

Mutual Gains? Health-Related HRM, Collective Well-Being and Organizational Performance

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ABSTRACT Research on the effects of HR management on employees' psychological well-being has yielded inconclusive results. Moreover, prior works remain unclear on whether human resource practices specifically aimed at enhancing employee well-being also benefit organizational performance. Building on signaling theory and conservation of resources theory, our study investigates the relationship between health-related human resource management (HHRM), employees' collective well-being (in terms of collective emotional exhaustion and collective engagement) and organizational performance. Results from a multi-source field study of top management team members, HR representatives, and 15,952 employees in 88 organizations reveal a positive indirect relationship between HHRM and employees' collective well-being, which is mediated by employees' positive stress mindset. In addition, we find this positive indirect association to depend on the level of transformational leadership climate in organizations. Finally, our findings also show a positive indirect relationship between HHRM and company performance, mediated by employees' positive stress mindset and collective engagement.

Keywords: employee well-being, health-related human resource management, organizational performance, stress mindset

INTRODUCTION

Given the increasing number of work-related psychological illnesses, creating a psychologically healthy workplace is considered a major challenge for organizations to sustain a long-term competitive advantage (Grawitch et al., 2015). One factor that is considered to play a key role for enhancing employee well-being is human resource (HR) management (Guest, 2017).

However, research on the effects of HR management on employees' psychological well-being has yielded inconclusive results (for two comprehensive reviews, see Peccei et al.,

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2013; van de Voorde et al., 2012). Moreover, prior works have developed contradictory theoretical perspectives on the relationship between HR management, employee well-being and company performance: On the one hand, a ‘mutual gains’ perspective considers HR management to benefit both employee well-being and organizational performance (e.g., Appelbaum et al., 2000). On the other hand, a ‘conflicting outcomes’ view suggests that well-being and performance are distinct organizational goals, which can be achieved by different sets of HR practices (e.g., Godard, 2004).

Existing empirical studies thus provide ambiguous evidence and call for further research to investigate how (i.e., through what mechanisms) and when (i.e., depending on what contingencies) HR management may positively relate to employee well-being (van de Voorde et al., 2012). Moreover, empirical analyses are needed to assess whether HR practices that specifically aim at enhancing employee well-being are also positively associated with organizational performance (Guest, 2017; Paauwe et al., 2013). Our study addresses these research gaps by shedding light on the relationship between HR management, employee well-being and organizational performance. For this purpose, we develop and test an organizational-level model that is reflective of the ‘mutual gains’ perspective and investigates the role of health-related human resource management (HHRM), a system of HR practices and principles that is specifically aimed at maintaining and promoting employees’ psychological well-being.

Guided by general frameworks for the effects of HR management (Nishii and Wright, 2008; Ostroff and Bowen, 2000) and building on signaling theory (Spence, 1973) as well as conservation of resources theory (Hobfoll, 1988), we posit that HHRM positively relates to employees’ positive stress mindset — that is, the extent to which employees in an organization hold the mindset that stress can be a source of personal growth, well-being, and performance (Crum et al., 2013). Such a positive stress mindset, in turn, is assumed to be positively linked to collective well-being in terms of lower levels of collective emotional exhaustion (i.e., employees’ shared perceptions of how emotionally drained their colleagues are from their work; Gonzalez-Morales et al., 2012) and higher levels of collective engagement (i.e., employees’ shared perceptions of how physically, cognitively, and emotionally invested their colleagues are in their work; Barrick et al., 2015). Due to the beneficial association with employees’ positive stress mindset and collective well-being, we expect HHRM to also show a positive indirect relationship with company performance (see Figure 1).

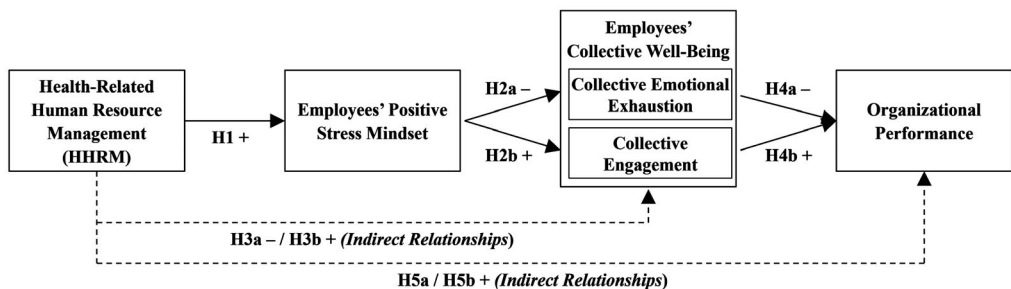


Figure 1. Overview of mediation model

Taking a contingency perspective, we furthermore examine the moderating role of transformational leadership climate. Consistency in messages sent across organizational sources has been argued to be essential for creating strong situations in which employees unambiguously interpret the signals sent by HR management (Bowen and Ostroff, 2004). Thus, we expect that the positive relationships of HHRM with employees' positive stress mindset and collective well-being depend on the degree to which the signals sent by organizational leadership are consistent with HR management's focus on valuing and promoting employee well-being (see Figure 2). As such, in particular transformational leadership climate (i.e., the extent to which leaders throughout an organization engage in transformational leadership behaviours; Menges et al., 2011) should signal to employees that leaders take care of their followers' well-being (Montano et al., 2017).

Our study contributes to illuminating the inconsistent picture of prior research on the relationship between HR management, employee well-being and organizational performance. First, we propose employees' positive stress mindset as a conceptual mechanism underlying the association between HHRM and well-being. Thereby, our analysis suggests the mindset concept (Dweck, 2008) as a new and promising approach for the HR literature. Second, we investigate leadership as a contingency of HHRM (van de Voorde and Boxall, 2014). Contrary to prior research, which mainly treats HR and leadership as substitutes for each other, we propose that HR management and organizational leaders act as synergistic partners in the relationship with employee well-being. Third, we address the ongoing theoretical debate concerning the performance consequences of the relationship between HR management and well-being (Peccei et al., 2013). By empirically investigating a model that is reflective of the 'mutual gains' perspective, our analysis makes a step toward advancing this debate and scrutinizes whether health-specific HR systems are positively associated with both employee well-being and company performance. Thereby, our study also echoes calls for more 'balanced approaches' in the strategic HR literature (e.g., Lepak and Boswell, 2012; Paauwe, 2009) and for putting employee well-being centre-stage in the relationship between HR management and performance.

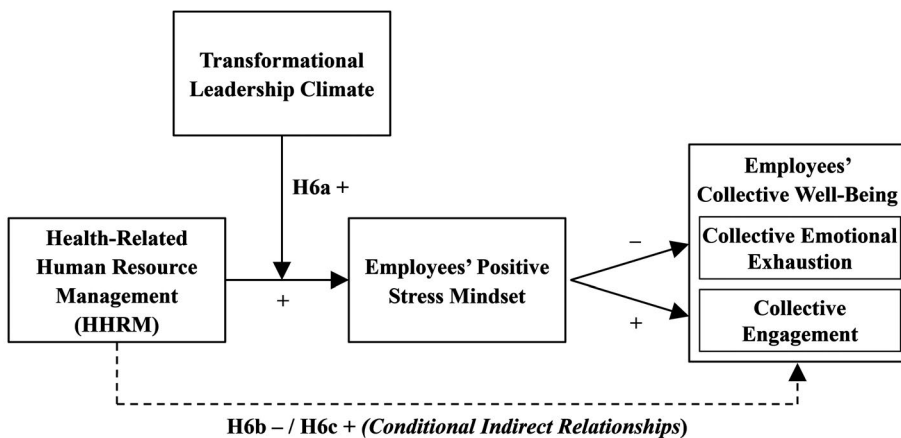


Figure 2. Overview of moderated mediation model

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

In developing our theoretical model, we draw from general frameworks of the relationship between HR management and employee well-being (Peccei et al., 2013; van de Voorde and Boxall, 2014) as well as organizational effectiveness (Bowen and Ostroff, 2004; Nishii and Wright, 2008; Ostroff and Bowen, 2000). Overall, these models suggest that HR management can enhance well-being and thereby increase performance, thus following the ‘mutual gains’ perspective. Yet, they acknowledge that these relationships are complex, and stress the particular relevance of employees’ attitudes as a mediating mechanism; moreover, they refer to leadership as a contingency.

Health-Related Human Resource Management (HHRM)

We define health-related human resource management (HHRM) as a system of HR practices and principles that is specifically aimed at maintaining and promoting employees’ psychological well-being. In elaborating our conceptualization of HHRM, we build on HR principles and practices that have been discussed as effective means for creating a psychologically healthy workplace (e.g., Browne, 2000; Grawitch et al., 2006, 2015; Kelloway and Day, 2005). We also consider institutional initiatives, such as the psychologically healthy workplace program by the American Psychological Association (APA, 2016), the quality criteria by the European Network of Workplace Health Promotion (ENWHP, 1999), and the healthy workplace model by the World Health Organization (WHO, 2010). Based on these sources, we identify four key principles and practices for effective HR psychological health promotion.

First, a comprehensive approach to HHRM embraces HR practices pertaining to both prevention of and recovery from work-related psychological health problems (Giga et al., 2003). Related to this principle, the public health model proposes three levels of intervention for occupational health management (Tetrick and Quick, 2011). Primary and secondary level interventions are preventive, eliminating potential risk factors to psychological well-being from the work environment and providing employees with tools to insulate them against potential health risks (e.g., stress training programs). Tertiary level interventions, in contrast, focus on helping employees recover from existing psychological health problems (Grawitch et al., 2015). The second principle of comprehensive HHRM pertains to explicitly considering leaders as a target group for health-related HR practices (Kelloway and Day, 2005), as leaders’ psychological health and behaviour are considered to play a crucial role for employee well-being. Third, the critical role of top management support has been repeatedly emphasized, thereby pointing to the particular relevance of top management communication to encourage participation in health-related HR practices (Grawitch et al., 2006). Fourth, an ongoing evaluation of HHRM is indispensable to ensure that it is effective and sustainable (Biron and Karanika-Murray, 2014).

In addition, we align our conceptualization of HHRM with the literature on strategic HR systems which proposes that HR benefits strategic objectives by influencing employees’ (a) knowledge, skills, and abilities, (b) motivation and effort, and (c) opportunities to contribute (Jiang et al., 2012). Hence, we assume that HHRM will be most effective when it relates to all three policy domains (Lepak et al., 2006). For strengthening health-related knowledge, skills, and abilities, HHRM should include HR practices aimed at training

and educating employees, either to enable them to adequately manage stress or to help them recover from existing health problems (Luthans et al., 2006). With regard to motivation and effort, HHRM should motivate employees to adopt a healthy style of working and living. For example, it may reward psychologically healthy work behaviour, such as participation in health-related HR measures for stress management (ENWHP, 1999). Lastly, HHRM should promote the opportunity to contribute by, for instance, offering employees the possibility to flexibly adapt their job design (e.g., working hours) to their state of psychological health (Kelloway and Day, 2005). Moreover, HHRM may also involve employees in the design of health-related HR measures (Grawitch et al., 2015).

In sum, we define HHRM as a system of health-related HR practices and principles that focus on prevention of and recovery from psychological illnesses, include both employees and leaders as target groups, receive support from the top management, and are systematically evaluated. In addition, HHRM will be most effective when it promotes employees' abilities, motivation, and opportunities to contribute to creating a psychologically healthy workplace.

HHRM and Collective Well-Being: Employees' Positive Stress Mindset as a Mediator

Stress mindset defined. Stress mindset refers to a general attitude toward the nature and consequences of stress which influences individuals' stress response (Crum et al., 2013). Building on the notion of mindsets as interpretative mental frames for focusing attention and organizing information (Dweck, 2008), a stress mindset can orient individuals toward a unique understanding of stressful experiences and direct them toward corresponding reactions.

Mindsets have received increasing scholarly attention in recent years, in particular sparked by the works of Dweck (1999, 2008) showing that individuals can substantially differ in their beliefs about whether human attributes (such as intelligence) are malleable and can develop over time. The powerful influence of mindsets on individuals' motivation, behaviour, and well-being has also been demonstrated in relation to other targets such as aging, physical exercise, or food consumption. Building on a considerable body of research that proves potentially positive consequences of stress, Crum et al. (2013) introduce the concept of a positive 'stress-is-enhancing' mindset, in which individuals consider stress to have beneficial effects for their personal growth, well-being, and performance. Indeed, extant research has found evidence for a 'stress-related growth' phenomenon, indicating that stressful experiences can increase physiological and mental functioning, enhance mental toughness, and instil a sense of mastery (e.g., Park and Helgeson, 2006).

Crum et al. (2013) have proved a positive stress-related mindset to be conceptually and empirically distinct from other variables determining stress response. They show that stress mindset is largely independent from the amount and severity of stress one is experiencing and also differs from the appraisal of specific stressors as well as the choice of coping strategies. That is, while one may experience a specific work demand as stressful, one can have the mindset that the consequences of this stress may ultimately result in enhanced outcomes. Moreover, while one's stress mindset may serve as a mental context in which coping actions are chosen, it does not constitute a coping strategy itself. Rather,

it refers to a meta-cognitive attitude toward the nature of stress in general, which acts as a selective lens for making sense of stressful situations.

A positive stress mindset has shown to lead to enhanced stress response in terms of physiological reactions, effective behavioural approaches to stress, and subjective well-being (Crum et al., 2013, 2017). Moreover, prior studies have demonstrated that individuals' positive stress mindset can be systematically altered by ambient stimuli signaling that stress can be utilized as a source of personal growth, well-being, and performance (Crum et al., 2013, 2017). These findings concur with evidence from other domain-specific mindsets which has also proved that mindsets can be changed quite readily by establishing a context which orients individuals toward mindset-relevant information (e.g., Blackwell et al., 2007; Dweck, 2008).

In our analysis, we examine employees' positive stress mindset in organizations — that is, the extent to which employees in an organization on average hold the mindset that stress can be a source of personal growth, well-being, and performance. In the following section, we examine the role of HHRM with regard to employees' awareness of the potentially enhancing nature and consequences of stress.

HHRM and employees' positive stress mindset. HR management has been argued to serve a signaling function of an organization's intentions toward its employees (Bowen and Ostroff, 2004). We combine this rationale with signaling theory which states that information asymmetry between parties is reduced when one party (the sender) communicates signals to another party (the receiver) conveying information about the underlying qualities of the sender in terms of the ability to fulfil the needs of the receiver (Spence, 1973, 2002). Thus, we hypothesize that HHRM signals to employees that the organization cares about their well-being and offers support for making positive use of stress for personal growth and well-being, thereby positively relating to their stress mindset. This assumption also resonates with social information processing theory which posits that individuals' social environment can provide important cues for the development of their attitudes (Salancik and Pfeffer, 1978).

In organizations that have implemented HHRM, a bundle of health-related HR practices signal to employees that their company provides instrumental resources for effectively managing stressful work challenges (Connelly et al., 2011). Among others, they see their organization offering trainings for productively mastering high work demands, observe the possibility that employees' job designs can be flexibly adapted to the state of psychological health, and realize that their company provides support for preventing potentially deleterious effects of stress. The signaling effect of these practices is further reinforced by the perception that the organization's top management shows commitment for a psychologically healthy workplace and HR attempts to involve employees into the design of health-related HR practices (Grawitch et al., 2015).

Following from the signals sent by HHRM, employees perceive multiple informational cues from the organizational environment communicating optimism that stressful requirements at work can be successfully approached (Salancik and Pfeffer, 1978). Therefore, employees' overall confidence toward work demands should be higher in organizations that have implemented HHRM, making them more apt to evoke feelings of positive challenge. Specifically, they are more likely to perceive stressful challenges

at work as opportunities that can be realized, offering potential for personal growth, increased mastery, and enhanced accomplishment. This assumption also resonates with research on social cognitive theory (Bandura, 1997) and organizational support theory (Rhoades and Eisenberger, 2002) which has shown that signals of organizational support provide a modelling function that alters employees' positive attitudes toward work-related challenges and increases their perceived mastery, leading to perceptions of opportunities for personal development. In sum, the signals sent by HHRM should be positively associated with employees' notion that stress can also be utilized as a potential source of increased growth, well-being and performance, thus relating to a positive mindset about the potentially enhancing nature of stress (Crum et al., 2013).

Hypothesis 1: Health-related human resource management (HHRM) is positively associated with employees' positive stress mindset.

Employees' positive stress mindset and collective well-being. Based on conservation of resources theory, we expect a positive stress mindset to favourably relate to employee well-being. According to Hobfoll (1988), individuals are motivated by striving to both protect current resources and acquire new resources to prevent future resource loss. A positive stress mindset enables employees to both retain and acquire resources. Holding the mindset that stress can be a source of growth and well-being, they are less likely to perceive high job demands as a threat to their resources and are able to prevent resource loss. In a similar vein, they evaluate possibilities for acquiring new resources more positively; they realize that productively using stress to increase personal mastery and goal accomplishment helps to build resources to prepare for future work demands. Hence, we expect beneficial associations of a positive stress mindset with two indicators of well-being: collective emotional exhaustion and collective engagement. Thereby, we follow the notion of psychological well-being not merely as the absence of mental health problems, but also as the ability to feel energetic and dedicated at work (Schaufeli and Bakker, 2004).

Emotional exhaustion describes a work-related stress reaction in which individuals feel overextended and perceive their emotional and physical resources to be depleted (Maslach et al., 2001). Gonzalez-Morales et al. (2012) define collective emotional exhaustion as employees' shared perceptions about how emotionally drained their colleagues are at work. Engagement, in contrast, can be defined as a positive affective-motivational work-related state of mind associated with vigour, dedication, and absorption (Schaufeli and Bakker, 2004). Collective engagement refers to employees' shared perceptions about the extent to which members of an organization are physically, cognitively, and emotionally invested in their work (Barrick et al., 2015).

As for exhaustion, a positive stress mindset is positively associated with individuals' ability to achieve a moderate level of arousal when confronted with stressful situations (Crum et al., 2013). Such a moderate level of arousal has been found to be ideal for well-being and performance, as it is sufficient for meeting stressful demands but prevents resource loss and harmful health consequences (Crum et al., 2017), thus serving as a potential safeguard against exhaustion. As for engagement, a positive stress mindset is likely to

positively relate to employees' motivation to fully invest their physical, cognitive, and emotional resources into work. By becoming aware that making positive use of stress increases their personal growth and mastery — thus providing new resources to meet future work demands (Hobfoll, 2011) — employees may be motivated to search for new challenges, persistently strive for goal attainment, and remain resilient in the face of difficulties. Hence, their vigour and dedication at work should be higher (Schaufeli and Bakker, 2004).

Therefore, a positive stress mindset is likely to positively relate to collective well-being in terms of low levels of collective emotional exhaustion and high levels of collective engagement. In combination with Hypothesis 1, HHRM is thus expected to show a positive indirect relationship with both indicators of well-being, which is mediated by employees' positive stress mindset.

Hypothesis 2a: Employees' positive stress mindset is negatively associated with collective emotional exhaustion.

Hypothesis 2b: Employees' positive stress mindset is positively associated with collective engagement.

Hypothesis 3a: Employees' positive stress mindset mediates the negative indirect association between HHRM and collective emotional exhaustion.

Hypothesis 3b: Employees' positive stress mindset mediates the positive indirect association between HHRM and collective engagement.

Collective Well-Being and Organizational Performance

The 'happy productive worker' thesis (Cropanzano and Wright, 2001) suggests that healthy and motivated employees are more likely to contribute to productivity-related behaviours that benefit organizational effectiveness. Thus, collective emotional exhaustion should negatively relate to performance (Taris, 2006). On the one hand, employees' individual resources for accomplishing their work are likely to be drained, thus being associated with diminished individual performance, which should also impair overall company effectiveness. On the other hand, an environment in which employees are emotionally exhausted can have implications for the availability of collective resources. In such a context, individuals may experience a lack of support from their exhausted co-workers. As a consequence, task-related cooperation and personal relationships could suffer, thereby negatively relating to collaboration and productivity (Gonzalez-Morales et al., 2012).

In contrast, in organizations with high collective engagement, employees are likely to fully invest their efforts and abilities into work (Schaufeli and Bakker, 2004), thus speaking to a positive relationship with individual performance which can also benefit overall company effectiveness. In addition, shared perceptions of high employee work involvement may instill a collective sense of vigour, which can be associated with increased productivity. Moreover, social comparison processes and the normative influence of their peers may prompt employees to increase their level of engagement to that of high-performing co-workers, thereby showing behaviours that positively relate to organizational performance (Barrick et al., 2015).

As both collective emotional exhaustion and collective engagement are proposed to be indirectly associated with HHRM via employees' positive stress mindset, it can be expected that there is a positive indirect relationship between HHRM and organizational performance. This indirect relationship, then, is serially mediated by employees' positive stress mindset as well as low levels of collective emotional exhaustion and high levels of collective engagement.

Hypothesis 4a: Collective emotional exhaustion is negatively associated with organizational performance.

Hypothesis 4b: Collective engagement is positively associated with organizational performance.

Hypothesis 5a: HHRM has a positive indirect association with organizational performance through employees' positive stress mindset and collective emotional exhaustion.

Hypothesis 5b: HHRM has a positive indirect association with organizational performance through employees' positive stress mindset and collective engagement.

The Moderating Role of Transformational Leadership Climate

Leaders have been proposed to play an important role in shaping employees' perceptions of HR management (Nishii and Wright, 2008). We combine this rationale with signaling theory, which posits that signal consistency (i.e., agreement of multiple signals sent from the same source) is important for their intended impact to unfold. If various signals sent from one source (in our case the organization) are conflicting, receivers will be confused and the signaling effect will be weakened (Connelly et al., 2011). In a similar vein, social information processing theory suggests that equivocal information obtained from the environment impairs the formation of individuals' attitudes (Salancik and Pfeffer, 1978). Thus, we assume that the relationship between HHRM and employees' positive stress mindset depends on whether the signals sent by organizational leadership are consistent with HR management's focus on fostering employee well-being.

In this regard, transformational leadership climate proves to be particularly relevant, defined as the extent to which leaders throughout an organization engage in transformational leadership behaviours (Menges et al., 2011). It originates from individual leader behaviours, but emerges as a shared organizational property. Thereby, processes like attraction-selection-attrition and newcomer socialization contribute to similarity in leadership behaviours within organizations. A high transformational leadership climate is marked by organizational leaders articulating inspiring visions, motivating followers to achieve joint goals, intellectually stimulating them to think 'outside the box', and providing them with individualized support (Podsakoff et al., 1996). Transformational leaders are motivated by moral commitment toward the well-being of their followers (Kelloway et al., 2012) and have been shown to promote their psychological health (Montano et al., 2017). In the face of challenging demands, they inspire followers to achieve common goals despite drawbacks and to develop innovative approaches for coping with difficult tasks. In addition, they are sensitive to followers' needs and feelings and show caring and

compassionate behaviours. Acting as coaches and mentors, they help followers to effectively cope with work challenges and to use them as a source for personal growth and development.

In organizations with a high transformational leadership climate, leaders are perceived as caring about employee well-being, enabling them to effectively manage work demands, and supporting them to use challenges as a source for personal development. Thus, a high transformational leadership climate aligns with the signals sent by HHRM with regard to a concern for employee well-being (Connelly et al., 2011), thereby contributing to consistency in employee perceptions of the organizational environment (Salancik and Pfeffer, 1978); this signal consistency should be positively related to employees' positive stress mindset. In contrast, in organizations where transformational leadership climate is low, employees are likely to perceive the signals from HHRM and leadership as ambiguous in terms of support for well-being and productively using stress. As a result, they may speculate about the true intentions of HHRM, be reluctant to participate in health-related HR trainings, or experience conflict between the healthy workplace practices supported by HHRM and the daily interaction with their leaders. Hence, employees are less likely to perceive HHRM as a supportive resource for making positive use of stress which attenuates the positive association between HHRM and employees' positive stress mindset.

To conclude, HHRM can be expected to more positively relate to employees' positive stress mindset under high as compared to low levels of transformational leadership climate. As employees' positive stress mindset is hypothesized to act as a mediator of the association between HHRM and employees' collective well-being, it can also be expected that the strength of these indirect relationships depends on the level of transformational leadership climate.

Hypothesis 6a: Transformational leadership climate moderates the association between HHRM and employees' positive stress mindset such that the association is more positive under high as compared to low levels of the moderator.

Hypothesis 6b: Transformational leadership climate moderates the association between HHRM and employees' positive stress mindset such that the indirect association between HHRM, employees' positive stress mindset, and collective emotional exhaustion is more negative under high as compared to low levels of the moderator.

Hypothesis 6c: Transformational leadership climate moderates the association between HHRM and employees' positive stress mindset such that the indirect association between HHRM, employees' positive stress mindset, and collective engagement is more positive under high as compared to low levels of the moderator.

METHOD

Data and Sample

Data for our study were collected in cooperation with a benchmarking agency in German small- and medium-sized enterprises (SMEs) as part of a larger benchmarking analysis. SMEs are often referred to as the 'backbone' of the German economy, where

they make up over 99 per cent of all companies, employing more than 60 per cent of the working population (Soellner, 2014). To be eligible for participation, companies had to be located in Germany, and company size had to be less than 5,000 employees. Overall, our analysis is based on data from 88 organizations belonging to the service (45 per cent), manufacturing (31 per cent), trade (17 per cent), and finance (7 per cent) sector. They employed an average of 336 employees ($SD = 590$), with a total of 15,952 respondents participating in our survey (within-organization response rate of 67 per cent). These employees averaged 40 years of age ($SD = 6.69$), were predominantly male (58 per cent), and had an average company tenure of 8 years ($SD = 2.99$).

To prevent possible problems associated with common source bias, we collected data from six different sources in each organization: the top HR representative, four unique groups of employees, and the members of the top management team (TMT). The companies' top HR representatives were surveyed to obtain information on HHRM as well as several control variables. They were predominantly male (56 per cent), averaged 45 years of age ($SD = 9.00$), and had been with their company for 11 years ($SD = 9.96$). In addition, all employees of the participating companies received an invitation to take part in a web-based survey. Using a split-sample design, they were randomly assigned to one of four different survey versions (hereinafter 'employee survey version 1-4') based on a random function programmed into the survey website.^[1] The four survey versions asked employees to provide information on different constructs of our theoretical model: employees' positive stress mindset (employee survey version 1), collective emotional exhaustion and collective engagement (employee survey version 2), transformational leadership climate (employee survey version 3), and co-worker support as a control variable in our analysis (employee survey version 4). Finally, TMT members in each company were surveyed to gauge information on organizational performance. These TMT members were mostly male (91 per cent), averaged 49 years of age ($SD = 7.30$) and had an average tenure of 15 years ($SD = 10.02$).

Measures

Unless indicated otherwise, we used 5-point scales (1 = strongly disagree, 5 = strongly agree) for the measures in our survey. To justify the aggregation of our variables to the organizational level, we calculated both intraclass correlation coefficients (ICC_1 and ICC_2 ; Bliese, 2000) and the $r_{wg(j)}$ -index (James et al., 1984) and relied on common statistical benchmarks discussed in the literature (Bliese, 2000; LeBreton and Senter, 2008).

Health-related human resource management. We collected information on this variable from the organizations' top HR representatives. Lepak et al. (2006, p. 247) propose that 'key informants must be knowledgeable persons about HR systems or activities'. Therefore, we considered top HR representatives to be the most valid and reliable informants for reporting on corporate health-related HR practices and principles, particularly in our sample of SMEs.

In line with our conceptualization of HHRM, we created an eight-item scale (see Appendix). To test the construct validity of our newly developed scale, we proceeded in two steps. First, we conducted a pilot study with a second, independent sample of 86

top HR representatives from German SMEs. With this dataset, we conducted an exploratory factor analysis of our scale, which yielded one factor with an eigenvalue of 4.93 accounting for 61.6 per cent of the variance in the data and no other factors with an eigenvalue above 1.0; the average loading of the items on this factor was 0.78 (ranging from 0.66 to 0.86). The one-factor solution was also backed by the results of a subsequent confirmatory factor analysis (CFA). We used two incremental fit indices — the comparative fit index (CFI) and the incremental fit index (IFI) — in combination with the standardized root mean square residual (SRMR) to assess model fit, as recommended for sample sizes < 200 (Hu and Bentler, 1999). Results indicated a very good fit of the one-factor model with the data ($\chi^2/df = 1.47$; CFI = 0.98, IFI = 0.98, SRMR = 0.04), with the CFI and IFI above the value of 0.90 as well as the SRMR below the value of 0.08 as commonly discussed thresholds in the literature (Hu and Bentler, 1999; Kline, 2010). In a second step, to further establish the measure, we conducted a separate CFA in the study's main dataset, which also yielded satisfactory results for the one-factor solution ($\chi^2/df = 1.37$; CFI = 0.98, IFI = 0.98, SRMR = 0.03). To obtain a company score of HHRM, the eight items were averaged ($\alpha = 0.91$).

Employees' positive stress mindset ($\alpha = 0.93$; ICC₁ = 0.05^[2]; ICC₂ = 0.69; $r_{wg(j)}$ = 0.86). To capture the degree to which employees in the participating companies held a positive mindset toward the nature and consequences of stress, employees in survey version 1 were asked to provide their assessment of the eight-item stress mindset scale by Crum et al. (2013). A sample item is: 'Experiencing stress facilitates my learning and growth'. To obtain an indicator for employees' positive stress mindset in organizations, items were averaged and aggregated to the organizational level following a direct-consensus composition model (Chan, 1998).

Collective emotional exhaustion ($\alpha = 0.97$; ICC₁ = 0.10; ICC₂ = 0.82; $r_{wg(j)}$ = 0.81). The degree to which respondents collectively perceived the employees in their organization to be emotionally exhausted was gauged in employee survey version 2 using the five-item scale by Gonzalez-Morales et al. (2012). A sample item is: 'The employees working in this company feel used up at the end of the workday'. Items were averaged and aggregated to the organizational level.

Collective engagement ($\alpha = 0.92$; ICC₁ = 0.08; ICC₂ = 0.78; $r_{wg(j)}$ = 0.95). Respondents' shared perceptions of the extent to which the employees in their organization showed high levels of engagement was measured in employee survey version 2 using the six-item scale by Barrick et al. (2015). A sample item is: 'The employees in this company tend to be highly focused when doing their jobs'. Again, items were averaged and aggregated to the organizational level of analysis.

Transformational leadership climate ($\alpha = 0.93$; ICC₁ = 0.12; ICC₂ = 0.80; $r_{wg(j)}$ = 0.87). To measure this variable, we relied on the scale by Podsakoff et al. (1996), with employee survey version 3 including a total of 16 items on leaders' articulating a vision (sample item: 'My supervisor inspires others with his/her plans for the future'), fostering acceptance of collective goals ('My supervisor gets employees to work together for the same goal'),

intellectual stimulation ('My supervisor has provided me with new ways of looking at things which used to be a puzzle for me'), and individualized support ('My supervisor behaves in a manner that is thoughtful of my personal needs'). Following prior research (Menges et al., 2011), we asked respondents to assess the extent to which their direct leaders exhibited transformational leader behaviours and applied a direct-consensus composition model for aggregation (Chan, 1998).

Organizational performance ($\alpha = 0.76$; $ICC_1 = 0.23$; $ICC_2 = 0.44$; $r_{wg(j)} = 0.92$). As objective performance data was not available for the mostly privately owned SMEs in our sample, TMT members were asked to report on their company's performance.^[3] Following prior research, we conceptualized company performance as comprising both organizational and operational aspects (Combs et al., 2005) and measured both dimensions with two items each (for a similar approach, see, e.g., Boehm et al., 2014). Thus, we measured organizational performance with two items relating to the company's current financial situation and company growth, while operational performance was gauged with two items pertaining to employee productivity as well as employee retention and turnover. In line with prior studies using subjective performance measures (e.g., Wall et al., 2004), TMT members were asked to rate their company's performance compared to their direct industry competitors (1 = far below average, 7 = far above average).

Control variables. We controlled for seven additional factors: First, we included company size, as it has been shown to relate to various employee attitudes and behaviours (Pierce and Gardner, 2004); as this measure was skewed, we log-transformed it. Second, we controlled for industry affiliation. In particular service sector companies have shown to exhibit significant differences in HR practices, culture, and performance compared to companies from other industries (Datta et al., 2005). Hence, we included three dummy variables (i.e., service, manufacturing, and trade), using finance as the reference category. Third, we accounted for possible staffing shortage, as this may relate to both well-being and performance (Ganster and Dwyer, 1995). We measured this variable by asking the top HR representatives whether their company is currently not able to carry out new projects due to understaffing (1 = totally disagree, 7 = totally agree). Fourth, we controlled for dynamism of the organizational environment, as a highly dynamic context may be associated with both well-being and performance. Top HR representatives answered the five-item scale by Jansen et al. (2006; sample item: '*Environmental changes in our local market are intense*'; 1 = totally disagree, 7 = totally agree; $\alpha = 0.86$).

Fifth, we included employees' mean age as age has been shown to relate to wellbeing and performance (Ng and Feldman, 2008). Sixth, we controlled for employees' average company tenure, because, like age, tenure has been shown to be associated with employee behaviour and performance. Seventh, we included the average degree of co-worker support as co-workers are considered to be a major source of social support, in addition to leadership and HR management. Employees in survey version 4 answered the four-item social support scale by Jetten et al. (2012) with a co-worker-referent (sample item: '*To what extent do you get the help you need from your colleagues at work?*'; 1 = not at all, 5 = to a great extent). Items were averaged and aggregated to the organizational level ($\alpha = 0.93$; $ICC_1 = 0.04$; $ICC_2 = 0.59$; $r_{wg(j)} = 0.86$).^[4]

Analytical Techniques

We tested our theoretical predictions using multiple regression analysis. To examine the mediation hypotheses, we assessed the statistical significance of the indirect effects and their associated confidence intervals with the help of a bootstrapping-based product-of-coefficients procedure (Preacher and Hayes, 2004). To test for moderated mediation, we relied on Preacher et al.'s (2007) approach for analysing conditional indirect effects, in which the point estimate of the indirect effect of an independent on a dependent variable via a mediator is tested for different values of the moderator (i.e., -1 SD, mean, and $+1$ SD) using a bootstrapping procedure.

RESULTS

Table I provides an overview of means, standard deviations, and intercorrelations. As expected, HHRM is significantly correlated with employees' positive stress mindset ($r = 0.22$, $p \leq 0.01$). In addition, employees' positive stress mindset is negatively associated with collective emotional exhaustion ($r = -0.37$, $p \leq 0.001$) and positively associated with collective engagement ($r = 0.43$, $p \leq 0.001$), which in turn show significant correlations with organizational performance (collective emotional exhaustion: $r = -0.32$, $p \leq 0.01$; collective engagement: $r = 0.34$, $p \leq 0.001$).^[5]

To examine whether HHRM is positively associated with employees' positive stress mindset, we conducted multiple regression analysis with stress mindset as the dependent variable. As can be seen from Table II, HHRM shows a positive relationship ($\beta = 0.31$, $p \leq 0.01$), supporting Hypothesis 1. Moreover, it was predicted that employees' positive stress mindset is negatively associated with collective emotional exhaustion (Hypothesis 2a) and positively associated with collective engagement (Hypothesis 2b). Hence, we conducted additional regression analyses with collective emotional exhaustion and collective engagement as the dependent variables and stress mindset as the main predictor. As Table II shows, employees' positive stress mindset is negatively related to collective emotional exhaustion ($\beta = -0.32$, $p \leq 0.01$) and positively related to collective engagement ($\beta = 0.37$, $p \leq 0.001$), thus supporting Hypotheses 2a and 2b.

To test whether employees' positive stress mindset constitutes a mediator through which HHRM is associated with collective emotional exhaustion and collective engagement (Hypotheses 3a and 3b), we conducted a bootstrapping-based product-of-coefficients procedure using PROCESS for SPSS (Hayes, 2012) with 1,000 bootstrap samples. The bias-corrected bootstrap 95 per cent confidence interval for both indirect relationships does not include zero, thus supporting Hypothesis 3a (dependent variable collective emotional exhaustion: unstandardized point estimate $B = -0.04$, bootstrap standard error [BootSE] = 0.02, bias-corrected 95 per cent bootstrap confidence interval [Boot95%CI] = $[-0.08, -0.01]$) and Hypothesis 3b (dependent variable collective engagement: $B = 0.03$, BootSE = 0.01, Boot95%CI = $[0.01, 0.06]$).

Hypotheses 4a and 4b focus on the relationship between collective well-being and organizational performance. As can be seen in Table II, collective engagement is positively associated with performance ($\beta = 0.35$, $p \leq 0.05$), supporting Hypothesis 4b. In contrast, collective emotional exhaustion does not show a significant relationship

Table I. Descriptives and intercorrelations

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Health-related human resource management (HRM)	3.22	0.87														
2 Employees' positive stress mindset	2.44	0.24	0.22**													
3 Collective emotional exhaustion	2.47	0.39	-0.20	-0.37***												
4 Collective engagement	3.73	0.24	0.18	0.43***	-0.50***											
5 Transformational leadership climate	3.50	0.31	0.32**	0.31**	-0.50***	0.64***										
6 Organizational performance	5.56	0.68	0.15	0.22*	-0.32**	0.34***	0.28**									
7 Company size (log)	5.17	1.09	0.13	-0.24*	0.27*	-0.14	-0.15	-0.05								
8 Industry (service)	0.45	0.50	0.09	0.17	0.03	0.11	0.11	-0.15	-0.11							
9 Industry (production)	0.31	0.46	-0.20	-0.16	-0.08	-0.08	-0.25*	-0.05	-0.12	-0.61***						
10 Industry (trade)	0.17	0.38	0.09	-0.07	0.04	-0.04	0.17	0.16	0.20	-0.41***	-0.30**					
11 Staffing shortage	2.87	1.58	-0.15	-0.11	0.12	0.05	-0.03	-0.10	0.05	0.06	0.15	-0.16				
12 Environmental dynamism	4.93	1.35	0.16	-0.08	0.12	-0.03	0.02	0.02	-0.01	-0.16	0.12	0.16	0.16			
13 Mean age	39.81	6.69	-0.04	-0.11	0.10	-0.11	-0.14	-0.06	0.05	-0.08	0.11	-0.05	0.04	-0.09		
14 Mean company tenure	7.71	2.99	0.09	-0.28**	0.18	-0.22*	-0.22*	-0.05	0.31**	-0.30**	0.12	0.00	-0.16	-0.25*	0.39**	
15 Co-worker support	3.97	0.24	0.23*	0.08	-0.32**	0.63***	0.48***	0.16	0.07	0.03	-0.18	0.16	0.06	0.01	-0.12	-0.10

Note: N = 88. *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001.

Table II. Results of multiple regression analysis

	Dependent variables					
	Model 1	Model 2a	Model 2b	Model 3a	Model 3b	Model 4
<i>Control variables</i>						
Company size	-0.18	0.18	-0.07	0.19	-0.06	0.01
Industry (service)	-0.33	-0.03	0.07	0.01	0.07	-0.47
Industry (production)	-0.33	-0.24	0.12	-0.23	0.12	-0.37
Industry (trade)	-0.26	-0.03	-0.04	-0.01	-0.04	-0.10
Staffing shortage	-0.06	0.13	0.03	0.11	0.02	-0.01
Environmental dynamism	-0.18	0.14	-0.02	0.18	-0.01	0.02
Mean age	0.05	0.03	0.00	0.02	0.00	0.01
Mean company tenure	-0.35*	0.11	-0.03	0.14	-0.03	-0.06
Co-worker support	-0.05	-0.39***	0.63***	-0.36***	0.64***	-0.19
<i>Independent variables</i>						
Health-related human resource management (HHRM)	0.31** (<i>B</i> = 0.08)			-0.13	-0.02	0.07
Employees' positive stress mindset		-0.32** (<i>B</i> = -0.53)	0.37*** (<i>B</i> = 0.38)	-0.28** (<i>B</i> = -0.47)	0.38*** (<i>B</i> = 0.39)	-0.02
Collective emotional exhaustion						-0.21
Collective engagement						0.35* (<i>B</i> = 0.99)
R ²	0.23	0.38	0.56	0.40	0.56	0.27
F	2.29*	4.73***	9.64***	4.48***	8.66***	2.09*

Note: N = 88; standardized regression coefficients are reported (unstandardized coefficients in parentheses). *p ≤ 0.05, **p ≤ 0.01, ***p ≤ 0.001.

($\beta = -0.21$, n.s.); thus, Hypothesis 4a is not supported. In a further step, we examined the indirect link between HHRM and organizational performance. As collective emotional exhaustion is not significantly related to performance, we only tested whether the indirect relationship between HHRM and company performance is serially mediated by employees' positive stress mindset and collective engagement (Hypothesis 5b). The bias-corrected 95 per cent bootstrap confidence interval for this indirect relationship does not include zero ($B = 0.03$, $\text{BootSE} = 0.02$, $\text{Boot95\%CI} = [0.01, 0.08]$), thus supporting Hypothesis 5b.

Hypothesis 6a assumes that transformational leadership climate moderates the link between HHRM and employees' positive stress mindset such that the relationship is more positive under high (vs. low) levels of the moderator. To test this assumption, we analysed in a first step the interaction of HHRM and transformational leadership climate on employees' positive stress mindset, which is significant ($\beta = 0.24$, $p \leq 0.05$) and explains a significant amount of additional variance in employees' positive stress mindset ($\Delta R^2 = 0.04$, $p \leq 0.05$; see Table III).

Table III. Results of moderated regression analysis

	<i>Employees' positive stress mindset</i>	
	<i>Step 1</i>	<i>Step 2</i>
<i>Control variables</i>		
Company size	-0.14	-0.12
Industry (service)	-0.30	-0.25
Industry (production)	-0.30	-0.32
Industry (trade)	-0.26	-0.24
Staffing shortage	-0.06	0.01
Environmental dynamism	-0.16	-0.16
Mean age	0.05	0.03
Mean company tenure	-0.32*	-0.29*
Co-worker support	-0.12	-0.16
<i>Independent variables</i>		
Health-related human resource management (HHRM)	0.26*	0.23*
Transformational leadership climate (TFL climate)	0.19	0.25*
<i>Interaction</i>		
HHRM X TFL climate		0.24*
R ²	0.26	0.30
ΔR^2		0.04*
F	2.33*	2.66**

Note: N = 88; standardized regression coefficients are reported.

* $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

In a second step, we calculated simple slopes at one standard deviation both above and below the mean of the moderator. Results show that the positive relationship between HHRM and employees' positive stress mindset becomes stronger under high levels of transformational leadership climate ($\beta = 0.45$, $p \leq 0.01$) but is entirely dissolved under low levels of the moderator ($\beta = 0.01$, n.s.). Thus Hypothesis 6a, which predicted that the strength of the relationship between HHRM and employees' positive stress mindset is dependent on transformational leadership climate, is supported. Moreover, our analysis illustrates that the relationship between HHRM and employees' positive stress mindset even becomes non-significant under the condition of low transformational leadership climate. Figure 3 illustrates the interaction effect.

Finally, we examined whether transformational leadership climate also moderates the indirect relationships between HHRM and collective emotional exhaustion as well as collective engagement mediated by employees' positive stress mindset (Hypotheses 6b and 6c), following the procedure by Preacher et al. (2007). Results show that the negative indirect association between HHRM and collective emotional exhaustion only exists under a high transformational leadership climate ($B = -0.06$, $\text{BootSE} = 0.02$, $\text{Boot95\%CI} = [-0.11, -0.01]$), becoming weaker and non-significant at mean ($B = -0.03$, $\text{BootSE} = 0.02$, $\text{Boot95\%CI} = [-0.07, 0.00]$) and low levels of the moderator ($B = -0.01$, $\text{BootSE} = 0.02$, $\text{Boot95\%CI} = [-0.06, 0.04]$). In a similar vein, the positive indirect relationship between HHRM and collective engagement only exists under a high transformational leadership climate ($B = 0.05$, $\text{BootSE} = 0.02$, $\text{Boot95\%CI} = [0.01, 0.09]$), becoming weaker and non-significant at mean ($B = 0.02$, $\text{BootSE} = 0.01$, $\text{Boot95\%CI} = [-0.00, 0.06]$) and low levels of the moderator ($B = 0.01$, $\text{BootSE} = 0.02$, $\text{Boot95\%CI} = [-0.03, 0.04]$). Thus, Hypotheses 6b and 6c are supported. Moreover, the indirect relationships between HHRM and collective emotional exhaustion as well

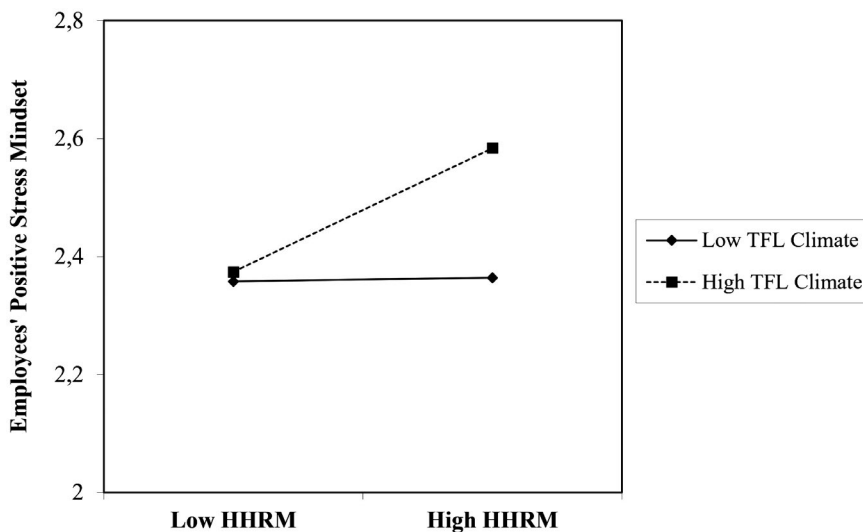


Figure 3. Moderation effect of transformational leadership (TFL) climate on the association between health-related human resource management (HHRM) and employees' positive stress mindset

as collective engagement even become non-significant when transformational leadership climate is low.

Robustness Check

Due to the cross-sectional nature of our analysis, there is a potential risk of reverse causality between HHRM and organizational performance. To at least partially address this issue, we gathered additional data on both prior and subsequent organizational performance for as many companies in our sample as possible.^[6] Based on a sub-sample of $N = 26$ companies, we found no significant relationship between subjective ratings of prior organizational performance and the level of HHRM implemented in these companies ($r = 0.04$, $p = 0.86$), thus speaking against the assumption that HHRM was influenced by prior firm performance. In addition, based on a sub-sample of $N = 22$ companies, we found strong correlations of employees' collective engagement ($r = 0.49$, $p \leq 0.05$) and collective emotional exhaustion ($r = -0.36$, $p \leq 0.10$) with subjective ratings of subsequent organizational performance, hence further substantiating the association between collective well-being and organizational performance as the last step of our mediation model. Together, the findings from the robustness check suggest that reverse causality between HHRM and organizational performance does not seem to be a major issue in our study.

DISCUSSION

The aim of this paper was to examine the relationship between health-related human resource management (HHRM), employees' collective well-being and company performance. Results from a study in 88 organizations show that HHRM is indirectly related to well-being in terms of lower levels of collective emotional exhaustion and higher levels of collective engagement. This indirect association is mediated by employees' positive stress mindset and moderated by transformational leadership climate, such that the indirect relationship between HHRM and collective well-being only exists under high (vs. low) levels of the moderator. Moreover, HHRM shows a positive indirect association with organizational performance that is mediated by employees' positive stress mindset and collective engagement.

Theoretical Implications

Extant research on the relationship between HR management, employee well-being and organizational performance has been both theoretically and empirically inconclusive (van de Voorde et al., 2012). Our study contributes to this stream of research in three major ways: First, it helps to illuminate prior inconsistent findings by examining how HR management is related to employee well-being. Similar to previous results that revealed the relationship to be complex, HHRM does not show a direct, but an indirect relationship with well-being that only becomes apparent when taking employees' positive stress mindset as a mediator into consideration. Thereby, our analysis extends the growing body of research on stress mindset, suggesting that such a mindset

is associated with the implementation of a health-related HR system in organizations. As prior research has also shown other domain-specific mindsets to impact individuals' affect, motivation, and behaviour (e.g., Rattan and Dweck, 2018), mindsets in general might constitute a new and promising approach for understanding the role of HR management.

Second, results on the moderating role of transformational leadership climate support the proposition that leadership acts as a critical contingency of the relationship between HR management and employee well-being (van de Voorde and Boxall, 2014). While the role of line management for HR management has been repeatedly discussed (e.g., Jiang et al., 2013), most of the few existing studies are rooted in the substitutes-for-leadership model (Kerr, 1977), proposing HR and leadership to act as substitutes for each other (e.g., Chuang et al., 2016). Our analysis provides a different perspective by showing that HR and leadership constitute synergistic partners when it comes to the relationship with employee well-being. Thus, our findings might be seen as evidence for the assumption that signal consistency is important for the effectiveness of HR management (Bowen and Ostroff, 2004). Moreover, our results imply that signal inconsistency might not only attenuate but even entirely dissolve signal effectiveness.

Third, our study contributes to the theoretical debate on the relationship between HR management, employee well-being and organizational performance (Peccei et al., 2013). In this regard, the 'mutual gains' view argues that HR management benefits both well-being and performance (e.g., Appelbaum et al., 2000). In contrast, the 'conflicting outcomes' perspective considers well-being and performance to be parallel organizational objectives that are influenced by different sets of HR practices (e.g., Godard, 2004). Our study adds to advancing this conceptual debate by providing empirical support for a theoretical model that is reflective of the 'mutual gains' perspective, showing that collective engagement acts as a mediator of the association between HHRM and organizational-level performance. At the same time, collective emotional exhaustion is not shown to be a mediator of the relationship. Thus, our findings indicate that the relationship between HHRM and performance may be mediated in particular by employees' positive affective-motivational well-being, a proposition that can also be found in individual-level models of well-being, such as the job demands-resources model (Schaufeli and Bakker, 2004).

By supporting the 'mutual gains' perspective on HR, well-being and performance, our study also adds to the broader strategic HR literature. Since the rise of the strategic HR concept in the 1980s, many works have followed a unitarist perspective, arguing that 'what is good for the organization is also good for the employees' (van Buren et al., 2011). Yet, this functionalist, managerial view of HR management has been largely criticized for neglecting employee concerns and well-being (e.g., Guest, 2017). The decreasing employee focus has led to calls for more 'balanced approaches' (e.g., Paauwe, 2009) that pay equal attention to both the managerial perspective on strategic HR and the well-being of employees. Such calls are complemented by claims that the employee-organization relationship should play a more prominent role in strategic HR analyses (e.g., Lepak and Boswell, 2012) and that a stronger emphasis on multi-stakeholder conceptualizations of HR management and performance is necessary (e.g., Beer et al., 2015).

Our study echoes the calls for a more balanced perspective and for putting employee well-being centre-stage in the relationship between HR management and performance. As such, our findings stand in contrast to the (either implicit or explicit) notion that there exists a tension or trade-off between employee concerns and organizational effectiveness (Lepak and Boswell, 2012). That is, our study indicates that employee well-being and strategic value creation may not necessarily constitute competing HR objectives. Rather, our findings might be seen as tentative evidence for the view that ‘what is good for the employees is also good for the organization.’

With regard to implications for strategic decision-making, employee well-being might be incorporated as a key objective into an organization’s strategy in order to ensure the strategic fit of HHRM (Lepak et al., 2006). Moreover, implementing HHRM may help organizations to transform the HR function into what Paauwe (2004) calls an ‘enabler’ for strategic options. In times of rapidly changing markets and increasing competitive pressure, HR can facilitate the development of a workforce that is able to flexibly adapt to the changing strategic demands of organizations. For this purpose, companies need to take care of employee needs and well-being in order to increase their learning, flexibility, and change readiness. HHRM may constitute a viable approach for turning HR into such a strategic enabler.

To conclude, the health-related HR system developed in our study may result in a situation that helps organizations meet their strategic objectives while at the same time putting employee well-being at the heart of the HR-performance relationship. In this regard, HHRM may provide a potential answer to the plea made by Guest (2002, p. 340) that, ‘if a set of HR practices was found to be associated with both high performance and well-being, then we would be closer to making progress in the search for the elusive happy and productive worker’.

Practical Implications

Our findings can support companies in taking effective action for creating a psychologically healthy workplace. First, our analysis points to the importance of establishing a comprehensive system of health-related HR practices. Following from the conceptualization in our study, HHRM should incorporate HR practices that focus on both prevention of and recovery from psychological illnesses, that are targeted at both employees and leaders, that receive support from the organization’s top management, and that are constantly evaluated. Moreover, HHRM will be most effective when it simultaneously strengthens employees’ ability, motivation, and opportunity to contribute to creating a psychologically healthy workplace. Although certainly not exhaustive, this list may constitute a good starting point for organizations that strive to introduce effective HHRM. Depending on additional strategic priorities of the company, HHRM may be complemented by other HR systems (e.g., targeted at occupational safety, employee commitment, or involvement). In doing so, ensuring alignment and avoiding conflict with HHRM is essential.

Second, organizations should be aware of the critical role that leaders play in the context of HHRM. In this regard, transformational leadership climate proves to be particularly relevant as it contributes to employees’ perception that not only HR but also

organizational leaders care about their well-being. This perceived consistency between signals sent from different organizational actors is important for the positive relationship between HHRM, employees' positive stress mindset and well-being to occur. Hence, organizations should promote high levels of transformational leadership climate, for example by adequately selecting and training their leadership personnel. In this regard, existing research demonstrates the effectiveness of training for transformational leadership (e.g., Antonakis et al., 2011) and offers advice for the design of leadership development programs.

Limitations and Future Directions

Like any other study, our research is not without limitations. First, our analysis is cross-sectional, thus precluding the possibility of drawing causal inferences. While we are confident that our model is based on sound theoretical reasoning and the robustness check based on additional performance data generally supports the assumed flow of causality between HHRM and organizational performance, the potential risk of reverse causality cannot entirely be ruled out. As both the influence of a positive stress mindset on well-being and the impact of well-being on performance have been proved by extant longitudinal or experimental research (e.g., Crum et al., 2013; Petrou et al., 2015), future studies should aim in particular at further validating the relationship between HHRM and employees' positive stress mindset. In this regard, prior investigations have provided initial evidence for the malleability of individuals' stress-related mindset (Crum et al., 2013, 2017); yet, based on our cross-sectional analysis, it cannot be precluded that a positive stress mindset might also affect employees' perceptions of HHRM and organizational leadership to some extent. Therefore, we strongly encourage further research to replicate our findings using longitudinal research designs.

Second, the generalizability of our findings may be limited due to particularities of our sample (i.e., SMEs located in Germany). Hence, future research should on the one hand examine the effects of HHRM in larger companies where it may, for example, be harder to implement health-related HR measures in a way that all employees are equally reached. On the other hand, it seems to be worthwhile to study the effects of HHRM in other national and/or cultural contexts, as cultural and legislative differences between countries and regions may influence the design and consequences of health-related HR systems.

Third, our analysis is exclusively based on top HR representatives' assessments of HHRM and future research may profit from also incorporating employees' subjective view on HHRM (Nishii and Wright, 2008). In a similar vein, it appears to be promising to investigate the 'strength' of HHRM in terms of its effectiveness in communicating unambiguous, consistent messages to employees about what is appropriate behaviour (Bowen and Ostroff, 2004). Hence, future research may investigate how the distinctiveness, consistency, and consensus of HHRM determine its impact on well-being and performance.

A fourth limitation relates to the measurement of organizational performance. Our sample consists mostly of privately owned SMEs for which objective performance data is not publicly available. Thus, we had to rely on TMT members' subjective performance

ratings which can be associated with potential weaknesses, such as response bias. However, the use of board members as key informants proved to be adequate in prior research (Combs et al., 2005), which also found strong correlations with objective performance indicators (Wall et al., 2004). Nonetheless, future research would benefit from replicating our findings using objective performance data.

Notwithstanding these limitations, our study offers additional implications for further research. Regarding the stress mindset concept, future studies may investigate the emergence of collective, 'organizational mindsets'. Given the limited amount of variance in employees' stress mindset that can be attributed to organizational membership in our study, future studies could focus on organizational-level stress-related mindsets that are even more strongly shared among employees (for first evidence on such 'organizational mindsets', see Dweck et al., 2015). With regard to future individual-level research, it is conceivable that a positive stress mindset might also have detrimental effects. While stress mindset and appraisal have been shown to be largely independent from one another (Crum et al., 2013), a positive stress mindset might nevertheless lead employees to uncritically accept intensifying job demands, thus entailing the risk that they might overextend themselves. Future studies may explore under what conditions such a systematic influence of stress mindset on stress appraisal could emerge.

Moreover, further research may profit from scrutinizing the relationships in our conceptual model, in particular the link between HHRM and employees' positive stress mindset, from the viewpoint of additional theoretical perspectives. In this regard, for example social cognitive theory (Bandura, 1997), organizational support theory (Rhoades and Eisenberger, 2002), or a human capital perspective (Barney, 1991) may offer the opportunity for an in-depth analysis of underlying mechanisms in terms of employees' efficacy beliefs, competences, or social exchange processes that could account for the relationship between HHRM and employees' stress mindset.

Finally, we strongly encourage additional empirical analyses to further address the theoretical debate concerning the relationship between HR management, employee well-being and organizational performance (Peccei et al., 2013). While our study aimed at advancing this debate by providing empirical evidence for a model that is reflective of the 'mutual gains' perspective, future analyses may incorporate an additional 'conflicting outcomes' explanation for the effects of HHRM. For example, it may be worthwhile to consider whether HHRM might prompt employees to put an overly strong emphasis on preventing potential health risks that could attenuate its positive indirect association with collective engagement and organizational performance. Moreover, future research would benefit in particular from analysing whether, how, and when more performance-oriented HR approaches (such as high performance work systems) may lead to 'mutual gains' or 'conflicting outcomes' in terms of employee well-being and company performance. Apart from their intended performance-enhancing effects, such HR systems may for example cause employees' perceptions of work intensification and performance pressure that could result in lower levels of psychological well-being.

NOTES

- [1] To verify that random assignment worked as expected, we tested for possible differences between survey versions with regard to employees' age, gender, and tenure. To this end, we conducted regression analyses with employee attributes as dependent variables and survey versions as dummies. We used a logit model for gender differences and obtained a nonsignificant overall model fit ($\chi^2 = 1.10$, $p = 0.78$). For age and tenure differences, we specified OLS models and also found nonsignificant overall model fits (age: $F = 0.99$, $p = 0.50$; tenure: $F = 0.57$, $p = 0.63$). These results indicate that random assignment to the survey versions worked as intended.
- [2] Although an ICC(1) of 0.05 is at the lower end of acceptable values, it can still be considered as a 'typical' value (Bliese, 2000, p. 361) that 'represents a small to medium effect, suggesting that group membership influenced judges' ratings' (LeBreton and Senter, 2008, p. 838).
- [3] We suggest that for our analysis, the use of subjective performance ratings is an adequate alternative to objective performance data: First, subjective TMT performance ratings have proved to strongly correlate with objective performance indicators (Wall et al., 2004). Second, the TMT members can be considered as key informants due to their senior management positions and their high average tenure of 15 years. Third, subjective performance assessments allow for the use of SMEs as an important research setting for which objective performance data is often not publicly available. Fourth, TMT members' ratings provide comparable performance assessments across companies in our multi-industry sample.
- [4] We performed a series of CFAs to check for convergent and discriminant validity of our core variables. Due to the limited sample size ($N = 88$), we had to economize the parameters to be tested in order to increase the cases-to-parameter ratio; therefore, we followed prior research and applied a parceling approach for the sub-dimensions of transformational leadership climate. Moreover, we treated organizational performance as a formative construct and excluded it from our full CFA model (Podsakoff et al., 2006); yet, the model showed a similar fit when performance was included as an additional reflective measure. Our hypothesized measurement model with five latent factors (i.e., HHRM, employees' positive stress mindset, collective engagement, collective emotional exhaustion, and transformational leadership climate) shows an adequate fit with the data ($\chi^2/df = 1.59$; CFI = 0.92, IFI = 0.92, SRMR = 0.07, AIC = 825.73). All factor loadings are > 0.50 and the mean average variance extracted (AVE) is 0.71 (from 0.53 for HHRM to 0.87 for collective exhaustion). This model was compared to four alternative models: One with HHRM and transformational leadership climate loading on one factor ($\chi^2/df = 2.20$; CFI = 0.83, IFI = 0.83, SRMR = 0.13, AIC = 1072.51), one with HHRM, transformational leadership climate, and stress mindset as one factor ($\chi^2/df = 3.04$; CFI = 0.71, IFI = 0.71, SRMR = 0.17, AIC = 1419.61), one with all mediators as one factor ($\chi^2/df = 2.92$; CFI = 0.73, IFI = 0.72, SRMR = 0.17, AIC = 1371.83), and one with all variables loading on a single factor ($\chi^2/df = 4.17$; CFI = 0.54, IFI = 0.55, SRMR = 0.19, AIC = 1895.51). All alternative models fit the data worse than the five factor model.
- [5] As some predictors show substantial intercorrelations, we checked for possible biases due to multicollinearity. Yet, variance inflation factors (VIFs) fell far below the critical value of 10 (Kennedy, 2008) for all our regression models (mean VIF values ranging between 2.17 and 2.35).
- [6] The additional performance data was obtained from the benchmarking agency with which we had conducted the data collection for our study. Data on prior firm performance was collected between 12 and 30 months before our study; similar to our analysis, assessments were provided by TMT members with a four-item scale comprising two items each on both financial and operational performance. Data on subsequent organizational performance was collected between 12 and 24 months after our study. Again, subjective assessments were captured with a four-item scale comprising two items each on both financial and operational performance. These ratings were provided either by TMT members or companies' top HR representatives.

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APPENDIX

HEALTH-RELATED HUMAN RESOURCE MANAGEMENT (HHRM)

To which extent does your company implement the following psychological health-related HR practices and principles: (1 = not at all, 5 = to a great extent)

1. HR practices for preventing psychological health problems at work (e.g., stress management trainings)
2. HR practices for coping with already existing psychological health problems (e.g., support for employees who suffer from burnout)
3. Psychological health-related HR practices specifically designed for leaders (e.g., trainings for psychological health-oriented leadership)
4. Opportunities for flexibly adjusting employees' job designs to the state of their psychological health (e.g., working hours or work organization)
5. Involvement of employees into the design and implementation of psychological health-related HR practices (e.g., HR planning workshops together with employees)
6. Incentives for employees to participate in psychological health-related HR practices (e.g., rewards for frequent attendance of health-related trainings)
7. Permanent and systematic evaluation of psychological health-related HR practices
8. Top management support for and emphasis on the importance of a psychologically healthy workplace.