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When health care workers perceive high-commitment HRM will they be motivated to continue working in health care? It may depend on their supervisor and intrinsic motivation

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ABSTRACT

In this health care field study, we examined the link between human resource management (HRM), transformational leadership, intrinsic motivation and motivation to continue to work. Based on the social exchange theory, we proposed a mediation model linking HRM to motivation to continue to work in health care, via respectively transformational leadership and intrinsic motivation. Results from data collected from 171 employees revealed that transformational leadership and intrinsic motivation mediate the relationship between perceptions of high-commitment HRM and workers' motivation to continue to work. Practical implications for organizations in health care are discussed.

KEYWORDS

Health care; high-commitment HRM; motivation; social exchange theory; transformational leadership

Introduction

In the Dutch health care sector, workers often retire before the official retirement age (Arts & Otten, 2010) or are complaining of decreased motivation around their retirement (Theeuwes & Zijl, 2001), therefore the future labor supply of health care workers and subsequent care provision is under pressure. Dwindling labor supply stimulates wage inflation and creates risks for affordable health care. In addition, workers shortages can jeopardize the accessibility and quality of care (Zorginnovatieplatform, 2009). As the backbone of the Dutch health system, health care workers account for the largest share of public expenditures on health. However, the presence of high-quality, motivated personnel is a key aspect of the (Dutch) health care system performance (Bassett, Bijlmakers, & Sanders, 1997;

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Gilson, Alilio, & Heggenhougen, 1994). Overall, organizations need to understand how to motivate their workers to continue to work in health care and to find effective strategies for encouraging workers to remain active in this workforce.

Studies focusing on organizational factors for workers to stay in the workforce show a relationship between, for instance, organizational support or appropriate Human Resource practices, and workers' decision to continue working (Armstrong-Stassen, 2008; Armstrong-Stassen & Ursel, 2009; Wang & Shultz, 2010). In the current study, we argue that there are management practices and organizational policies health care organizations can apply to increase motivation to continue working in this sector. We study high-commitment human resource management (HRM) in the form of employee perceptions that typically includes selection, training, teamwork, performance appraisal and rewards (Sun, Aryee, & Law, 2007). In our study, we focus on HR practices reflecting investment in long-term relationships and employee development (e.g. Arthur, 1994) and are labeled high-commitment HRM. If the organization's HRM practices are commitment oriented, it will create conditions that encourage employees to identify with organization objectives and to exert effort to achieve them (Whitener, 2001). Additionally, as noted by Arthur (1994), commitment-oriented HRM practices not only encourage employees' motivation and willingness to contribute, but also help forge a stronger psychological connection between employees and several objects. In line with the HRM literature, we use social exchange theory (SET; Blau, 1964) to explain the positive relationship between perceptions of high-commitment HRM and employee motivation. Based on SET (Blau, 1964), employee perceptions of high-commitment HRM are likely to be reciprocated with appropriate attitudes and behaviors. One way to reciprocate high-commitment HRM for health care workers is to continue to work in health care as these workers identify with the collective and tend to see the health care sector as their scope (Veld, Paauwe, & Boselie, 2010).

Second, we investigate a mediational chain, linking perceptions of high-commitment HRM and workers' motivation to continue to work in health care. To learn more about the process through which high-commitment HRM affects motivation to continue working in this sector, we study transformational leadership and intrinsic motivation respectively as mediators (e.g. Boxal, Ang, & Bartram, 2010). Previous theoretical work on HRM suggests transformational leadership as a mediator in the relationship between HRM and outcomes (Purcell & Hutchinson, 2007). Leaders tend to play a crucial factor in 'bringing policies to live' in the work environment and a trickle-down effect is expected. That means, we expect an effect from organizational-level HRM to leader behavior to follower motivation (Wright & Nishii, 2004). However, we suggest that leaders indirectly affect motivation to continue working in the health care. From the leadership literature, we know that transformational leaders stimulate intrinsic motivation among workers (Judge & Piccolo, 2004). In the health care sector, workers are likely to be intrinsically motivated in their work, and more specifically in their

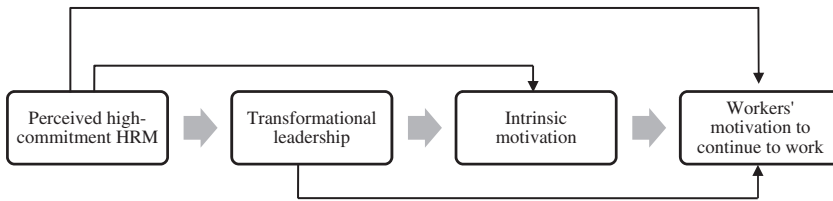


Figure 1. Proposed mediational research model.

profession (Galletta, Portoghese, & Barttistelli, 2011; Janssen, De Jonge, & Bakker, 1999; Veld et al., 2010) and therefore we expect this to be important for workers to continue to work in health care. Overall, we examine a mediation model suggesting high-commitment HRM to be related to motivation to continue to work via transformational leadership and intrinsic motivation, respectively, in a Dutch health care field setting using data from 171 employees. The proposed research model is depicted in Figure 1.

Perceived high-commitment HRM in health care

Labor is the most important production factor in health care (Van Dijk & Pool, 1999). To fulfill their social duty, i.e. providing services to citizens who are eligible for care, health care organizations are dependent on the dedication, expertise and experience of the employees who provide the services (Van Wijk, 2006). In a human service organization (Hasenfeld, 1983), services mainly occur through the relationship between client and employee, making the health care sector labor intensive. This is an important characteristic of health care organizations and therefore HRM seems essential (Buchan, 2000; Veld et al., 2010).

Strategic human capital is reflected in the ‘human’ assets in the organization and it is created and managed through the organizational system reflected in the HR architecture (Becker & Huselid, 2006).

We operationalize HRM as high-commitment HRM, which means a consistent set of HR practices (e.g. Becker & Huselid, 1998, 2006) focused on enhancing performance via stimulating commitment and development (e.g. Boon & Kalshoven, 2014; Boselie, Dietz, & Boon, 2005; Combs, Liu, Hall, & Ketchen, 2006). High-commitment HRM differs from high-performance HRM in such a way that high-commitment HRM is specifically focused on building a long-term relationship and psychological bond between employees and the organization (Boon & Kalshoven, 2014; Boselie et al., 2005). The main focus of high-commitment HRM is to shape ‘long-term relationships’ with employees and to create autonomy for workers to provide proper services (Appelbaum, Bailey, Berg, & Kalleberg, 2000; Lepak & Snell, 2007). As health care workers are a key factor in the primary process of providing services (Van Dijk & Pool, 1999), we study employees’ *perceptions* of high-commitment HRM (e.g. Eisenberger, Fasolo, &

Davis-LaMastro, 1990), rather than actual or intended HRM (Wright & Nishii, 2004). In line with Kuvaas (2008), high-commitment HRM is seen as the degree to which employees perceive that their commitment needs are being supported by the HR commitment practices offered to them (Kuvaas, 2008).

Perceived high-commitment HRM and workers' motivation to continue to work

Motivation to continue to work has been defined as a worker's desire or intention to continue to work (Armstrong-Stassen, 2008; Kooij, 2010; Kooij, de Lange, Jansen, & Dijkers, 2008). This concept is related to the so-called 'lottery question', which asks whether individuals would stop or continue working were there no economic reasons to continue (Snir & Harpaz, 2002). Warr (2008) referred to this form of motivation to work as non-financial employment commitment. This 'motivation to continue to work' is particularly elicited through high levels of work centrality and interesting work (Arvey, Harpaz, & Liao, 2004). Applying this to the health care sector, Veld et al. (2010) show that health care workers are more connected with the profession and the sector than with the organization they work for. Thus, we study motivation to continue working in the health care.

So far, research shows that the organization offers the employee high-commitment HRM, and in return, the employee becomes more attached or committed to the organization (e.g. Meyer & Smith, 2000; Ng & Feldman, 2009; Whitener, 2001), or has a favorable relationship with the organization (Gould-Williams & Davies, 2005) and also contributes to the organization in a higher degree (Hornung, Rousseau, & Glaser, 2008). Applying this to the health care sector, it is likely that high-commitment HRM results in motivation to continue working in this sector. The effect of perceived HR commitment on workers' motivation to continue to work can be explained using SET, and in particular the norm of reciprocity (Blau, 1964; Gouldner, 1960). According to SET, when an employee and an employer are in a social exchange relationship, reciprocal unspecified and social obligations between the two parties drive the behaviors of these parties. High-commitment HRM serves as a basis for reciprocity between the employee and the organization because the mutual obligation that they agreed upon strengthens the employment relationship. Lee and Bruvold (2003) demonstrated that organizational inducements in the form of investments in employee development seem to create obligations on the part of the employees to reciprocate in positive ways.

Based on the work of Veld et al. (2010), however, we argue that health care workers reciprocate beyond the organization and see the health care sector as their scope. From a social exchange perspective (Blau, 1964), the exchange may be directed at different objects, such as organizational members or the organization or the sector. Similarly, Flynn (2005) shows an indirect form of generalized exchange whereby employees do not have to repay the original giver (in this study the organization) to reciprocate. Employees who identify with the collective are

likely to prefer a generalized form of exchange (Flynn, 2005). In line with this, research indicates that employees working in the health care sector identify with health care rather than with the organization (Veld et al., 2010), and are likely to have a generalized exchange relationship with the organization. Thus, employees, who perceive high-commitment HRM, are likely to view motivation to continue to work in the health care sector as appropriate exchange behavior to offer. So based on SET, we state that individual workers view high-commitment HRM as a personalized commitment and investment as well as a recognition of their contribution, which they then reciprocate through being motivated to continue to work (Hannah & Iverson, 2004; Shore & Shore, 1995) in health care. Thus, we hypothesize:

H₁: Perceived high-commitment HRM is positively related to workers' motivation to continue to work in healthcare.

Perceived high-commitment HRM, workers' motivation to continue to work, transformational leadership and intrinsic motivation

Besides the proposed direct relationship between perceived high-commitment HRM and workers' motivation to continue to work in health care, we argue that mediation processes play a role in this relationship. In the current study, we propose that the relationship between perceived high-commitment HRM and workers' motivation to continue to work in health care is sequentially mediated via transformational leadership and intrinsic motivation. To describe the theoretical background of the research model (see Figure 1), we first focus on the link between perceived high-commitment HRM and transformational leadership. Second, we depict the relationship between transformational leadership and workers' motivation to continue to work in health care. Third, we focus on the link between transformational leadership and intrinsic motivation. Finally, we will describe the double mediation of transformational leadership and intrinsic motivation in the relationship between perceived high-commitment HRM with workers' motivation to continue to work.

First, researchers argue that employees are likely to be influenced both by perceptions of HRM and by leadership behavior (Purcell & Hutchinson, 2007). Based on the work of Bowen and Ostroff (2004), HRM sends consistent signals throughout the HR infrastructure to transformational leaders that allow them to understand the appropriate individual and collective responses. We expect a trickle-down effect from organizational-level HRM to leaders' behavior to follower attitudes (Masterson, 2001; Mayer, Kuenzi, Greenbaum, Bardes, & Salvador, 2009; Wright & Nishii, 2004). According to Feldman (1994), social support received from the transformational leader is an important force in sustaining or impeding attachment to the work situation. Transformational leaders are able to positively influence the exchange relationships that they have with the employee as well as

the relationship that the employee has with the organization (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001). Because transformational leaders act as agents of the organization who have responsibility for directing (and evaluating) subordinates' performance, employees would view their supervisor's favorable or unfavorable orientation toward them as indicative of the organization's support (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Related research from Armstrong-Stassen and Schlosser (2010), for example, shows that perceptions of nurses about how supportive their hospitals are are related to their perceptions of fairness and support from their immediate supervisor. Thus, it seems that the 'immediate' supervisor plays a critical role as a *key agent* of the organization through which members form their perceptions of the organization and thereby influence worker outcomes (Liden, Bauer, & Erdogan, 2004). Specifically, we argue that transformational leadership is a partial mediator between high-commitment HRM and workers' motivation to continue to work in health care (e.g. Bowen & Ostroff, 2004).

In turn, from a motivational leadership perspective, Shamir, House, and Arthur (1993) stress role modeling as a key process underlying the effects of transformational leadership. Role modeling implies a process by which followers mold their beliefs, feelings and behavior according to those of the leader. In this way, employees are likely to copy the motivational behavior of the transformational leader, which is likely to turn into employee motivation. Intrinsic motivation refers to the desire to expend effort based on interest in and enjoyment of the work itself (Amabile, Hill, Hennessey, & Tighe, 1994; Gagné & Deci, 2005; Ryan & Deci, 2000). For intrinsically motivated employees, effort is based on interest and enjoyment (Ryan & Connell, 1989). When intrinsically motivated, employees feel naturally drawn, or pulled, toward completing their work. The decision to expend effort is based on personal interest and enjoyment and is thus fully volitional, self-determined and autonomous (Kehr, 2004). A study among health care workers described that these workers are commonly being motivated by intrinsic rewards (Brock, Lange, & Leonard, 2010, p. 2).

Transformational leadership is primarily based on intrinsic motivation, rather than extrinsic motivation (Bass, 1990; Bono & Judge, 2004). When transformational leaders care for their workers' feelings and needs, facilitate their skill development, show them ways to achieve the goals and express confidence in them (Bass, 1990), they are likely to enhance their workers' interest in their task. Then, the degree of intrinsic motivation of workers increases by an increase of the perception that the outcomes of the task are consistent with its own authentic interests and values. So, transformational leadership and intrinsic motivation are expected to be positively related (Shin & Zhou, 2003). According to transformational leadership literature, transformational leadership improves intrinsic motivation and subsequently it might improve workers' motivation to continue to work by building a social exchange relationship. Transformational leaders strengthen employees' felt obligation to help the organization reach its goals and increase affective

organizational commitment, with a positive effect on intrinsic motivation and subsequently motivation to continue to work (Kark & Van Dijk, 2007; Masi & Cooke, 2000; Rafferty & Griffin, 2004) in health care. Thus, employees who feel a sense of attachment to the transformational leader perceive organizational support, have autonomy and feel a sense of responsibility for their tasks and activities that in turn could improve intrinsic motivation and workers' motivation to continue to work. When employees are intrinsically motivated to their work, they appear to have less intentions to retire because of the work itself, the work environment or their working conditions provide them enough satisfaction and pleasure to stay active (De Lange & Thijssen, 2007).

Using SET, Saks (2006) stresses that intrinsic-motivated employees feel an obligation to reciprocate. That is, if organizations offer support to their employees, for example, via high-commitment HRM and transformational leadership, they feel obliged to become cognitively, emotionally and physically motivated to their work. In health care organizations, there is an emphasis on generalized exchange relationship and health care workers are likely to be motivated to continue working in health care because they identify with the health care sector and see this as an appropriate exchange (Flynn, 2005; Veld et al., 2010). Combining the above, since high-commitment HRM focuses on (job) autonomy, discretionary effort, (personal) involvement or commitment and identification with organizational goals, we argue that high-commitment HRM might have a trickle-down effect on transformational leadership that positively affects intrinsic motivation (Bono & Judge, 2003; Pierce, Jussila, & Cummings, 2009) and in turn, continuous motivation to work in health care. Thus, we hypothesize:

H₂: Transformational leadership and intrinsic motivation subsequently mediate the relationship between perceived high-commitment HRM and workers' motivation to continue to work in healthcare.

Method

Sample and procedures

Three hundred and thirty questionnaires were distributed among employees at all levels in various organizations in the Dutch health care. These organizations were contacts of the researchers. A separate letter distributed with each questionnaire explained the research goal, the procedure and voluntary nature of participation and the confidentiality of the data. After three weeks, a reminder was sent to the employees. This resulted in a response rate of 53.9% (178 participants). Seven participants were removed from the data because 50% of the questions were not completed. Thus, the total sample consisted of 171 participants. The participants' average age was 40 years (SD = 11.89) and 19.3% were male. Participants worked in various health care institutions, such as nursing homes (21.1%), home care and hospitals (both 13.5%). Most

participants finished secondary vocational education (44.4%), and others had a higher vocational (32.7%) or university degree (10.5%). The average tenure in the organization is 10.29 years ($SD = 8.51$) (in the analyses, we use the square root of tenure as this variable is not normally distributed).

Measures

All items had a 5-point response scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Perceived high-commitment HRM

How employees experience high-commitment HRM in their organization was measured with 22 items of the HRM scale introduced by Lepak and Snell (2002). Lepak and Snell (2002) distinguish different sets of HR practices, each with a different focus, such as productivity-oriented and commitment-oriented HRM. Here we focus on commitment-oriented HRM. Employees rated the use of five HR practices – selection, training and development, performance evaluation, rewards, and job design – in their organization. Sample items are: ‘The recruitment/selection process for employees places priority on their potential to learn’ (recruitment and selection), ‘Our training activities for employees strive to develop firm-specific skills/knowledge’ (training and development), ‘Performance appraisals for employees emphasize employee learning’ (performance appraisal), ‘Compensation/rewards for employees provide incentives for new ideas’ (compensation) and ‘Employees have a high degree of job security’ (job design). This scale had a Cronbach’s α of .92.

Motivation to continue to work in health care

Motivation to continue to work was measured using a three-item scale developed by Armstrong-Stassen (2008). We included an introduction sentence to the scale indicating that the questions refer to motivation to continue to work in health care. A sample item is: ‘I expect to continue to work as long as possible’. The reliability of this scale was .90.

Transformational leadership

Transformational leadership was measured with the five-item scale developed and validated by De Hoogh, Den Hartog, and Koopman (2004). A sample item is: ‘My supervisor gives employees the feeling of an important, common mission/task to work’. Cronbach’s α was .93.

Intrinsic motivation

Intrinsic motivation was measured with the four-item scale used by Grant (2008), derived from Ryan and Connell (1989). An example item is: ‘I have fun at work’. Cronbach’s α was .96.

Demographic and control variables

In an effort to enhance the statistical accuracy of our analytic procedures, we controlled for tenure with the organization (in years) and calendar age. As tenure was positively skewed, we used a square root transformation on this variable before we included it in our analyses. Finally, accounting for potential halo ratings based on the relationship between leader and follower seems appropriate (cf. Cooper, 1981; Murphy, 1982). Typically, a measure of Leader–Member-Exchange (LMX) can accomplish this to extract variance due to high-quality or low-quality relationships. As noted by Engle and Lord (1997), discrepancy between leader and employee implicit leadership theories may be important since discrepancies may influence perceived similarity and identification with the dyadic partner, which provide a basis for common understanding, and permit more automatic, intuitive social interactions. The behavior of both members of the dyad (i.e. leader and employee) is likely to align with expectations and both members are likely to interpret behavior similarly. In combination, these processes should produce greater liking and higher quality relationships as assessed by LMX. LMX is assessed with seven items created by Graen and Uhl-Bien (1995). An example item is: ‘How would you describe your working relationship with your supervisor?’ Cronbach’s α was .92.

Measurement model

The expected measurement model had four latent factors (i.e. Perceived high-commitment HRM, transformational leadership, intrinsic motivation and workers’ motivation to continue to work) and provided an acceptable fit to the data $\chi^2 = 893.76$ (df = 511, $N = 171$), $p < .01$, CFI = .91; TLI = .90, RMSEA = .07 (cf. Hu & Bentler, 1999). With LMX (used as a control variable) included in the measurement model, the fit was also acceptable $\chi^2 = 1240.43$ (df = 759, $N = 171$), $p < .01$, CFI = .91; TLI = .90, RMSEA = .06. Conceivable alternative models with fewer factors did not fit our data well.

Analysis Strategy

We used path analysis in MPlus in order to test our hypotheses. Path analysis allows for simultaneous estimation of different regression equations, as well as testing the significance of indirect effects. We used cut-off values of .90 for the CFI and TLI, and less than .06 for the RMSEA (Hu & Bentler, 1999). We used maximum-likelihood estimation for handling missing data, in which all available data are used in the analysis.

Results

Table 1 presents descriptives, inter-correlations and reliabilities of the scales. HRM, transformational leadership, intrinsic motivation and motivation to continue to work are significantly correlated in the expected direction.

Hypothesis 1 stated that perceived high-commitment HRM is positively related to workers' motivation to continue to work in health care. To test this hypothesis, we used regression analysis in MPlus, which is presented in Table 2. The model fits the data well ($\chi^2 = .00$ (df = 0, $N = 171$), n.s., CFI = 1.00; TLI = 1.00, RMSEA = .00). Table 2 shows a significant relationship between HR commitment and motivation to continue to work ($\beta = .27$, $p < .01$), supporting Hypothesis 1.

Hypothesis 2 stated that transformational leadership and intrinsic motivation mediate the relationship between perceived high-commitment HRM and workers' motivation to continue to work. To test this hypothesis, three regression equations were estimated simultaneously; transformational leadership was regressed on the control variables and HR commitment, intrinsic motivation was regressed on the control variables, HR commitment and transformational leadership, and workers' motivation to continue to work was regressed on the control variables, HR commitment, transformational leadership and intrinsic motivation. Results are presented in Table 3. The model fits the data well ($\chi^2 = .00$ (df = 0, $N = 171$), n.s., CFI = 1.00; TLI = 1.00, RMSEA = .00).

Preacher and Hayes (2004) suggest two conditions need to be met in testing mediation. First, there should be an effect to be mediated. Second, the indirect effect should be statistically significant in the predicted direction. The first condition is met, as Hypothesis 1 is supported. Second, we found a significant and positive indirect relationship between perceived high-commitment HRM and workers' motivation to continue to work ($\beta = .28$, $p < .01$). More specifically, Table 3 shows a significant relationship between perceived high-commitment HRM and transformational leadership ($\beta = .43$, $p < .01$), transformational leadership

Table 1. Descriptive statistics and correlations among all study variables.

Construct	Mean	SD	1	2	3	4	5	6
1. Age	40.09	11.89						
2. Square root of tenure with the organization	2.93	.10	.69**					
3. LMX	3.43	.77	.02	-.06				
4. Perceived high-commitment HRM	3.09	.66	.09	-.07	.57**			
5. Transformational leadership	3.64	.98	.00	-.03	.71**	.70**		
6. Intrinsic motivation	3.96	1.04	.03	-.06	.62**	.60**	.71**	
7. Workers' motivation to continue to work	3.77	1.02	-.03	-.02	.53**	.49**	.58**	.74**

Note: $N = 171$.

* $p < .05$; ** $p < .01$.

Table 2. Results of regression analysis to test Hypothesis 1.

	Workers' motivation to continue to work
Age	-.02
Tenure within the organization (square root)	.03
LMX	.38**
Perceived high-commitment HRM	.27**
R^2	.33**

Notes: $N = 171$. Standardized coefficients are presented.

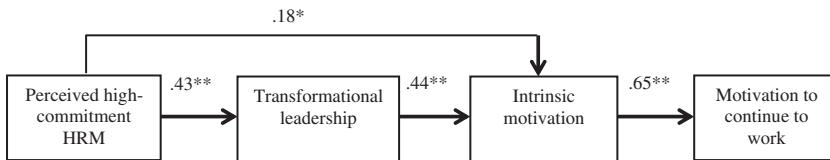
* $p < .05$; ** $p < .01$.

Table 3. Results of path analysis to test Hypothesis 2.

	Transformational leadership	Intrinsic motivation	Workers' motivation to continue to work
Age	.04	.11	-.11
Tenure within the organization (square root)	.00	-.10	.10
LMX	.47**	.19**	.09
Perceived high-commitment HRM	.43**	.18*	.02
Transformational leadership		.44**	.04
Intrinsic motivation			.65**
R ²	.63**	.55**	.56**

Notes: $N = 171$. Standardized coefficients are presented.

* $p < .05$ ** $p < .01$.

**Figure 2.** Main and mediating relationships of perceived high-commitment HRM and workers' motivation to continue to work.

Notes: $N = 171$. Standardized coefficients are presented. * $p < .05$; ** $p < .01$.

and intrinsic motivation ($\beta = .44$, $p < .01$), and between intrinsic motivation and workers' motivation to continue to work ($\beta = .65$, $p < .01$), which is in line with Hypothesis 2. We also found a significant relationship between perceived high-commitment HRM and intrinsic motivation ($\beta = .18$, $p < .05$), suggesting that the path between perceived high-commitment HRM and intrinsic motivation is partially mediated by transformational leadership. Taken together, these results support Hypothesis 2. Figure 2 depicts the results of the path analysis.

Discussion

The present study extends previous research by demonstrating a mechanism through which high-commitment HRM motivates workers to continue to work in health care. Based on SET (Blau, 1964), we proposed and tested a mediational model in which we examined transformational leadership and intrinsic motivation as potential mediators of the relationship between perceived high-commitment HRM and workers' motivation to continue to work in health care. The results provide additional knowledge and insights in the 'linking mechanisms and the mediating effects of key variables' into the so-called HRM black box (Wright & Gardner, 2004). As hypothesized, we found a relationship between perceived high-commitment HRM and workers' motivation to continue to work. Further, we found that transformational leadership and intrinsic motivation are subsequently

important mediators in this relationship. More specifically, the findings suggest that workers perceive high-*commitment* HRM through (support of) their transformational leader and this leader enhances intrinsic motivation, which in turn enhances workers' motivation to continue to work in the Dutch health care sector.

The impact of perceived high-commitment HRM, transformational leadership and intrinsic motivation on workers' motivation to continue to work in the health care sector appears to be highly relevant outside the Netherlands as well. This is reflected, for example, in Eaton's (2000) work on health care in the US and the research carried out by Buchan (2004) into Britain's NHS. Further, management reforms in the Dutch health care sector are comparable to developments in such countries as the UK and the US (Bach & Kessler, 2007). The Dutch health care sector may be characterized by contextual factors, but these exist in the UK [and the US] as well (Boselie, 2010). So, the empirical findings thus have potential relevance for health care in other countries.

Theoretical implications

This study examined a model which explains the association between perceptions of high-commitment HRM and workers' motivation to continue to work in health care. We aimed to add to the current HRM literature by applying social exchange and trickle-down theory to explain individual-level relationships between perceptions of HRM and motivation. Results revealed that employees' *perceptions* of HR commitment practices are important in understanding the effects of these HR practices. The availability of high-commitment HRM, as perceived by employees, was found to be positively related to their motivation to continue to work in health care. This positive association provides support for SET, which suggests that employees view high-commitment HRM as a personalized commitment to them, an investment in them, and as recognition of their contributions – which they then reciprocate through corresponding positive motivation. Subsequently, these findings support the ideas put forward by Bowen and Ostroff (2004) and Purcell and Hutchinson (2007) that HR practices have a role of communicating to employees the strategic focus, the nature of the organization, their value to it and the type of behaviors expected and is important for employees to continue to work within the health care sector.

Notwithstanding the relevance of HR practices for sending key messages to employees, our findings show that supervisor behavior also has a significance influence on workers' motivation to continue to work. We add to the transformational leadership literature by showing that employee perceptions of HRM are translated into leader behavior and that results in intrinsic motivated workers and motivation to continue to work. Consistency in the messages sent by different HRM practices creates a strong situation, where employees know what the expectations of the organization are, increasing their performance and motivation (Bowen & Ostroff, 2004). When HR practices and leadership behavior are in

line with each other, employees will feel more committed to perform well. Our study shows that high-commitment HRM and transformational leadership are perceived as such. Likewise, if high-commitment HRM is consistently translated via leadership behavior to the employee level, such that they encourage employees to work longer, workers' motivation to continue to work will be enhanced. Results revealed a 'trickle-down' effect from organization level to supervisor level to individual level. These findings support the results of Armstrong-Stassen and Schlosser (2010) showing that nurses' perceptions on how supportive their hospitals are are related to their perception of fairness and support of their supervisor, which in turn results in nurses' intention to remain with their hospital.

However, it may be that motivation of health workers is highly dependent on the local healthcare context. If so, it (again) emphasizes the importance of individual approach that the supervisor has to apply to motivate to continue to work in health care. Perhaps one of the most important implications is that supervisors ought to be asking their own workers about their particular intrinsic motivational factors, and developing plans locally to address them. In order not to stigmatize workers and in line with the recent trends of individualization of working arrangements (Rousseau, 2005), for example, individual agreements (i.e. I-deals; Rousseau, 2005) can be made between an employee and the organization. Idiosyncratic deals are 'voluntary, personalized agreements of a nonstandard nature negotiated between individual employees and their employers regarding terms that benefit each party' (Rousseau, Ho, & Greenberg, 2006, p. 978). These agreements are particularly important for the enhancement of workers' motivation continue to work as these indicate organization support. For example, Bal, De Jong, Jansen, and Bakker (2012) have shown that I-deals are important in long-term retention of employees in health care organizations. Neither, future research may unravel which other HR practices are important antecedents of workers' motivation to continue to work.

In this study, transformational leadership results in intrinsic-motivated workers and in turn motivation to continue to work. In line with the idea that HRM is at least in part a perceptual process, the positive relationship between HRM, transformational leadership and motivation to continue to work (as well as the mediational process) held – even when controlling for LMX. This positive association between high-commitment HRM, leadership and work-related attitudes provides additional insights into the complex relationship between HRM and organizational performance. Therefore, we would argue that theoretical developments and future empirical research in this field should incorporate both individual-level employee perceptions of HRM and the supervisor level, rather than merely studying the association between HRM and employee behavior at the organizational level (Guest, 1999; den Hartog, Boselie, & Paauwe, 2004; Kinnie, Hutchinson, Purcell, Rayton, & Swart, 2005; Wright & Boswel, 2002) and in this way extend our knowledge of the HRM black box.

Practical implications

Our findings may have important implications for practice. First, our study showed that high-commitment HRM practices are effective in enhancing motivation to continue to work in health care. Health care organizations could use high-commitment HRM in order to increase workers' motivation to continue to work. Investigating organizational factors, such as HR commitment, is essential because the current pensions systems give individuals the financial possibility to stop working if (or even before) they reach their retirement age (Wang & Shultz, 2010). Given the central role played by intrinsic motivation in workers' motivation to continue to work, organizations may use our findings to tailor their HR policies in general towards intrinsic motivation. For example, health care organizations need to be careful how to implement reward systems for their employees. If they do decide to use rewards in order to increase motivation to continue to work, it would be the most fruitful if they focus on rewards that enhance intrinsic motivation or at least do not harm intrinsic motivation. It is important that both organization and supervisor gain insight into what 'drives' employees and creates opportunities to achieve a match between what people need, expect and perceive.

Next, the results indicate that employee perceptions of high-commitment HRM are important in affecting employee motivation. For health care organizations, assessing how health care workers view these practices seems important. Also, communication and implementation of HRM practices need close attention to make sure that the HR practices are perceived as intended to have positive effects on employee motivation.

Supervisors play an important role in conveying different kinds of information that is relevant to the organization and the way they frame this information. In particular, paying specific attention to supervisors as an occupational group with numerous responsibilities and competing priorities is necessary. Further, training supervisors in transformation leadership can help in enhancing intrinsic motivation and in turn motivation to continue to work. Subsequently, if the goals and vision of the supervisor are not in line with those of the organization, employees are likely to receive mixed signals about what is important, making it harder for them to get motivated. Organizations and supervisors send signals about the goals within the organization to employees and these signals shape employees' work motivation. Supervisors are generally seen as agents of the organization (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). Thus, it is important for organizations to support and train supervisors in consistent communication and behaviors towards employees in goals, selection, training and appraisals.

Limitations and conclusion

A limitation of this study is the cross-sectional nature of the study meaning we could not test for causal relationships. However, we based our research model on previous literature. These previous studies (e.g. Liao, Toya, Lepak, & Hong, 2009; Morris, Lydka, & O’Creedy, 1993) examine the associations between high-commitment HRM and employee outcomes at the individual level using a longitudinal design. Although this study does not test causal relationships, the proposed direction of results is therefore based on previous longitudinal design studies that did allow testing for directionality. More research is needed on the cause-effect relationships. Also, more longitudinal studies are needed to demonstrate the influences of perceived high-commitment HRM on workers’ motivation to continue to work.

Second limitation is that the data may be subject to common source and common method bias. The relationships between the variables may thus be overestimated. Perceived high-commitment HRM, transformational leadership, intrinsic motivation and motivation to continue to work are all assessed by employees (using self-reporting). Self-reports seem appropriate for measuring affective states, though single source bias is a methodological threat. This way of measuring is hard to avoid when assessing attitudinal variables such as intrinsic motivation and motivation to continue to work. Others, such as Kooij (2010), also test relationships on workers’ motivation to continue to work in this manner. Since this study focuses on employees’ perceptions of high-commitment HRM and their work-related outcomes, it is not feasible to obtain measures of these constructs from alternative sources. Furthermore, Spector (2006) demonstrated that using a self-report methodology does not guarantee significant results, and that mono-method correlations are not by definition higher than multi-method correlations.

Third, recognition of the limits of the generalizability of results is important as the study was done exclusively in a health care setting and there is a possibility for range restriction in HRM and motivation as the Attraction-Selection-Attrition process (Schneider, 1987; Schneider, Goldstein, & Smith, 1995) attenuates some of the relationships found. Future research is needed to address the extent to which our findings generalize to other industries and other organizations. Although we deliberately selected the health care sector, employees in other sectors, with less stressful, physically and mentally demanding jobs, might respond differently to high-commitment HRM. Additionally, the results are valid for the Dutch health care sector, characterized as a family- and intern-oriented culture, and might vary for organizations that are characterized by a market or hierarchical culture (Bremer, Lamers, & Burms, 2008). Future research could consider other sectors with different dominant cultures.

Fourth, the respondents indicated that they intend to stop working at the age of 63 years. This however reflects their motivation to continue working, and not whether the respondents actually continued to work after this age. Although the

theory of reasoned action states that intentions predict actual behaviors (Fishbein & Ajzen, 1975), future research could include whether employees actually continue working to test whether this assumption holds.

Fifth, other variables that may influence workers' motivation to continue to work were omitted from the examined model. For example, it would be interested to contrast transformational leadership with transactional leadership in terms of intrinsic and extrinsic motivation. Transactional leaders are likely to use extrinsic rewards (contingent reward) to control workers' motivation to continue to work, which is likely to decrease intrinsic motivation (Deci & Ryan, 1985). Additionally, we did not address the financial situation of employees in our study. Some workers may feel that they have no choice but to remain with their organization because of financial need (which would mean that they are extrinsic motivated to continue to work longer). For a more detailed view, future research should incorporate other (mediating) variables that may affect workers' motivation to continue to work, such as extrinsic motivation and more specifically financial needs.

In conclusion, employees interpret high-commitment HRM as indicative of the personified organization's commitment to them. Consistent with the SET, the results of this study imply that employees reciprocate their perceptions accordingly in their own commitment to the organization, as motivation to continue to work. The present study extends our understanding of how perceived high-commitment HRM affects workers' motivation to continue to work, suggesting that any such influence is indirect. In this study, transformational leadership and intrinsic motivation mediated the relationship between perceived high-commitment HRM and workers' motivation to continue to work.

Disclosure statement

No potential conflict of interest was reported by the authors.

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