Satisfaction with HR practices and employee performance: A moderated mediation model of engagement and health

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ABSTRACT

This study examines employee evaluations of HR practices (HRPs), which are a critical and yet underexplored antecedent of their effectiveness. Drawing on the Job Demands–Resources model, it proposes a moderated mediation model that studies the relationship between employee satisfaction with HRPs and in-role and extra-role performance as mediated by engagement. The results suggest satisfaction with HRPs influences both the performance dimensions considered, although its effects are greater for extra-role performance. Engagement intervenes significantly only in the relationship between this satisfaction and extra-role performance. Furthermore, the study acknowledges the burdens HRP-related resources may place on the workforce and examines the moderating effects of a personal resource such as health on the satisfaction with HRPs-engagement link, finding that it significantly strengthens it. It also finds that the indirect effect of satisfaction with HRPs on extra-role performance is stronger for healthier employees. These findings provide novel insights into the HR causal chain and help practitioners to better manage HRP design, communication, and audits.

1. Introduction

Although HR practices (HRPs) have the potential to improve organisational performance by eliciting appropriate workforce contributions, research on the HR causal chain has stressed that employees' evaluations of these practices may account for their effectiveness (Lepak et al., 2012; Wright & Nishii, 2013). Broadly defined, workforce evaluations of HRPs refer to the positive or negative subjective view held by employees of these practices (Beijer et al., 2019). Unfavourable evaluations may make HRPs unsuccessful as performance-enhancing tools, no matter how well they address organisational priorities (Meijerink et al., 2021).

Despite the significance of workforce evaluations of HRPs, empirical research has documented the performance implications of only some such evaluations. Specifically, most existing studies have focused on HR attributions, namely employees' assessment of management's reasons for embracing HRPs (i.e., exploiting the workforce vs. enhancing its well-being) (e.g., Nishii et al., 2008). However, this is not the only kind of appraisal employees make of the HRPs they encounter. They can indeed examine them from multiple angles besides causal explanations for their adoption (Lepak et al., 2012), which implies that other relevant

evaluations of HRPs affecting performance may exist (Van Beurden et al., 2021).

To advance our understanding of employees' evaluations of HRPs and their implications, this study focuses on satisfaction with HRPs, resulting from employees' assessment of the practices' capacity to meet their personal needs and expectations (Kinnie et al., 2005; Meijerink et al., 2021). The work adjustment literature suggests that employees put their own needs at the heart of their appraisal of a workplace's arrangements (Liu et al., 2017; Nishii & Wright, 2008). When they perceive these arrangements meet their individual priorities, their satisfaction with them tends to increase, fostering their intentions to contribute to organisational success (Deery et al., 2017; Liu et al., 2017). Because HRPs are essential workplace components, employees are expected to appraise their alignment with their needs and requirements, with the resulting satisfaction level being likely to drive their subsequent contributions (Nishii & Wright, 2008; Van Beurden et al., 2021). Despite the plausibility of these arguments, little research has focused on employees' satisfaction with HRPs, which is surprising considering the importance of fulfilling employees' needs and expectations in modern employee-centric HRM (Liu et al., 2017). Thus, Boon et al. (2019) and Van Beurden et al., 2021 have recently argued the need for research

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investigating the impact of satisfaction with HRPs on employee productive behaviours.

This study responds to such calls by exploring *whether* employee satisfaction with HRPs affects their performance, focusing on both in-role and extra-role outputs (i.e., the two essential facets of workforce contributions) (Call & Ployhart, 2020). In this endeavour, the Job Demands–Resources model (JD-R) (Schaufeli & Bakker, 2004) is used. From a JD-R perspective, HRPs represent management interventions that provide employees with job resources (e.g., abilities, feedback, autonomy), which may support performance by helping to meet two essential categories of work-related needs: 1) effective role functioning, and 2) personal development (Bakker et al., 2014). It is argued here that, as resource-delivery tools, HRPs will be valued differently by the workforce depending on the perceived quality of the resources involved (Schaufeli & Taris, 2014); increased satisfaction with the practices indicates that their associated resources are more capable of fulfilling work-related needs, thereby driving employee performance.

In order to better understand the effects of satisfaction with HRPs on workforce performance, the study also investigates *how* these effects may originate (i.e., the mediating mechanisms). The JD-R model suggests that when employees are provided with valued resources (i.e., resources that fulfil their work-related needs), they tend to become more engaged, that is, more determined and enthusiastic while working (Schaufeli & Bakker, 2004). Engagement is considered a powerful trigger of productive outcomes, with previous literature showing that it is a key link between workforce exposure to high-quality job resources and its level of contribution (Bakker et al., 2014). Therefore, because satisfaction with HRPs implies these practices deliver resources that are relevant to employees, the role of engagement as a mediator linking satisfaction with HRPs to performance is examined.

Finally, this study examines *when* satisfaction with HRPs is more likely to affect engagement by including employee health as a moderator in this relationship. Prior research has considered employee health as a highly desirable HRM-related outcome (Oppenauer and Van De Voorde, 2018; Peccei & Van De Voorde, 2019). Our view is different (albeit complementary). From a JD-R perspective, health is a personal resource (i.e., an individual asset) employees can use to effectively tackle work burdens (Airila et al., 2014; Williamson & Carr, 2009). It may therefore be relevant in employees making the most of HRP-related resources, as these resources have potential downsides that need to be withstood (Topcic et al., 2016). Specifically, increased physical and psychological exertion may be required to leverage the resources associated with HRPs (e.g., skill resources delivered by training), whereby employee health may affect the actual exploitation of those resources (Stirpe et al., 2018). Hence, it is argued here that while both healthy and not-so-healthy employees may recognise the value of HRPs based on the resources they deliver and, thus, show satisfaction with them, this satisfaction is likely to prompt greater engagement when employees enjoy better health, as they will feel more capable of coping with the resources' downsides. Accordingly, our study explores whether satisfaction with HRPs and health interact positively to affect engagement and, thus, performance.

This study uses data from an ad hoc survey of employees from a major pharmaceutical multinational enterprise in Italy. It contributes to the literature on the HR-causal chain in several ways. First, by exploring the influence of satisfaction with HRPs on employee outcomes it responds to calls to expand research on employee evaluations of HRPs and their performance implications (e.g., Boon et al., 2019). Second, and relatedly, the conceptualisation of satisfaction with HRPs from a JD-R viewpoint advances our theoretical understanding of what employees may target when evaluating HRPs (i.e., the quality of the resources HRPs deliver). By doing so, the study adds to the emerging literature that uses the JD-R model to investigate employees' view of HRPs (cf. Van Beurden et al., 2021). Third, following recent research on the physical and psychological burdens HRP-related resources can place on employees (e.g., Topcic et al., 2016), the study offers original insights into the relevance

of workforce health for HRM, and its role within the HR causal chain. Finally, the study may provide practitioners with useful guidance for improving HRP design and communication, and more advanced HR audits.

2. Theory and hypotheses

2.1. Employee evaluations of HRPs

Strategic HRM (SHRM) research has begun to provide more nuanced explanations of the HRPs-performance link by acknowledging that well-aligned HRPs per se do not boost organisational success, as they must first translate into productive employee behaviours that create value for the organisation (Lepak & Boswell, 2012). However, Wright and Nishii (2013) argue that employees' evaluations of HRPs inform their behaviour, whereby the value of HRPs depends on how employees appraise them. Employees' evaluations are therefore central to any HR causal chain. Nishii et al. (2008) provide empirical support for this view. They found that employees' attributions of the managerial reasons underlying the use of HRPs (i.e., exploiting employees vs. supporting their well-being) are a critical antecedent of workforce contributions, concluding that even well-intended HRPs may not elicit the desired employee inputs unless they are evaluated favourably. Subsequent research has largely supported these findings (e.g., Sanders & Yang, 2016).

While HR attributions may affect workforce performance, they represent only some of the possible evaluations made by employees of the HRPs they experience. As suggested by Lepak et al. (2012), employees can indeed appraise such practices from different viewpoints that may be relevant to explain their performance. One such viewpoint, highlighted by the work adjustment literature, indicates that rather than passively accepting workplace arrangements, employees tend to evaluate them subjectively based on their capacity to meet the employees' needs and requirements (Nishii & Wright, 2008). When employees perceive that the arrangements they encounter are need-supportive, their satisfaction with them tends to increase, leading to more productive attitudes and behaviours (e.g., increased attendance, improved performance) (Deery et al., 2017; Kinnie et al., 2005; Liu et al., 2017). Because HRPs are key workplace arrangements experienced by employees on an ongoing basis (Lepak & Boswell, 2012), it can be argued that increased satisfaction with them relates to greater productive contributions by the workforce.

This argument is analysed here within the JD-R model (Schaufeli & Bakker, 2004). This model not only proposes a taxonomy of employees' primary needs while working, but also delineates theoretical arguments for how workplace arrangements (including HRPs) may support the fulfilment of such needs, thereby promoting employee satisfaction with them and, thus, performance.

The JD-R model suggests that employees have two basic categories of needs (Schaufeli & Taris, 2014). On the one hand, they have extrinsic needs associated with work goals, whereby they need to "get things done", which implies dealing effectively with job-related demands and challenges. This category can be labelled "functioning needs". On the other hand, employees have intrinsic, psychological needs related to their basic search for personal growth, whereby they seek to nurture and deploy their work potential. This second category can be called "development needs". When these two work-related needs are fulfilled, employees are in a better position to contribute to organisational success (Bakker & de Vries, 2021). The JD-R model therefore understands workplace arrangements as resource-delivery mechanisms, management interventions whose aim is to provide employees with relevant physical, psychological, social, or organisational resources to fulfil their work-related needs, thus enhancing their contribution levels (Bakker et al., 2014). Decision latitude, social support from supervisors, or appropriate technical infrastructure are some of the resources that management interventions can provide (Bakker & Demerouti, 2017).

This implies that employees evaluate management interventions based on the quality of the resources they deliver to fulfil either of their two essential work-related needs; their satisfaction with them will increase with the perceived capacity of the intervention to deliver resources that effectively fulfil individual functioning and/or development needs (Schaufeli & Taris, 2014).

2.2. Satisfaction with HRPs and employee performance

From a JD-R perspective, HRPs constitute a specific category of management interventions that provide employees with certain resources that are relevant to the fulfilment of their workplace needs (Bakker & de Vries, 2021; Hu et al., 2018; Stirpe et al., 2018). Below the resources associated with selected core HRPs are explored, namely training and development, performance management and compensation, and workforce participation initiatives (Boon et al., 2019). Following the arguments presented in the previous section, it is proposed that because satisfaction with HRPs implies these practices have a greater capacity for delivering resources that respond to employees' needs, it may account for increasing performance levels.

Beginning with training and development, these practices are intended to provide job-relevant knowledge, skill, and ability (KSA) resources (Appelbaum et al., 2000). From a JD-R perspective, KSAs enable employees to deal with job demands and duties more successfully (Hu et al., 2018). Thus, they may support a workforce's functioning needs. Employees who are satisfied with the training and development they receive are likely to feel that these initiatives furnish them with capabilities that promote their work efficacy. In support of this argument, Giangreco et al., 2009 found that the perceived usefulness of training vis-à-vis work tasks is a major antecedent of trainees' overall satisfaction. Satisfaction with training and development may also reflect the capacity of their related resources to adequately meet employees' development needs. Indeed, training and development actions may lead to new work methods and greater control over work outcomes. Furthermore, they may enable employees to assume broader responsibilities and pursue better career opportunities (Topcic et al., 2016).

Performance management and compensation are usually designed to operate in mutually reinforcing ways (Appelbaum et al., 2000) and also involve relevant resources. Performance management schemes are interventions that gather and relay information resources to employees in the form of feedback about their performance, with a view to continual improvement (Bakker et al., 2014). By helping employees to identify their strengths and weaknesses, performance management systems can therefore support employees' functioning, as well as development needs (Aguinis et al., 2011). Employees satisfied with their performance management system are likely to think it effectively provides constructive feedback. This argument is supported by Boswell and Boudreau (2000), who found that employees' perceptions of the utility of their performance management programme for actually improving performance tend to predict programme satisfaction. Compensation also involves information resources. Indeed, pay packages reflect an organisation's top priorities, enabling employees to align their contributions with them and meet expectations (Appelbaum et al., 2000). Furthermore, compensation provides psychological resources that can sustain development needs. The rewards received are a yardstick used by employees to understand how the firm values their labours, with an impact on self-esteem, sense of personal accomplishment, and perceived status (Aguinis et al., 2011). When linked to performance outcomes, rewards may further strengthen feelings of recognition for results attained, so perceptions of distributive justice relate positively to pay satisfaction (McFarlin & Sweeney, 1992).

Finally, modern HRM emphasises employees' direct influence on their job management (e.g., range of tasks undertaken, how the work is done) (Appelbaum et al., 2000). Several HRPs provide autonomy opportunities, such as flexible job descriptions and job enrichment schemes. The JD-R model suggests that autonomy is a resource that may support employees' work-related needs (Bakker et al., 2014). Autonomy may foster development, as it allows employees to deploy their talents on the job and more fully appreciate the significance of their tasks (Topcic et al., 2016). Furthermore, employees with more autonomy may function better, as they will find more bespoke ways of dealing with their job's demands and fulfilling their duties (Oppenauer and Van De Voorde, 2018). Arguably, employees who are satisfied with the autonomy they experience are likely to perceive that these opportunities effectively empower them in their job, thus suitably supporting their functioning and development needs.

In sum, following the JD-R model, HRPs can be considered resource-delivery mechanisms, with greater workforce satisfaction with them being indicative of the enhanced capacity of their associated resources to fulfil individual work-related needs (Bakker et al., 2014; Boswell & Boudreau, 2000; Giangreco et al., 2009). Because the JD-R model suggests that meeting these needs is a catalyst for improved workforce contributions (Schaufeli & Taris, 2014), an argument can be made linking greater satisfaction with HRPs to increased employee performance.

Workforce performance is multidimensional, as employees may deliver different kinds of inputs to further organisational goals. Specifically, performance may be in-role and extra-role (Williams & Anderson, 1991). The former refers to official job requirements, such as those included in job descriptions. It bears a direct relation to the organisation's technical core processes and is usually associated with meeting well-specified goals recognised by formal reward systems (Call & Ployhart, 2020). The latter refers to less formal inputs delivered by employees discretionally, without necessarily directly influencing their target productivity. Extra-role inputs improve the social and psychological context of the organisation, with an indirect effect on its core operations. Some such inputs are helping colleagues or protecting company resources (Williams & Anderson, 1991). Both kinds of performance are expected from employees in the dynamic, interdependent modern workplace (Eldor & Harpaz, 2016), with their variance being significantly accounted by individual level characteristics (Call & Ployhart, 2020). Accordingly, both are considered here to explore the effects of satisfaction with HRPs. Thus, it is proposed:

Hypothesis 1. Satisfaction with HRPs is positively associated with in-role performance (H1a) and extra-role performance (H1b).

2.3. The mediating role of employee engagement

A question may be raised about how satisfaction with HRPs may trigger employee performance. The JD-R model indicates that this is likely to occur via the activation of work engagement, a positive state of mind characterised by greater determination and excitement at work (Schaufeli & Bakker, 2004). Specifically, engagement has three core components: vigour (i.e., energy and mental resilience), dedication (i.e., a sense of significance, enthusiasm, and challenge), and absorption (i.e., being captivated by one's work) (Schaufeli et al., 2006). Research strongly supports a process leading from job resources through engagement to individual performance (Bakker et al., 2014). When employees encounter adequate workplace resources (i.e., which help fulfil functioning and development needs), an engagement-based motivational process is initiated which tends to make them more willing to invest increased physical, cognitive, and emotional efforts. Thus, they perform their duties with greater involvement, intensity and focus over longer periods of time. This tendency to become immersed in their work implies that engagement mediates between the resources available and workforce performance (Bakker & Demerouti, 2017).

Therefore, inasmuch as satisfaction with HRPs reflects the capacity of such practices to deliver higher-quality resources, employees satisfied with their HRPs are likely to perform better through enhanced engagement. Previous research indicates that engagement may promote

in-role performance (e.g., Yalabik et al., 2013). In fact, engaged employees are more persistent and vigilant when pursuing their formal obligations and tackling job demands. This results in more accurate assignment execution and increased likelihood of reaching work-related goals (Bakker et al., 2014). There is also evidence that engagement unleashes extra-role performance (e.g., Eldor & Harpaz, 2016). Indeed, the characteristic persistence and focus of engaged employees fuel proactive behaviours and, because these employees put more energy into their work, they tend to show increased propensity to go the extra mile to facilitate co-workers and the organisation (Schaufeli & Taris, 2014).

Considering the reasoning above, H1a and H1b may be refined by including engagement as a mediator in the satisfaction with HRPs-performance relationships. Hence, it is proposed:

Hypothesis 2. Work engagement mediates the relationships between satisfaction with HRPs and in-role performance (H2a), and between satisfaction with HRPs and extra-role performance (H2b).

2.4. The moderating role of employee health

While satisfaction with HRPs may have a positive effect on workforce engagement, the strength of this effect can vary with employees' personal resources. From a JD-R perspective, personal resources involve those individual characteristics that improve employees' sense of their ability to deploy other resources available in the workplace (Bakker & de Vries, 2021). Personal resources may also affect perceptions of impediments in the work environment, and provide motivational fuel that help employees to deal more effectively with those impediments (Schaufeli & Taris, 2014). Examples of personal resources are openness to experience (De Clercq & Bouckenooghe, 2019), assertiveness, self-efficacy, and resilience (Bakker & van Wingerden, 2021).

Another important personal resource is health (Airila et al., 2014; Tengland, 2011; Williamson & Carr, 2009). Airila et al. (2014) report that when employees feel physically and mentally healthy, they also tend to feel more able to face job challenges. Tengland (2011) and Williamson and Carr (2009) suggest that employees' health can affect their ability to make productive use of workplace resources and draw motivation from them. Following this research, it is proposed here that an employee's health may influence the satisfaction with HRPs-engagement relationship. This stance is based on recent studies revealing potential downsides of HRP-related resources, which sounder health may help to face (e.g., Stirpe et al., 2018; Topcic et al., 2016).

These studies reveal that although HRP-related resources may benefit employees, and hence trigger satisfaction with the practices, their use may involve certain "costs" that employees need to withstand to leverage their potential. For example, while training-associated KSA resources make employees more competent (Appelbaum et al., 2000), they may also require a cognitive effort for their effective integration into work processes (Stirpe et al., 2018). Similarly, although performance management systems provide valuable feedback, they may also generate anxiety, as employees may feel constantly monitored. Moreover, in order to leverage that feedback, employees may need to invest additional physical and mental effort at work (Oppenauer and Van De Voorde, 2018). Finally, while autonomy-enhancing HR interventions give employees greater control over their work (Appelbaum et al., 2000), they may also put more pressure on them to be positive and accountable, which may again require further exertion (Topcic et al., 2016).

These arguments suggest that employees' physical and psychological health may be important to exploit HRP-related resources, as it enables employees to better bear potential burdens. We thus propose that health positively moderates the relationship between satisfaction with HRPs and engagement. Specifically, it is argued that the engagement implications of this satisfaction are likely to be stronger for employees who are healthier, as this personal asset will make them feel more confident

of their ability to cope successfully with the downsides of the HRP-related resources. Accordingly, it is predicted:

Hypothesis 3. Employee health moderates the relationship between satisfaction with HRPs and engagement, whereby it will be stronger for healthier employees than for less healthy ones.

Because this study has previously conceptualised a mediation model between satisfaction with HRPs and performance through engagement, the potential moderating role of health in the satisfaction with HRPs-engagement relationship suggests a first-stage moderated mediation model (Hayes, 2018). Specifically, it is conceivable that the indirect effects of satisfaction with HRPs on in- and extra-role performance through engagement will be greater for employees with sounder health. Thus, it is proposed:

Hypothesis 4. Health moderates the indirect relationships between satisfaction with HRPs and in-role (H4a) and extra-role (H4b) performance via engagement, whereby these indirect relationships will be stronger for healthier employees than for less healthy ones.

Fig. 1 depicts the research model.

3. Methodology

3.1. Data

The hypotheses were tested through a field study, surveying employees from a major multinational company operating in the pharmaceutical industry in Italy. This very competitive industry plays a leading role in Italy in terms of both investments and value added. Its workforce is highly educated and skilled, and represents a key competitive factor (Farmindustria, 2019). Sustaining employee engagement and performance via effective HRM is indeed pivotal to pharma companies (Deloitte, 2018).

Most of the information required for testing the hypotheses was collected through the survey, except for the data on in-role performance and certain employee profile variables that were obtained from the company's records. The study itself was part of a larger HR research initiative, coordinated by an Italian business school. Online surveys were distributed to all the company's 430 full-time white-collar employees. The HR director informed the employees of the survey's importance to the company, stressing that the data would be handled solely by an outside party and processed anonymously. The survey was prepared by following the recommendations made by Podsakoff et al. (2003) to reduce the likelihood of common method bias. We also liaised with the company's HR team to confirm the items were readable and relevant. All response scales ranged from 1 ("strongly disagree") to 5 ("strongly agree").

The data were gathered in October 2017. A total of 364 questionnaires were returned, representing an 84.6% response rate. After deleting cases with missing values, 274 questionnaires were retained for the analyses. No significant differences were found in age, gender, business unit or occupational status between the final sample and the total population. With a mean age of 47.2, the sample consisted of 55% men and 45% women. There was a diversity of occupational backgrounds, including administration, R&D, operations, and commercial roles, thereby increasing the variability in the kind of HRPs experienced.

3.2. Measures

Satisfaction with HRPs. Following previous research (Conway & Monks, 2008; Kinnie et al., 2005), satisfaction with HRPs was measured through an additive index involving five items. Employees had to indicate their level of satisfaction with five core HRPs. The items are reported in Table 1 along with factor loadings based on exploratory factor analysis (EFA) and Cronbach's alpha.

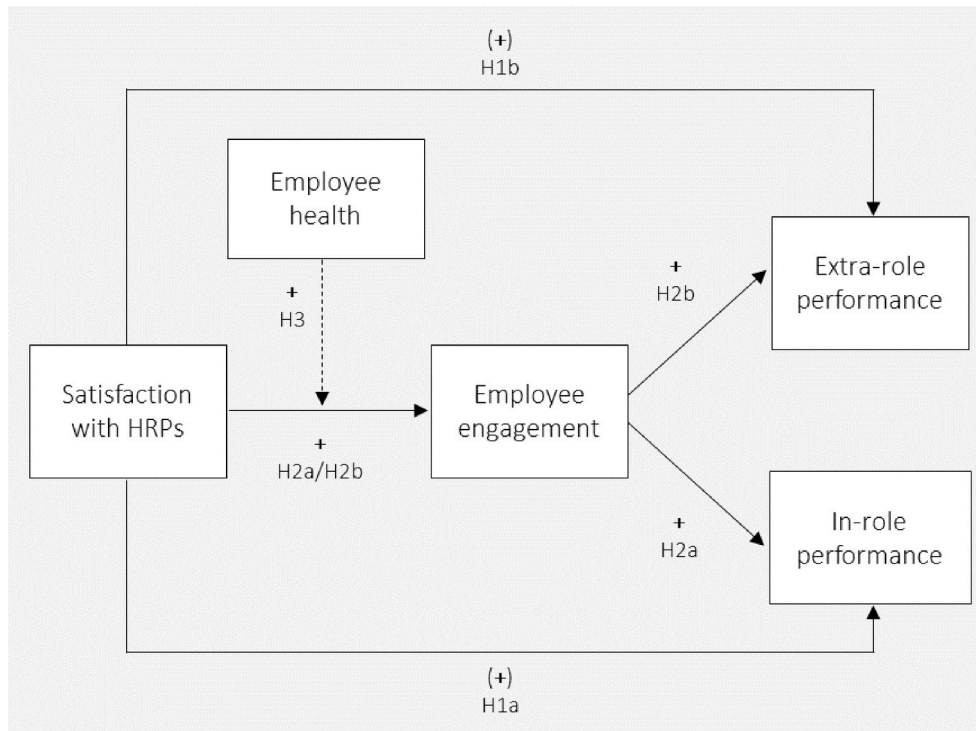*In-role performance.* Following Yalabik et al., 2013, in-role performance

Fig. 1. The proposed research model.

was measured using the results of the company's performance appraisal process. The company's HR director made available the summary evaluation score received by each employee from their supervisor on a ten-point scale (from 1 "extremely low" to 10 "extremely high") on the degree to which the goals defined at the beginning of the evaluation period had been achieved. All employees had their performance appraised after completing our online survey. Performance data were provided to us three to five months after the survey was administered. The slight skewness of the variable's distribution was corrected via a natural log transformation.

Extra-role performance. This was measured with a seven-item scale based on Williams and Anderson (1991). The items in this scale capture informal productive actions towards co-workers, and towards the organisation. The EFA conducted has allowed retention of only six of these items, reported in Table 1 along with factor loadings and Cronbach's alpha.

Employee engagement. This was measured via the nine-item scale developed by Schaufeli et al. (2006), consisting of three subscales capturing the core dimensions of vigour, dedication, and absorption. As shown in Table 1, the EFA indicates that the items load on two factors (i. e., one including the items for vigour and absorption and one including those for dedication). However, consistent with the suggestions in Schaufeli et al. (2006) and a well-established tradition in the engagement literature (e.g., Bakker & van Wingerden, 2021), this study uses an overall engagement measure. Confirmatory Factor Analysis supports this research approach (see subsection 3.3).

Health. This was measured via a single-item question, derived from the European Social Survey, capturing self-reported general health. The item asked: "How is your (physical and mental) health in general?" The responses were based on a five-point scale (from 1 "very bad" to 5 "very good"). Both physical and psychological health are relevant for explaining employees' ability to exploit the resources associated with HR interventions, and they interact with each other (Airila et al., 2014; Stirpe et al., 2018). This measure acknowledges their interactions and captures an employee's general state of health (Bambra & Eikemo, 2009). Wanous and Hudy (2001) found that single-item measures of global constructs have suitable reliabilities for achieving estimates of at least 0.70, suggesting that biases against such single-item measures are empirically unjustified.

Control variables. A set of eighteen business unit dummies was considered, as unit climate may affect employee attitudes (Wright & Nishii, 2008). Moreover, individual performance might benefit from overall unit performance. Three dummies indicating respondents' professional category were also included (i.e., managers; professional/technical; clerical), as engagement and extra-role behaviours may vary across occupations (Kinnie et al., 2005). As employee tenure may affect individual productivity, we controlled for the length of service in months using company records (Conway & Monks, 2008). Furthermore, company records were also used to control for salary grade, as compensation may influence performance (Conway & Monks, 2008). Grades ranged from 1 (the lowest) to 14 (the highest). Because family responsibilities may affect employee outputs (Deery et al., 2017), we controlled for the hours dedicated to weekly household duties as reported by employees. Finally, we controlled for age (years) and gender (0 = male; 1 = female), as workforce attitudes and behaviours may vary according to these variables (Deery et al., 2017).

3.3. Common method variance

Like other HR studies (e.g., Cafferkey et al., 2019; Kloutsiniotis & Mihail, 2020; Latorre et al., 2020), some of the data came from a single source: the data for satisfaction with HRPs, engagement, and extra-role performance were provided by employees. Thus, there is a potential threat of common method variance (CMV), which is tempered because the items for our variables were taken from different sections of a 17-page questionnaire with around one-hundred items (cf. Podsakoff et al., 2003). A confirmatory factor analysis was performed with the items related to the three measures above to establish the scales' factorial validity (maximum likelihood estimation) (Podsakoff et al., 2003). A three-factor model, with all the items for the three measures loaded on their respective hypothesised factors, was compared to three alternative models: 1) a two-factor model combining engagement and extra-role performance; 2) a two-factor model combining satisfaction with HRPs and engagement; and 3) a one-factor model with all the indicators loaded on one general factor. Table 2 shows that the

Table 1

Exploratory factor analysis results[a].

Dimensions	Items	Loadings	
Satisfaction with HRPs Cronbach's α = 0.818	I am satisfied with the amount of autonomy that I have in deciding how my job should be done	.791	
	I am satisfied with the compensation I receive	.784	
	I am satisfied with the way my performance is managed	.783	
	I am satisfied with the opportunities I have to engage in training and education activities that are beyond that needed in my job	.624	
	I am satisfied with the amount of training I receive in my current position	.572	
Extra-role performance Cronbach's α = 0.714	I help others who have been absent	.679	
	I take time to listen to co-workers' problems and worries	.667	
	I conserve and protect organisational property	.614	
	I help others who have heavy work loads	.609	
	I adhere to informal rules devised to maintain order	.538	
	My attendance to work is above the norm	.537	
Engagement Cronbach's α = 0.783		*Factor 1*	*Factor 2*
	I feel happy when I am working intensely	.689	
	When I get up in the morning, I feel like going to work	.649	
	At my job, I feel strong and vigorous	.578	
	I get carried away when I am working	.550	
	At my work, I feel that I am bursting with energy	.533	
	I am immersed in my job	.486	
	I am enthusiastic about my job		.809
	I find the work that I do full of meaning and purpose		.730
	I am proud of the work that I do		.624

[a] Extraction method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.

three-factor model fitted the data satisfactorily ($\chi2 = 275.37$, $p < .001$; $df = 164$; RMSEA = 0.047; CFI = 0.92; TLI = 0.91; SRMR = 0.056), and obtained a better fit than all other models. These results support the distinctiveness of our study measures, thereby reducing the possibility of CMV being a major concern.

4. Results

Table 3 presents descriptive statistics for the study variables.

Satisfaction with HRPs is positively associated with engagement and in-role and extra-role performance. Engagement is associated with both performance dimensions. While health is not associated with in-role performance, it is positively related to both engagement and extra-role performance. The controls are differentially associated with our dependent variables. Because the variables "age" and "gender" are not significantly associated with any dependent variable, they were omitted from the subsequent analysis.

The hypotheses were tested via OLS regressions. The results are reported in Table 4.

The mediations specified in H2a and H2b were assessed by following the approach recommended by Baron and Kenny (1986), which some have questioned, so this was complemented following the procedures suggested by Hayes (2018). Specifically, bootstrapping was used to further test for mediation using the PROCESS SPSS macro. When not containing the value of zero, the resultant confidence interval reveals a difference in the change of coefficients for the mediation test. This method is appropriate to test mediations as it does not rely on the

assumption of a normal sampling distribution, or suffer from a high Type I error rate. Thus, it is commonly used in SHRM research to test mediations (e.g., Cafferkey et al., 2019).

One of the four mediation conditions indicated by Baron and Kenny (1986) involves a significant association between the mediator and the independent variable (the four conditions are discussed below). In our case, engagement is hypothesised to mediate the relationship between satisfaction with HRPs and both in-role and extra-role performance. Because this step is relevant to both mediations, the table was simplified by reporting it only once in Models 1 and 2 (Model 1 includes only the controls and Model 2 introduces engagement). Furthermore, because H3 predicted the moderating effect of health on the satisfaction with HRPs-engagement relationship, Model 3 introduced the interaction between satisfaction with HRPs and health to test this hypothesis. The information in Models 1, 2, and 3 will be presented when required by the sequence of our hypotheses.

Models 4 and 5 in Table 4 were run to test H1a. Model 4 included only the controls, while Model 5 introduced satisfaction with HRPs to examine its relationship with in-role performance, finding a positive and significant association between these two variables. The data therefore supports H1a, whereby in-role performance increases with satisfaction with HRPs.

To test H1b, which anticipates a positive association between satisfaction with HRPs and extra-role performance, Models 7 (including the controls only) and 8 (introducing satisfaction with HRPs) were run. Model 8 shows that this satisfaction is positively and significantly related to extra-role performance, thus supporting H1b. Compared to in-

Table 2

Confirmatory factor analysis results.

Models	$\chi2$	Df	RMSEA	CFI	TLI	SRMR	Hypothesised Model vs Alternative Models
Hypothesised model: Three factors	275.37	164	.047	.92	.91	.056	
Alternative Model 1: Two Factors	345.73	166	.060	.88	.86	.096	$\Delta df = 2$, $\Delta\chi2 = 70.36$***
Alternative Model 2: Two Factors	509.30	166	.082	.78	.75	.081	$\Delta df = 2$, $\Delta\chi2 = 233.93$***
Alternative Model 3: One Factor	609.97	167	.093	.71	.68	.089	$\Delta df = 3$, $\Delta\chi2 = 334.60$***

N = 274; TLI = Tucker-Lewis Index; CFI=Comparative Fit Index; RMSEA = Root Mean Squared Error of Approximation; SRMR=Standardised. Root Mean Square Residual.

***$p < .001$.

Table 3

Descriptive statistics and bivariate correlations.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. In-role performance (ln)	1.89	.12												
2. Extra-role performance	24.13	2.51	.18**											
3. Engagement	36.68	3.87	.17*	.53**										
4. Satisfaction with HRPs	15.42	3.72	.16*	.25**	.38**									
5. Health	3.95	.88	.01	.28**	.28**	.22**								
6. Clerical	.21	.44	-.32**	-.05	-.21**	-.16**	.02							
7. Professional/Technical	.67	.45	.10	.02	.15*	.12	.02	-.77**						
8. Manager	.10	.33	.28**	.04	.04	.04	.08	-.17**	-.48**					
9. Salary grade	8.72	2.32	.32**	.02	.19*	.13	-.07	-.74**	.31**	.54**				
10. Tenure	219.45	101.15	-.13*	-.12	-.09	.05	.11	.02	.02	-.01	.01			
11. Family burden	28.00	15.27	-.07	-.05	-.18**	-.07	-.06	.28**	-.18**	-.08	-.31**	-.07		
12. Age	47.20	7.63	-.08	-.05	-.05	.07	.14*	-.09	.08	-.01	.12	.75**	-.08	
13. Gender	.45	.49	-.04	.02	-.01	-.12	-.14*	.21**	-.11	-.12	-.30**	-.32**	-.21**	-.40**

N = 274; *p < .05; **p < .01.

Table 4

Results of regression analysis.

	Engagement			In-role Performance			Extra-role Performance			
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Business unit	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]	Yes[a]
Clerical[b]	-.07	-.05	-.03	-.66**	-.64**	-.64**	-.23	-.21	-.16	-.16
Professional/Technical[b]	-.02	-.03	-.02	-.41**	-.41**	-.42**	-.07	-.08	-.03	-.04
Salary grade	.03	.03	.06	-.01	-.02	-.03	-.16	-.15	-.15	-.15
Tenure	-.11	-.09	-.09	-.10	-.10	-.09	-.09	-.08	-.03	-.01
Family burden	-.16*	-.16*	-.13*	.02	.02	.03	-.03	-.02	.06	.01
Health	.26***	.20**	.23***	.03	.01	.01	.29***	.26***	.16**	.16**
Satisfaction with HRPs		.30***	.27***		.13*			.18**		.03
Satisfaction with HRPs × Health			.16**							
Engagement						.10			.52***	.51***
Bootstrap (CI[c])										(.0757 to .1815)
ΔR²	.217	.076	.022	.263	.013	.007	.198	.026	.205	.206
Adjusted R²	.146	.225***	.247	.186	.197	.191	.122	.148	.344	.342
Change in F	3.033***	26.752***	8.176**	3.441***	3.946*	2.192	2.619***	8.248**	83.658***	41.787***

N = 274 employees. Standardised coefficients are shown.

*p < .05; **p < .01; ***p < .001.

[a] Yes indicates that the eighteen business unit dummy variables were included within the model.

[b] Reference variable: Manager.

[c] CI = confidence interval (lower and upper 95 percent reported).

role performance (β = 0.13, p < .05), the association between satisfaction with HRPs and extra-role performance is stronger (β = 0.18, p < .01). This point is addressed in the discussion section.

H2a and H2b, respectively, predict that engagement mediates relationships between satisfaction with HRPs and both in-role and extra-role performances. According to Baron and Kenny (1986), four conditions are to be met for mediation. The first proposes that the independent variable should be significantly associated with the mediator. Model 2 shows that satisfaction with HRPs was significantly associated with engagement. Secondly, the independent variable should be significantly related to the dependent variable. The results discussed for H1a and H1b show that this condition holds for both relationships, satisfaction with HRPs with in-role and extra-role performances. The third condition states that the mediator should predict the dependent variable. Model 6 indicates that the relationship between engagement and in-role performance had the positive sign hypothesised, but lacked statistical significance. The data do not therefore support the third condition for mediating in-role performance, thereby rejecting H2a. Model 9, however, shows that this condition does hold for the relationship between engagement and extra-role performance, as it is positive and significant. The fourth condition (whereby the significant relationship between the dependent and independent variables either

weakens or becomes non-significant when controlling for the mediator) was then explored for extra-role performance. Model 10 shows that the formerly significant relationship between satisfaction with HRPs and extra-role performance became non-significant when engagement was controlled, suggesting full mediation (Baron & Kenny, 1986). The confidence interval resulting from bootstrapping analyses based on 5000 samples via the PROCESS SPSS macro does not contain the value of zero (95% CI: 0.0757 to 0.1815), which confirmed a significant indirect relationship between satisfaction with HRPs and extra-role performance via engagement (Hayes, 2018). H2b is thus supported.

To test H3, the satisfaction with HRPs-health interaction was introduced in Model 3. To avoid multicollinearity problems and facilitate the interpretation of regression coefficients, the two variables were previously standardised (Hayes, 2018). A positive and significant relationship was found between this two-way interaction and engagement, which means the data support H3, according to which the positive effects of satisfaction with HRPs on engagement increase with better employee health. Fig. 2 includes the plots for lower and higher health values—using one standard deviation below the mean and one above it.

Simple slope analyses revealed that the slope for higher health values is positive and significant (t = 5.885, p = .000), whereas it is non-significant for lower values (t = 1.200, p = .231).
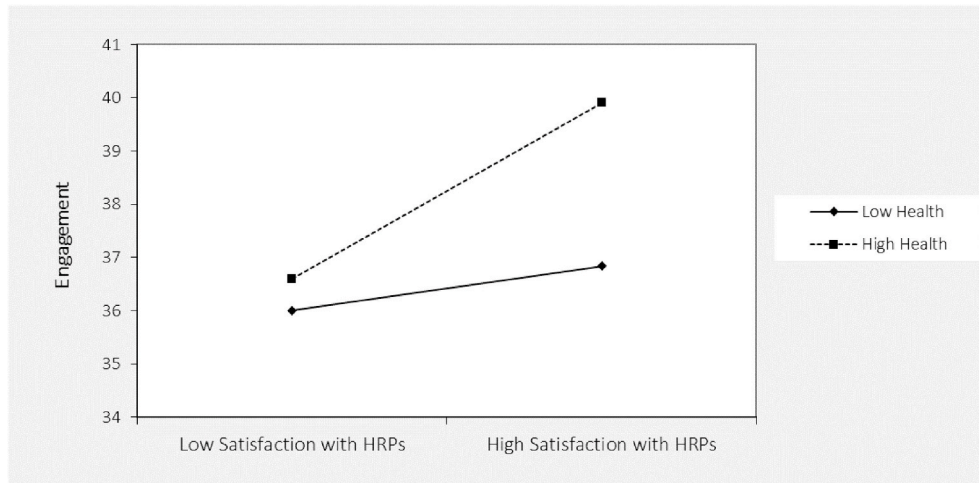
Fig. 2. Effects of the interaction of satisfaction with HRPs and health on engagement.

Interestingly, health does not significantly correlate with in-role performance (Models 4–6). However, it is positively related to both engagement (Models 1–3) and extra-role performance (Models 7–10). This finding suggests that instead of reducing their in-role contributions (i.e., formally evaluated inputs), less healthy employees tend to follow a preservation strategy that leads them to deliver decreased extra-role contributions (i.e., inputs that are not formally prescribed).

Finally, the PROCESS SPSS macro (Hayes, 2018) for first-stage moderated mediations was employed to test H4b, according to which the indirect effect of satisfaction with HRPs on extra-role performance through engagement is conditional on health. H4a was not tested because it was automatically rejected following the results for H2a. Table 5 shows confidence intervals (CIs) for bootstrap tests at three health values: (1) one standard deviation (SD) below the mean, (2) mean, and (3) one SD above the mean. The CIs are considered statistically significant if the range between the low and high CIs does not include zero (Hayes, 2018). The data suggest that this indirect effect is not significant at low levels of health (i.e., one SD below mean) as the range between low and high CIs includes zero (−0.024 to 0.92). However, it is significant at both mean (CI = 0.047 to 0.133) and higher levels of health (i.e., one SD above mean) (CI = 0.091 to 0.233), providing support for H4b.

5. Discussion

Building on the JD-R model, this study explored *whether*, *how*, and *when* satisfaction with HRPs influences workforce performance. The findings obtained from field data from an Italian context revealed that satisfaction with HRPs is an antecedent to both in-role and extra-role performance. Furthermore, they indicate that satisfaction with HRPs translates into increased extra-role performance via employee engagement. However, engagement seems not to mediate the satisfaction with HRPs-in-role performance relationship. Finally, the findings suggest that satisfaction with HRPs elicits greater engagement and, thus, improved extra-role performance when employees enjoy sounder health. These

findings involve theoretical and managerial insights.

5.1. Theoretical implications

The first contribution of this study is that, by investigating *whether* satisfaction with HRPs has performance consequences (H1a and H1b), it extends the SHRM literature on the HR causal chain. A central assertion in this literature is that workforce evaluations of HRPs are critical determinants of employee-level outcomes –i.e., essential antecedents of organisational performance (Wright & Nishii, 2013). Accordingly, prior research has investigated their effects on different workforce productive attitudes and behaviours. However, this research has mainly adopted an attributional perspective, addressing the beliefs held by employees regarding "why" managers adopt HRPs (e.g., Sanders & Yang, 2016). While our results reinforce the view that employees' appraisal of HRPs is relevant to their performance, our stance provides original insights into the implications of using practices viewed by employees as fulfilling their work-related needs, hence prompting their satisfaction with them. This also highlighted that employees may produce evaluations of HRPs relevant to their performance from different perspectives besides attributional ones. This information is critical for organisations as the essential SHRM role is to deliver HRPs that maximise employee contributions (Liu et al., 2017). As our study reveals that HRPs may differ in their capacity to drive performance, with those meeting employee satisfaction being more effective, it advises caution when deploying HRPs without considering employee satisfaction with them. While other scholars have suggested that satisfaction with HRPs may be relevant to workforce performance (Nishii & Wright, 2008), this is among the first studies to provide evidence that this is indeed the case. Taken together, our findings add to the knowledge base regarding HRP value by underpinning the idea that it cannot be assumed that HRPs will have the same effect on the whole workforce (Lepak & Boswell, 2012; Lepak et al., 2012). Without considering employee satisfaction with HRPs, a short-sighted representation of their performance implications may be obtained.

Table 5
Bootstrap results for the conditional indirect effects.

Health	Effect	Boot SE	Boot Lower Limit 95% CI[a]	Boot Upper Limit 95% CI[a]
−1 SD (−8.8)	.034	.029	-.024	.92
M (0)	.088	.022	.047	.133
+1 SD (+8.8)	.142	.029	.091	.233

Bootstrap sample size = 5.000.

[a] CI=Confidence Interval.

The second contribution of this study, which is related to the previous one and gives it theoretical substance, refers to our conceptualisation of satisfaction with HRPs. Adopting a JD-R perspective has allowed us to theorise on a specific meaning HRPs may have for employees (i.e., resource-delivery tools), and thus on a critical aspect of these practices that they may target when evaluating them (i.e., the quality of the resources involved). While previous research has used the JD-R model to explain the effects of HRPs on employees (e.g., Kloutsiniotis & Mihail, 2020), only a few works have used this model to make sense of what employees may target when evaluating HRPs (cf. Van Beurden et al., 2021). This study adds to this emerging literature, and further develops it by exploring the performance consequences of employees' evaluations.

The third contribution refers to the explorations of *how* satisfaction with HRPs elicits performance. Our JD-R standpoint has allowed us to provide theoretical arguments and empirical evidence for the mediating role of engagement in the satisfaction with HRPs-performance relationships (H2a and H2b). However, while engagement was found to significantly mediate the satisfaction with HRPs-extra-role performance relationship, no significant mediation effect was observed for the satisfaction with HRPs-in-role performance link. Specifically, we found that satisfaction with HRPs is positively associated with engagement, while engagement is not significantly related to in-role performance.

This result seems surprising, particularly in light of the JD-R literature that largely supports the view that more engaged employees tend to show better performance (cf. Bakker & Demerouti, 2017). Yet some specificities of this study may help explain this unexpected finding. First, the way the in-role performance was measured may have affected the results.[1] This study relied on the company's records of the supervisors' performance appraisals. While supervisors are in a privileged position to assess their employees' in-role performance, their measurement is not necessarily exhaustive, and their view may differ from that of other potential raters (e.g., colleagues, subordinates). As Conway and Huffcutt (1997) suggest, there may be different perspectives on an employee's job performance levels and involving more than one rater can improve measurement outcomes. It is thus possible that a more accurate measure for in-role performance would be conducive to more supportive findings for H1a.

Second, our findings may also be explained by the characteristics of the study's sample. Employees in different positions replied to the survey, including sales and R&D. For these positions, employee output might be affected by factors beyond their control, and they may thus be less able to translate their engagement into improved in-role performance. Notably, in the Italian pharmaceutical industry, salesforce outcomes are increasingly affected by healthcare policy-makers, who can influence doctors' prescribing decisions (Rashidian et al., 2015). In other positions, such as R&D, significant outcomes may be highly uncertain, and produced only in the long-term (e.g., obtaining a compound with business potential), even for highly-engaged employees. It is therefore plausible that for some jobs in our sample, ambiguity surrounding the achievement of tasks may be preventing us from detecting a significant relationship between engagement and in-role performance.

While these findings do not fully support our research model, they assume theoretical significance, particularly for the JD-R model, which considers engagement as an essential antecedent to individual performance. They are consistent with Parker and Griffin's suggestion, in their (2011) critical review of the concept of engagement, to pay closer attention to the kind of performance (e.g., in-role vs. extra-role) prompted by engagement in different contexts, as "a straightforward association between them cannot be assumed" (p. 64). Indeed, the evidence here suggests that while the effects of engagement on extra-role performance, discretionary in nature, appear generalisable across all the jobs in our sample, its effects on in-role performance may vary with

the level of task controllability in each job. Job characteristics may therefore moderate the engagement-in-role performance link. Nonetheless, it cannot be concluded that engagement is irrelevant for explaining employee performance in jobs characterised by task uncertainty. In fact, more engaged employees may record a better performance in these jobs over time compared to their less-engaged colleagues because of increased perseverance to complete work tasks in difficult times and better adaptation to changes (Schneider et al., 2018). Future research adopting a long-term longitudinal perspective might clarify this point.

Although engagement does not mediate the relationship between satisfaction with HRPs and in-role performance, a positive and significant association was found between these two variables, suggesting that in part satisfaction with HRPs may directly elicit increased in-role performance. This might occur when the practices are perceived to provide relevant resources for improving the execution of certain core tasks. For example, a training programme providing highly-valued skills may improve employee performance without necessarily having an intermediate effect on engagement (Lepak & Boswell, 2012). However, the significance of the satisfaction with HRPs-in-role performance relationship ($\beta = 0.13$, $p < .05$) suggests that this may be affected by moderators. Again, following our reasoning above, it may be posited that, in jobs characterised by reduced task uncertainty, the relationship is stronger than in those where this uncertainty is greater. Future research should explore these arguments, as they suggest the existence of job-based boundary conditions affecting the performance value of satisfaction with HRPs.

Besides the mediating role it plays in our model, the evidence here also reveals that engagement increases with satisfaction with HRPs. This finding is noteworthy as it indicates that this satisfaction is conducive to a higher-quality workforce. Employee engagement is considered a significant ingredient of organisational success in today's highly-competitive business environment where a workforce's attitude to work may be a source of competitive advantage (Schneider et al., 2018). While this study shows that more engaged employees are likely to deliver improved extra-role performance, there are also other potential benefits associated with engagement: more engaged workforces tend to show greater loyalty to their employer, learning propensity, and innovative behaviour, with subsequent effects on organisational performance (Bakker & Demerouti, 2017; Schneider et al., 2018). By increasing engagement, satisfaction with HRPs may therefore have an indirect effect on other important outcomes over and above those explored here.

The fourth contribution of this study is that it provides evidence on *when* the satisfaction with HRPs-engagement relationship is stronger (H3). Specifically, our study showed that it is positively moderated by employees' health, with healthier employees tending to be more engaged when they are satisfied with their HRPs. It also revealed that the indirect effect of satisfaction with HRPs on extra-role performance via engagement is stronger for healthier employees than for less healthy ones (H4). This evidence supports the idea that even when HRPs provide valuable resources, hence meeting employee satisfaction, the acquisition and deployment of those resources may come at a physical and mental exertion cost (Stirpe et al., 2018), which sounder health may help to handle. Thus, satisfaction with HRPs translates more straightforwardly into improved engagement when employees are healthier.

These findings have theoretical significance. First, they provide salient insights into the relevance of employee health from a SHRM perspective. Health is conventionally regarded in SHRM research as a desirable HRP outcome; "good" HRPs are expected to induce more positive employee inputs, while also ensuring employee well-being (Oppenauer and Van De Voorde, 2018; Peccei & Van De Voorde, 2019). Our findings indicate that employee health may also affect the performance implications of HRPs by strengthening the relationship between employee satisfaction with them and improved workforce contributions. Therefore, our study suggests that health should not only

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[1] This argument was suggested by one reviewer.

be regarded as an HRP outcome, but also as a variable relevant to effective HRP functioning. Second, and relatedly, our study provides insights into how employee-level variables may intervene in the HR causal chain, suggesting that the specific segment of the chain explored (i.e., the employee evaluations of HRPs-employee outcomes link) may be contingent upon individual characteristics. Most representations of this chain tend to include sequentially-interconnected mechanisms linking HRPs to organisational performance, without considering potential individual-level moderators (cf. Kinnie et al., 2005; Lepak et al., 2012; Wright & Nishii, 2013). Our findings offer a more detailed view of the HR causal chain, which helps to advance our understanding of it.

5.2. Implications for practice

Our findings have managerial relevance. Satisfaction with HRPs seems to improve employees' contributions. Therefore, when introducing HRPs, managers should not only consider their strategic meaning to the organisation, but also ponder workforce satisfaction with them. The arguments here suggest that managers should be aware of how HRP-related resources fulfil employees' work-related needs if their aim is to maximise satisfaction with HRPs, and thus workforce engagement and performance. Communication plans clarifying how HRP-related resources can meet employees' needs might boost satisfaction with HRPs, particularly when new HRPs are launched or old ones are modified, which is when HRPs are most likely to be scrutinised by employees (Nishii & Wright, 2008). Those plans should be informed by questions such as: What resources do organisational HRPs involve that might help employees to work more effectively? What resources do they deliver that support workforce development? Furthermore, by highlighting the performance effects of satisfaction with HRPs, this study provides practitioners with insights for improving HR audits. These activities usually focus on the degree to which HRPs 1) fit together, and 2) are consistent with the firm's strategy (Becker et al., 2001; Wright & Nishii, 2013). The evidence here suggests that satisfaction with HRPs could be an additional audit criterion for evaluating HR systems. Finally, our findings add to the limited number of HR studies on the significance of changes in employee health (e.g., Airila et al., 2010). They advise managers to promote workplace health, not only for obvious ethical reasons or to reduce the cost of sick leave, but also because the provision of HRPs that meet employee satisfaction seems to result in improved workforce contributions when employees enjoy better health.

5.3. Limitations and future research

This study has its weaknesses. Its major limitation, shared by other HR studies (e.g., Cafferkey et al., 2019; Kloutsiniotis & Mihail, 2020; Latorre et al., 2020), is the use of cross-sectional data. Because the dependent and independent variables were measured simultaneously, with the exception of in-role performance, reverse causalities between them cannot be excluded. The results should therefore be read with this information in mind, and its relevance should not be downplayed. In fact, there is evidence suggesting bidirectional relationships between engagement and job, environmental, and individual characteristics (e. g., Weigl et al., 2010). However, previous research supports the reasoning on the causations proposed here. There is accumulated evidence indicating that engagement affects performance (cf. Bakker & Demerouti, 2017), and that employee satisfaction triggers both engagement and performance (e.g., Deery et al., 2017; Yalabik et al., 2013). Furthermore, for the relationships involving in-role performance, potential reverse causality issues are less severe. Indeed, while extra-role performance was measured simultaneously with the other main study's variables via an online survey, in-role performance was appraised for all employees after they completed the online survey. Nevertheless, future research would benefit from using longitudinal data to investigate our findings further, which could also help to shed additional light on the performance effects of engagement in different jobs.

Second, some of the data came from a single source (i.e., employees). However, following Podsakoff et al. (2003), several procedural and statistical strategies were used to moderate possible CMV.

Third, and like other studies (e.g., Deery et al., 2017), the data come from a single organisation, which reduces the findings' generalisability. Future studies could extend the analysis to include other workplaces.

Fourth, because different raters may evaluate an employee's performance differently depending on their specific viewpoints, future research on the relationships explored here is encouraged to adopt multi-source performance ratings. These would allow more comprehensive measurements to be obtained, and, possibly, more accurate findings (cf. Conway & Huffcutt, 1997).

Finally, this research cannot be extrapolated to workplaces in other countries as employee evaluations of HRPs may prompt different outcomes across socio-institutional contexts (Nishii et al., 2008). The Italian context is characterised by high levels of individualism. As in other similar societies, individuals are chiefly concerned with their own self-contentment (Burton et al., 2021). Therefore, in comparison with less individualistic contexts, not only is it possible that employees in Italy are more vigilant in evaluating the alignment of HRPs with their personal priorities, but also that their resulting satisfaction (or dissatisfaction) with the practices is more relevant vis-à-vis their consequent contributions. Thus, it would be worthwhile to explore cross-cultural extensions of this study.

6. Conclusions

As discussed by Liu et al. (2017), employees' view of HRPs play a critical role in the process through which these practices become linked to performance, and hence "research examining the impact of an employee's experience of HR systems on his or her outcomes is sorely needed" (p. 1165). This study has investigated *whether*, *how*, and *when* employee satisfaction with HRPs affects individual productive contributions. While there is undoubtedly a great deal of work yet to be done to fully explore workforce evaluations of HRPs and their related effects, we trust the findings here contribute to a better understanding of the meaning of such evaluations and inspire further research on the implications of satisfaction with HRPs.

Acknowledgements

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