | 0.71 | -.01 | .04 | -.01 | -.33** | .58** | .19* | .20* | (.64) | |
| 9. CFI, T3 | 3.45 | 0.65 | -.09 | .05 | -.01 | .07 | .25** | .26** | .47** | .37** | (.66) |

Internal consistency reliabilities are on the diagonal in parentheses.

PSS: perceived supervisor support; CFI: climate for innovation.

p* < .05, *p* < .01.

statistically significant association was found ($p > 0.05$, Cramer's $\phi = 0.01$). Based on the attrition analyses we assumed that the data were missing at random.

The results from the longitudinal CFA models supported longitudinal measurement invariance in both perceived supervisor support and climate for innovation (see Table 3). Due to inadmissible solutions (e.g. negative variances), we were unable to specify a second-order LGCM for perceived supervisor support. However, given that strict measurement invariance was supported, the mean scores used in the LGCM will not be distorted due to differences in reliability over time (Marsh, Nagengast, & Morin, 2013).

Latent growth curve modelling

In the first step, an unconditional linear growth model for supervisor support was tested and the model fit was, $\chi^2(1) = 0.76$; $p = 0.3832$; CFI = 1.00; TLI = 1.00; RMSEA = 0.004; 95% CI (0.00, 0.11); SRMR = 0.02. Mean scale values at the three time points were 3.27 (baseline), 3.33 (12 months), and 3.56 (24 months). The intercept factor mean (3.24, $p < .001$) and the intercept variance were statistically significant (0.54, $p = .010$), indicating that there were individual differences in perceived supervisor support at baseline. The slope factor mean was positive and statistically significant (0.15, $p = .040$), suggesting that the mean level of perceived supervisor support increased over time, whereas the slope factor variance was not statistically significant (0.11, $p = .259$). The correlation between the intercept and the slope factors for perceived supervisor support was negative and not statistically significant ($r = -0.45$, $p = .059$). Although the slope variance was not statistically significant the non-zero variance estimate indicates that there is variability in slope. Furthermore, it is known that the 1-*df* Wald test (i.e. the estimated slope variance divided by its estimated standard error of estimate, which is implemented in Mplus) has low power when only three time points are used (e.g. Berkhof & Snijders, 2001; Hertzog, von Oertzen, Ghisletta, & Lindenberger, 2008; Rast & Hofer, 2014). Scholars have also argued that adding predictors to the model can more effectively tease out variance in a slope, which is likely a function of increased power (e.g. Muthén, 2013). To further investigate the variability of the slope, we examined the longitudinal covariance pattern and used the equation for the variance of the slope expressed as (Wickrama, Lee, O'Neal, & Lorenz, 2016):

$$\text{Var}(\pi_1) = \frac{(\sigma_{12} + \sigma_{23} - 2\sigma_{13})}{2}$$

where 12 is the observed covariance between supervisor support in year 1 and year 2, 23 is the observed covariance between supervisor support in year 2 and year 3, and 13 is the observed covariance between year 1 and year 3. Examination of the longitudinal covariance patterns can provide evidence of significant slope variance because the growth parameters in the LGCM are derived from the covariance matrix of the measured variables (Brown, 2006; Wickrama et al., 2016). If there is a lack of variability in the slope 12, 13, and 23 are equal or near equal, whereas a positive $\text{Var}(\pi_1)$ value suggests significant slope variation. In the current data 12 = 0.44, 23 = 0.43, and 13 = 0.32, which resulted in a positive value of $\text{Var}(\pi_1) = 0.12$. Higher covariances between adjacent occasions than non-adjacent occasions and the positive $\text{Var}(\pi_1)$ value indicate that there is significant slope variation. Hence, based on these findings we conclude that there was an average increase in supervisor support over time and that there was significant variation in change between individuals.

Next, we tested a conditional linear growth model (i.e. the intervention-mediated effects LGCM) with the intervention variable as a predictor of the slope of supervisor support that, in turn, predicted climate for innovation at 24 months (see Figure 1). The model fit was acceptable, $\chi^2(32) = 61.45$; $p = 0.0013$; CFI = 0.95; TLI = 0.93; RMSEA = 0.04; 95% CI (0.03, 0.06); SRMR = 0.07. The residual variance of the slope factor was statistically significant in the conditional LGCM (0.12, $p = 0.001$) and the residual variance of the intercept factor was also statistically significant (0.57, $p < 0.001$). In support of Hypothesis 1, an intervention effect was found in the prediction of the slope of supervisor support ($B = 0.22$, $p = 0.037$), meaning that participants in the intervention group had a stronger (and positive) slope of perceived supervisor support relative to the comparison group. In addition, the slope of supervisor support was a statistically significant predictor of climate for innovation at 24 months ($B = 1.67$, $p < 0.000$). In support of Hypothesis 2, the indirect effect of the intervention variable on climate for innovation at 24 months through the growth trajectory of supervisor support was also statistically significant, $ab = 0.36$ (95%) CI_{MC} [0.02, 0.83]. In summary, supervisors in the intervention group were perceived by their employees as increasing their support more over the study period relative to the supervisors in the comparison

Table 3. Model fit of the longitudinal CFA and Latent Growth Curve Models (LGCM).

| Model | χ^2 | <i>df</i> | <i>p</i> | RMSEA [90%CI] | CFI | TLI | SRMR |
|------------------------------------|----------|-----------|----------|-------------------|------|------|------|
| Supervisor support | | | | | | | |
| Configural | 22.92 | 15 | 0.0858 | 0.03 [0.00, 0.06] | 0.99 | 0.97 | 0.06 |
| Metric | 31.23 | 19 | 0.0381 | 0.04 [0.01, 0.06] | 0.98 | 0.98 | 0.08 |
| Scalar | 34.64 | 23 | 0.0565 | 0.03 [0.00, 0.05] | 0.98 | 0.98 | 0.08 |
| Strict | 41.77 | 29 | 0.0589 | 0.03 [0.00, 0.05] | 0.98 | 0.98 | 0.08 |
| Climate for innovation | | | | | | | |
| Configural | 4.15 | 5 | 0.5276 | 0.00 [0.00, 0.06] | 1.00 | 1.01 | 0.03 |
| Metric | 4.00 | 7 | 0.7796 | 0.00 [0.00, 0.04] | 1.00 | 1.03 | 0.04 |
| Scalar | 6.65 | 9 | 0.6733 | 0.00 [0.00, 0.04] | 1.00 | 1.02 | 0.04 |
| Latent Growth Curve Models | | | | | | | |
| Unconditional LGCM | 0.76 | 1 | 0.3832 | 0.00 [0.00, 0.11] | 1.00 | 1.01 | 0.02 |
| Intervention-mediated effects LGCM | 61.45 | 32 | 0.0013 | 0.04 [0.03, 0.06] | 0.95 | 0.93 | 0.07 |

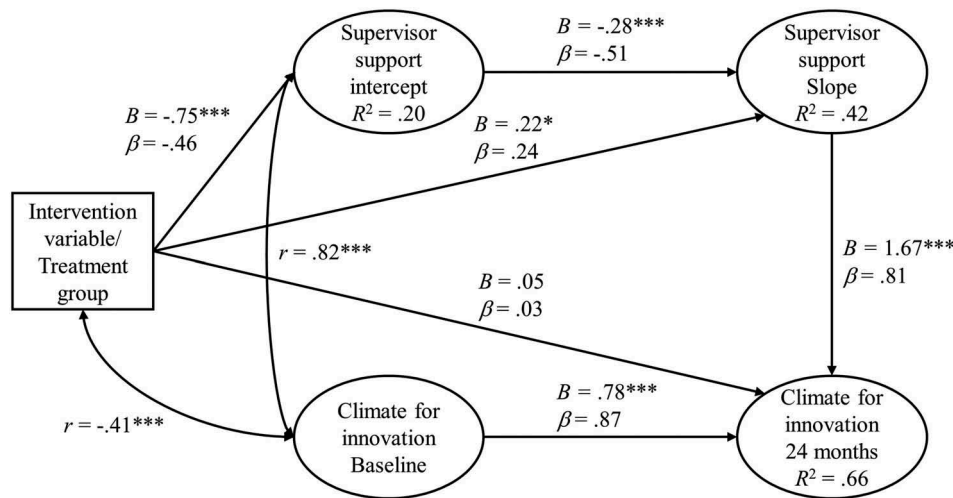


Figure 1. Latent growth curve model of intervention mediated effects.

group. These growth trajectories were, in turn, positively associated with climate for innovation at the 24-month follow-up.

Discussion

The current study examined the benefits of integrating employment and work practices in terms of aligning leadership training with job redesign to improve supervisor support. We used LGCM to assess changes in supervisor support and included an intervention-mediated effect through supervisor support on a more distal outcome: climate for innovation. The findings revealed that employees in the intervention group experienced an increase in supervisor support during the intervention period compared to the comparison group, which supports Hypothesis 1. In addition, the increase in supervisor support in the intervention group was positively related to an improvement in how creative the climate was as perceived by employees after the intervention, which supports Hypothesis 2. Our findings are aligned with earlier research (Amabile et al., 2004; Mumford et al., 2002; Schermuly et al., 2013), suggesting perceived supervisor support is important for an innovative climate at work. The intervention design in the current study strengthens the findings from previous studies and shows that increased supervisor support relates to improvement of the innovative climate. To date, a few studies have examined outcomes of aligning employment and work practices on the employee level and produced promising results (e.g. Christina et al., 2017). To our knowledge, our study is the first to show that aligning job redesign with training at the managerial level is beneficial to employees. We suggest that there are several reasons as to why alignment of employment and work practices, in terms of combining training with job redesign at the managerial level, are successful.

First, redesigning the leader role to include fewer administrative tasks and more potential time with employees is only a first step towards more supportive leadership. The job redesign initiative itself does not instruct leaders in *how* to support employees, rather it creates possibilities to do so. By aligning the redesign of the leader role with training, leaders are given

guidance on how they may support employees and which behaviours to express. In a similar manner, if leaders were provided with training only, without the job redesign initiative, chances are they would return to work and have had no opportunity or time to support employees because of environmental constraints, such as the burden of administrative tasks. The latter is a well-known problem within the transfer of training literature, where studies have shown that individuals' application of new knowledge and skills at work after attending training is hampered by environmental factors, such as lack of opportunities and support to perform new behaviours (Grossman & Salas, 2011).

Second, in addition to possible synergetic effects of redesign and training, the participatory elements of the design may have been of importance. Redesign and training are usually characterized as organizational top-down processes (Bakker & Demerouti, 2014). However, the usefulness of a participatory approach to fit the content of the training and redesign with environmental aspects as well as the needs of the participants is well-known (Nielsen & Randall, 2015; von Thiele Schwarz et al., 2016). In the current study, employees' knowledge of their needs (more support) and context (managers lacking time and skills) for creating changes provided the basis for the planned changes. We argue that a participatory approach may be particularly important when organizations strive to integrate and align employment and work practices.

Third, the change initiative used a multilevel approach that involved change on one organizational level to enable change on another. By targeting leaders' opportunity (through redesign) and ability (through training) to perform new behaviours, the objective was to enable changes at an employee level. Addressing change on multiple levels when needed has been suggested for creating better chances for initiating and sustaining change over time (Friedrich, Jenny, & Bauer, 2015; von Thiele Schwarz et al., 2016). Focusing only on the employee level might, in this case, have led to the lack of needed line manager support.

Our findings also indicate, in line with previous research (Amabile et al., 2004; Mumford et al., 2002; Schermuly et al.,

2013), that perceived supervisor support is important for fostering an innovative climate at work. The intervention design in the current study strengthens the findings from previous studies and shows that increased supervisor support is related to improvements of the innovative climate. Moreover, the first-line managers in their new role were not only giving support, they were also receiving support by their senior managers in biweekly meetings during for the first year. Thus, the alignment of activities on an employee level with activities on both line manager level and senior management level may also help explain the positive intervention outcomes of the present study. Support by senior managers when developing new leader roles to improve creativity was stressed by Mumford and colleagues (2007), and the authors also highlighted the importance of working out new roles over time. In the current study, the new roles were formed over a year during scheduled meetings, and the leaders reported that the discussions could be intense and conflicting. This may be an indication of the importance of time needed to develop a new role as a leader.

A contribution of the current study was the use of LGCM to examine the direct effects of the intervention on the primary outcome of supervisor support and intervention-mediated effects on the more distal outcome of climate for innovation. With three repeated measures, the data were well suited for LGCM because we expected that supervisor support would increase in a systematic way after the intervention. The effectiveness of interventions has traditionally been assessed using time-specific comparisons of mean levels between an intervention and control group (Curran & Muthén, 1999). However, given that the targeted behaviour (i.e. supervisor support) often develops naturally over time, and interventions are aimed at altering this natural developmental trajectory, time-specific mean level comparisons might not be of primary interest. Focusing solely on time-specific mean comparisons can be limiting and might even provide misleading results when the targeted behaviours naturally develop over time (Curran & Muthén, 1999). By using LGCM, the researcher acknowledges that, on average, one or several variables of interest are changing in a systematic, and that interindividual variability exists around the average rate of change (Ployhart & Vandenberg, 2010). Many intervention studies neglect the link between theory and evaluation because theories about processes (i.e. changes) are analysed using static statistical models (e.g. RM-ANOVA) not accounting for change in the outcome variables (MacKinnon & Dwyer, 1993). Beyond merely assessing direct effects of an intervention on an outcome, it is often of interest to examine potential mechanisms that can explain how the intervention achieved its effects (Cheong et al., 2003). Using LGCM and mediation analysis in an LGCM framework allows researchers to deal with these shortcomings and explicitly model change processes over time, affecting how a mediator can influence the outcome (Selig & Preacher, 2009).

Practical implications

The findings in the current study suggest that aligning employment and work practices, such as leadership training and job redesign, may be a worthwhile strategy for

organizations to enhance supervisor support. Job redesign initiatives have the advantage of being an effort that organizations can independently plan, manage, and control, compared to focusing on training only, where change is entirely dependent on the individual leader's ability to change their leadership behaviours.

Our findings also suggest that initiatives to improve supervisors' work environment, in our case changing the leader role to include more time with employees and less time on administrative tasks, is beneficial to the employees they manage. So, by intervening at the managerial level, organizations can achieve positive effects at other levels, in this case the employee level. Previous studies suggest that leadership training may be a cost effective way to improve employee work environments (Kelloway & Barling, 2010). Our study suggests that aligning leadership training with job redesign initiatives at the managerial level also shows promise in improving employees' perception of the support they receive from their supervisors, and that this is positively related to employees' experience of an innovative work climate.

Finally, it is a well-known problem that public sector managers have too many administrative tasks (Tafvelin et al., 2017). Our findings suggest that it is possible to organize managerial work in a way that includes less administration. In our study, administrative tasks were delegated to a support position, which freed time for managers to meet and interact with their employees. This might be a fruitful example for other public organizations to follow.

Limitations and future directions

The results of the present study should be interpreted in light of its limitations. First, we were not able to randomize managers into comparison and intervention groups, as this was an attempt to follow a change process initiated by the intervention group organization. As such, it was an attempt to maximize external validity, which sometimes comes at the expense of internal validity (Shadish et al., 2002). Therefore, there may be other factors that affected the observed differences between the groups. However, through contact with senior management in the municipalities, we know that no major changes were implemented in the comparison group during the study period, and in the intervention group, other change initiatives were put on hold during this period. We therefore find alternative explanations to our findings to be unlikely; nonetheless, given our design, we cannot rule them out. Second, all participants were recruited from relatively homogenous organizations within a single county in northern Sweden. Future research needs to investigate whether these findings are replicable in other settings. Third, having three measurement points only allowed us to assess a linear change trajectory. Having four or more measurement points would make it possible to examine other forms of change trajectories (e.g. quadratic or cubic; see Ployhart & Vandenberg, 2010), which could provide a more detailed account of the short- and long-term effects of the intervention (e.g. do the effects level off or accelerate over time). It would, for example, make it possible to examine if the effects of the intervention were characterized by a rapid increase that decreased over time or a slow increase that accelerated over time. Fourth, we relied solely on

self-report assessments and narrow measures of social support and climate for innovation to evaluate the effects of the intervention. Future research could, for example, focus on both quality (e.g. employee perceptions) and quantity (e.g. time spent with manager) of social supports and include different measures of climate for innovation (e.g. employee and manager perceptions, number of innovative ideas) to provide more specific knowledge of which aspects of social support are affected by this type of intervention and how those different aspects of social support are related to climate for innovation.

In the present study, we followed a change process initiated by the social service, which put constraints on our ability to impact the intervention and research design. The intervention in the present study consisted of horizontally integrating two HR practices, one employment practice (leadership training), and one work practice (job redesign). An important avenue for future research is to further tease out how work practices may be integrated not only with training but with other employment practices at the managerial level (such as rewards systems or recruitment) to positively impact employees' perceptions of supervisor support. Also, we only examined employee outcomes. For a more fine-grained understanding of how horizontal integration may be beneficial at multiple levels, additional intervention studies are needed that investigate how integrating work and employment practices relates to manager-rated and organizational outcomes (Christina et al., 2017).

Conclusion

The current findings suggest that horizontally integrating employment and work practices, in terms of aligning leadership training with job redesign, is a promising strategy that may result in positive outcomes at multiple levels in organizations. By redesigning the leadership role to include fewer administration tasks and more time to meet employees, combined with leadership training, supervisors' abilities to support employees were enhanced. Additionally, employees' perceptions of increased supervisor support also improved the climate at work. By aligning redesign initiatives with leadership training, organizations can improve employees' perceptions of supervisor support and their work environments thereby creating a workplace where employees can develop and prosper.

Data availability statement

The data that support the findings of this study are available from the corresponding author, [author initials blinded for review], upon reasonable request.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

This work was supported by FORTE under Grant 2014-073; Forskningsrådet för Hälsa, Arbetsliv och Välfärd [2014-073].

References

- Aguinis, H., Edwards, J. R., & Bradley, K. J. (2017). Improving our understanding of moderation and mediation in strategic management research. *Organizational Research Methods*, 20, 665–685.
- Amabile, T., Schatzel, E., Moneta, G., & Kramer, S. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *The Leadership Quarterly*, 15, 5–32.
- Anderson, N., & West, M. A. (1996). The team climate inventory: Development of the TCI and its applications in teambuilding for innovativeness. *European Journal of Work and Organizational Psychology*, 5, 53–66.
- Avolio, B. J., Reichard, R. J., Hannah, S. T., Walumbwa, F. O., & Chan, A. (2009). A meta-analytic review of leadership impact research: Experimental and quasi-experimental studies. *The Leadership Quarterly*, 20, 764–784.
- Bakker, A., & Demerouti, E. (2014). Job demands–Resources theory. In P. Y. Chen & C. L. Cooper (Eds.), *Work and wellbeing: A complete reference guide* (Vol. 3, pp. 1–28). Chichester, UK: John Wiley & Sons, Ltd.
- Barling, J., Loughlin, C., & Kelloway, E. K. (2002). Development and test of a model linking safety-specific transformational leadership and occupational safety. *Journal of Applied Psychology*, 87, 488–496.
- Beer, M., Boselie, P., & Brewster, C. (2015). Back to the future: Implications for the field of HRM of the multistakeholder perspective proposed 30 years ago. *Human Resource Management*, 54, 427–438.
- Berkhof, J., & Snijders, T. A. (2001). Variance component testing in multilevel models. *Journal of Educational and Behavioral Statistics*, 26, 133–152.
- Berg, M. E., & Erlandsson, A. (2004). *Coaching: att hjälpa ledare och medarbetare att lyckas [Coaching: to help leaders and employees to succeed]*. Lund: Studentlitteratur.
- Bhanthumnavin, D. (2003). Perceived social support from supervisor and group members' psychological and situational characteristics as predictors of subordinate performance in Thai work units. *Human Resource Development Quarterly*, 14, 79–97.
- Björk, L., & Härenstam, A. (2016). Differences in organizational preconditions for managers in genderized municipal services. *Scandinavian Journal of Management*, 32, 209–219.
- Boxall, P. (2012). High-performance work systems: What, why, how and for whom? *Asia Pacific Journal of Human Resources*, 50, 169–186.
- Boxall, P., Ang, S. H., & Bartram, T. (2011). Analysing the 'black box' of HRM: Uncovering HR goals, mediators, and outcomes in a standardized service environment. *Journal of Management Studies*, 48, 1504–1532.
- Boxall, P., & Macky, K. (2009). Research and theory on high-performance work systems: Progressing the high-involvement stream. *Human Resource Management Journal*, 19, 3–23.
- Boxall, P., & Purcell, J. (2008). *Strategy and human resource management* (2nd ed.). New York, NY: Palgrave Macmillan.
- Brown, T. A. (2006). *Confirmatory factor analysis for applied research*. New York, NY: Guilford Press.
- Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal*, 14, 464–504.
- Cheong, J., MacKinnon, D. P., & Khoo, S. T. (2003). Investigation of mediational processes using parallel process latent growth curve modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 10, 238–262.
- Christina, S., Dainty, A., Daniels, K., Tregaskis, O., & Waterson, P. (2017). Shut the fridge door! HRM alignment, job redesign and energy performance. *Human Resource Management Journal*, 27, 382–402.
- Curran, P. J., & Muthén, B. O. (1999). The application of latent curve analysis to testing developmental theories in intervention research. *American Journal of Community Psychology*, 27, 567–595.
- Dallner, M., Lindström, K., Elo, A.-M., Skogstad, A., Gamberale, F., Hottinen, V., Knardahl, S., & Orbede, E. (2000). *Validation of the general nordic questionnaire (QPS Nordic) for psychological and social factors at work*. Copenhagen: Nordic Council of Ministers.
- Daniels, K., Gedikli, C., Watson, D., Semkina, A., & Vaughn, O. (2017). Job design, employment practices and well-being: A systematic review of intervention studies. *Ergonomics*, 60, 1177–1196.
- Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86, 499–512.

- Duncan, S. C., Duncan, T. E., Strycker, L. A., & Chaumeton, N. R. (2007). A cohort-sequential latent growth model of physical activity from ages 12–17 years. *Annals of Behavioral Medicine*, 33, 80–89.
- Duncan, S. C., Duncan, T. E., Strycker, L. A., Li, F., & Alpert, A. (1999). *An introduction to latent variable growth curve modeling: Concepts, issues, and applications*. Mahwah, NJ: Erlbaum.
- Eisenberger, R., Stinglhamber, F., Vandenberghe, C., Sucharski, I., & Rhoades, L. (2002). Perceived supervisor support: contributions to perceived organizational support and employee retention. *Journal of Applied Psychology*, 87, 565–573.
- Ellinger, A. E., Musgrove, C. F., Ellinger, A. D., Bachrach, D. G., Elmadağ Baş, A. B., & Wang, Y.-L. (2013). Influences of organizational investments in social capital on service employee commitment and performance. *Journal of Business Research*, 66, 1124–1133.
- Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal*, 8, 430–457.
- EU-OSHA. (2014). *Calculating the cost of work-related stress and psychosocial risks*. European risk observatory. Literature review. European Agency for Safety and Health at Work. doi:10.2802/20493
- EU-OSHA. (2016). *Second European Survey of Enterprises on New and Emerging Risks (ESENER-2) overview report: Managing safety and health at work*. European risk observatory. European Agency for Safety and Health at Work. doi:10.2802/0742
- Falk, C. F., & Biesanz, J. C. (2016). Two cross-platform programs for inferences and interval estimation about indirect effects in mediational models. *SAGE Open*, 1–13. doi:10.1177/2158244015625445
- Fridrich, A., Jenny, G. J., & Bauer, G. F. (2015). The context, process, and outcome evaluation model for organisational health interventions. *BioMed Research International*, 2015. doi:10.1155/2015/414832
- Gillet, N., Gagné, M., Sauvagère, S., & 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*, 22, 450–460.
- Godard, J. (2004). A critical assessment of the high-performance paradigm. *British Journal of Industrial Relations*, 42, 349–378.
- Grossman, R., & Salas, E. (2011). The transfer of training: What really matters. *International Journal of Training and Development*, 15, 103–120.
- Guest, D. E. (1997). Human resource management and performance: A review and research agenda. *The International Journal of Human Resource Management*, 8, 263–276.
- Guest, D. E., Isaksson, K., & De Witte, H. (Eds.). (2010). *Employment contracts, psychological contracts, and employee well-being*. Oxford: Oxford University Press.
- Hertzog, C., von Oertzen, T., Ghisletta, P., & Lindenberger, U. (2008). Evaluating the power of latent growth curve models to detect individual differences in change. *Structural Equation Modeling: A Multidisciplinary Journal*, 15, 541–563.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55.
- Karasek, R., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life*. New York, NY: Basic Books, Inc., Publishers.
- Kelloway, E. K., & Barling, J. (2010). Leadership development as an intervention in occupational health psychology. *Work & Stress*, 24, 260–279.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York, NY: Guilford publications.
- Kottke, J. L., & Sharafinski, C. E. (1988). Measuring perceived supervisory and organizational support. *Educational and Psychological Measurement*, 48, 1075–1079.
- Le Blanc, P. M., Hox, J. J., Schaufeli, W. B., Taris, T. W., & Peeters, M. C. W. (2007). Take care! the evaluation of a team-based burnout intervention program for oncology care providers. *Journal of Applied Psychology*, 92, 213–227.
- Lepak, D. P., Liao, H., Chung, Y., & Harden, E. E. (2006). A conceptual review of human resource management systems in strategic human resource management research. *Research in Personnel and Human Resources*, 25, 217–271.
- Little, T. D. (2013). *Longitudinal structural equation modeling*. New York, NY: Guilford Press.
- MacKinnon, D. P., Cox, S., & Baraldi, A. N. (2012). Guidelines for the investigation of mediating variables in business research. *Journal of Business and Psychology*, 27, 1–14.
- MacKinnon, D. P., & Dwyer, J. H. (1993). Estimating mediated effects in prevention studies. *Evaluation Review*, 17, 144–158.
- Marsh, H. W., Nagengast, B., & Morin, A. J. S. (2013). Measurement invariance of big five factors over the life span: ESEM tests of gender, age, plasticity, maturity, and la dolce vita effects. *Developmental Psychology*, 49, 1194–1218.
- Moen, F., & Federici, R. (2012). Perceived leadership self-efficacy and coach competence: Assessing a coaching-based leadership self-efficacy scale. *International Journal of Evidence Based Coaching and Mentoring*, 10, 1–16.
- Mumford, M., Hunter, S., Eubanks, D., Bedell, K., & Murphy, S. (2007). Developing leaders for creative efforts: A domain-based approach to leadership development. *Human Resource Management Review*, 17, 402–417.
- Mumford, M., Scott, G., Gaddis, B., & Strange, J. (2002). Leading creative people: Orchestrating expertise and relationships. *The Leadership Quarterly*, 13, 705–750.
- Muthén, B. O. (2013). *Variances of growth factors*. [Online forum comment]. Retrieved from <http://www.statmodel.com/discussion/messages/14/228.html?1395703447>
- Muthén, B. O., & Satorra, A. (1995). Complex sample data in structural equation modeling. *Sociological Methodology*, 25, 267–316.
- Muthén, L. K., & Muthén, B. O. (1998–2017). *Mplus user's guide* (8th ed.). Los Angeles, CA: Muthén & Muthén.
- Ng, T. W., & Sorensen, K. L. (2008). Toward a further understanding of the relationships between perceptions of support and work attitudes: A meta-analysis. *Group & Organization Management*, 33, 243–268.
- Nielsen, K., & Randall, R. (2015). Assessing and addressing the fit of planned interventions to the organizational context. In M. Karanika-Murray & C. Biron (Eds.), *Debriefed organizational interventions for stress and well-being: Confessions of failure and solutions for success* (pp. 107–113). Dordrecht: Springer Netherlands.
- Nielsen, K., Randall, R., Holten, A. - L., & Rial Gonzalez, E. (2010). Conducting organizational-level occupational health interventions: What works? *Work and Stress*, 24, 234–259.
- Pauw, J. (2009). HRM and performance: Achievements, methodological issues and prospects. *Journal of Management Studies*, 46, 129–142.
- Ployhart, R. E., & Vandenberg, R. J. (2010). Longitudinal research: The theory, design, and analysis of change. *Journal of Management*, 36, 94–120.
- Preacher, K. J., & Selig, J. P. (2012). Advantages of Monte Carlo confidence intervals for indirect effects. *Communication Methods and Measures*, 6, 77–98.
- Rast, P., & Hofer, S. M. (2014). Longitudinal design considerations to optimize power to detect variances and covariances among rates of change: Simulation results based on actual longitudinal studies. *Psychological Methods*, 19, 133–154.
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, 87, 698–714.
- Sarros, J. C., Cooper, B. K., & Santora, J. C. (2008). Building a climate for innovation through transformational leadership and organizational culture. *Journal of Leadership & Organizational Studies*, 15, 145–158.
- Schermuly, C. C., Meyer, B., & Dämmer, L. (2013). Leader-member exchange and innovative behavior: The mediating role of psychological empowerment. *Journal of Personnel Psychology*, 12, 132–142.
- Selig, J. P., & Preacher, K. J. (2009). Mediation models for longitudinal data in developmental research. *Research in Human Development*, 6, 144–164.
- Sellgren, S. F., Ekval, G., & Tomson, G. (2008). Leadership behaviour of nurse managers in relation to job satisfaction and work climate. *Journal of Nursing Management*, 16, 578–587.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.
- Shanock, L. R., & Eisenberger, R. (2006). When supervisors feel supported: Relationships with subordinates' perceived supervisor support, perceived organizational support, and performance. *Journal of Applied Psychology*, 91, 689–695.

- Skakon, J., Nielsen, K., Borg, V., & Guzman, J. (2010). Are leaders' well-being, behaviours and style associated with the affective well-being of their employees? A systematic review of three decades of research. *Work and Stress*, 24, 107–139.
- Tafvelin, S., Isaksson, K., & Westerberg, K. (2017). The first year of service: A longitudinal study of organisational antecedents of transformational leadership in the social service organisations. *British Journal of Social Work*, 48, 430–448.
- Tregaskis, O., & Brewster, C. (2006). Converging or diverging? A comparative analysis of trends in contingent employment practice in Europe over a decade. *Journal of International Business Studies*, 37, 111–126.
- von Thiele Schwarz, U., Lundmark, R., & Hasson, H. (2016). The dynamic integrated evaluation model (DIEM): Achieving sustainability in organizational intervention through a participatory evaluation approach. *Stress and Health*, 32, 285–293.
- Wallin, L., Pousette, A., & Dellve, L. (2014). Span of control and the significance for public sector job demands: A multilevel study. *Economic and Industrial Democracy*, 35, 455–481.
- Watson, T. J. (2005). Organisations, strategies and human resourcing. In L. J. Harris & T. J. Watson (Eds.), *The strategic management of human resources* (pp. 6–33). London, UK: FT Prentice Hall.
- West, M. A., & Wallace, M. (1991). Innovation in health care teams. *European Journal of Social Psychology*, 21, 303–315.
- Whitfield, K., & Poole, M. (1997). Organizing employment for high performance: Theories, evidence and policy. *Organization Studies*, 18, 745–764.
- Wickrama, K. A. S., Lee, T. K., O'Neal, C. W., & Lorenz, F. O. (2016). *Higher-order growth curves and mixture modeling with Mplus: A practical guide*. New York, NY: Routledge.
- Widaman, K. F., Ferrer, E., & Conger, R. D. (2010). Factorial invariance within longitudinal structural equation models: Measuring the same construct across time. *Child Development Perspectives*, 4, 10–18.
- Wolmesjö, M. (2005). *Ledningsfunktion i omvandling: om förändringar i yrkesrollen för första linjens chefer inom den kommunala äldre- och handikappomsorgen* [Leadership function in change: Role changes for first line managers in municipal social care] [Doctoral thesis]. Sweden: Lund University.