

Untangling Human Resource Management and Employee wellbeing Relationships: Differentiating Job Resource HR Practices from challenge Demand HR Practices

Dr. Rajesh Jain , Associate Professor , IMS , SAGE University, Indore

Prof. Vandana Kadam , Assistant Professor, IMS , SAGE University, Indore

Prof. Sweety Dubey , Assistant Professor, IMS , SAGE University, Indore

Abstract

In the strategic HR literature, current empirical results on the relationship between HR practices and employee wellbeing are mixed and contradictory. Based on the job resources and demands model and the fine-tuned challenge-hindrance demands framework, we propose that an important reason lies in the lack of attention paid to the different characteristics of HR practices. HR practices can serve as either job resources or challenge demands to employees, thereby having differential effects on the psychological, physical, and social dimensions of wellbeing. We integrate a measure of challenge demand (including time pressure and workload) as a mediator to further reveal how these different categories of HR practices influence employee wellbeing. Using structural equation modeling in a dataset of 4823 individual workers from a National Workplace Survey of Employees conducted in Ireland, we find that job resource HR practices are positively associated with all three dimensions of wellbeing both directly and indirectly, while challenge demand HR practices are positively associated with psychological wellbeing but negatively associated with physical wellbeing and social wellbeing primarily through the mediating effect of time pressure and workload. These findings point to important variable relationships, reinforcing the need to untangle the HRM employee wellbeing relationship beyond aggregated and uniform HRM-wellbeing assertions.

Keywords: contradictory, psychological, mediator, HR practices, reinforcing.

1.1 INTRODUCTION

Strategic HRM (SHRM) scholarship is interested in studying the organizational implications of a bundle of HR practices or systems (e.g., “high performance work practices”) that enhance employees' knowledge, skills, and abilities, motivation, and opportunities to contribute. The enormous literature documenting links between HR systems and organizational performance has spawned a number of offshoots. One critical offshoot is a research stream evaluating SHRM's effects on outcomes on the individual worker level, most notably via “employee wellbeing”. The original SHRM wellbeing argument was that SHRM benefits both employee wellbeing and firm performance, leading to “mutual gains” for both parties. This perspective remains the dominant point of view amongst SHRM researchers aligned with the belief in “best practices”. Alternatively, a “conflicting outcomes” (or “labor process”) perspective views HR practices as a means to leverage employees to increase firm efficiency and/or reduce costs, but which can also harm employees due to increased workload and requirements. Both positive and negative relationships between HR practices and employee wellbeing are documented in the literature; Ogbonnaya & Messersmith, supporting either perspective. While traditional SHRM theories such as A-M-O theory provide a strong rationale to understand the organizational implications of HR functions on firm performance, they do not explain the inconsistent and contradictory wellbeing findings at the individual level that are frequently evidenced in the literature.

1.2 LITERATURE REVIEW AND HYPOTHESES

Employee wellbeing is broadly defined as “the overall quality of an employee’s experience and functioning at work” (Grant et al., 2007; Warr, 1987). Several approaches have been employed by researchers to explore this concept, including subjective (Diener, 1984) and psychological operationalizations (Ryff, 1989). For the purposes of this paper, we adopt Grant et al.’s (2007) multi-dimensional definition, which includes psychological, physical, and social dimensions of wellbeing. Specifically, in organizations, psychological wellbeing refers to the subjective experiences of individuals emphasizing the feeling of pleasure or the sense of fulfillment. It has been assessed by reference to subjective psychological outcomes including engagement, satisfaction, and commitment. Physical wellbeing is the objective physiological measures and/or the subjective experience of bodily health. Following the literature (Van De Voorde et al., 2012), we include exhaustion to reflect the subjective perspective of physical wellbeing. This reflects recent work which offers a more multifaceted view on wellbeing such as bridging happiness and health components (Elorza et al., 2022). Social (or relational) wellbeing refers to the quality of one’s relationships with other people and communities. Specifically, there is a nuance in the relationships amongst employees on one hand and the relationships between employees and their supervisors or organization on the other (Van De Voorde et al., 2012). We consider both dimensions, labeled as workplace relations. This final dimension speaks to systematic reviews of wellbeing research, which highlight that it is rare to consider social wellbeing in tandem with psychological and health dimensions (Boccoli et al., 2023).

1.2.1 JD-R model and wellbeing

Work-related factors influence individual wellbeing differently by functioning either as job resources or job demands. Job resources are aspects of the job that can provide employees means to complete their tasks, mitigate job demands, and/or nurture their personal growth, such as autonomy, participation, and feedback (Demerouti et al., 2001).

1.2.2 Challenge-hindrances demands framework and wellbeing

The challenge-hindrances demands framework suggests that there are both “good” stressors and “bad” stressors, which correspond to “challenge demands” and “hindrance demands” (Cavanaugh et al., 2000; LePine et al., 2005), respectively. Challenge demands such as high workload, time pressure, broad job scope, and high responsibility function as both stressors and opportunities for personal growth and achievement. This is because employees expect their efforts spent on dealing with those stressors can lead to future desirable consequences and to a sense of personal accomplishment once those demands are met. Therefore, challenge demands are associated with increased employee motivation and job performance (LePine et al., 2005).

1.2.3 Direct relationships between HR practices and employee wellbeing

While researchers vary in the HR practices that they include in different studies, compensation and benefits, job and work design, and training and development are the three most explored HR practice domains in the HRM literature, according to a widely referred literature review by Posthuma et al. (2013). These also come through in Boon’s et al. (2019) more recent review on HR systems (p. 2507). Accordingly, we consider pay for performance, participation, autonomy, and training in developing our hypotheses. Building upon the above discussion, when considering their relationships with the three different types of employee wellbeing, we separate these four HR practices into two categories based on their function as primarily job resources or challenge demands for individuals.

1.2.4 HR practices as resources

Employee participation and job autonomy are two classic examples of opportunity-enhancing HR practices in SHRM (Posthuma et al., 2013) and they are also viewed as common types of job resources by JD-R researchers (cf. Bakker & Demerouti, 2017; Demerouti et al., 2001). As discussed, job resources are expected to enhance all three components of

wellbeing because they are purely functional. Privileging an employee perspective to explore job resource HR practices as related to a multifaceted appreciation of wellbeing, we therefore hypothesize: **Hypothesis 1.** Job resource HR practices (e.g., participation and autonomy) have positive relationships with psychological (1a), physical (1b), and social (1c) wellbeing.

1.2.5 HR practices as demands

While less abundant, studies frequently report non-significant or negative associations of training and pay for performance with employee wellbeing, particularly physical wellbeing (e.g., Boxall & Macky, 2014; Guerci et al., 2019; Ogbonnaya & Messersmith, 2019). We postulate it may be because these two HR practices are challenge demand HR practices. Training and pay for performance belong to the ability-enhancing HR bundle and motivation-enhancing HR bundle, respectively. Both HR practices have the potential to develop and enrich employees, while simultaneously being demanding. According to challenge-hindrance demand framework (LePine et al., 2005), such challenge demands can stimulate psychological wellbeing but are associated with reduced physical wellbeing and social wellbeing. **Hypothesis 2.** Challenge demand HR practices (e.g., training and pay for performance) have a positive relationship with psychological (2a) wellbeing, but have negative relationships with physical (2b) and social (2c) wellbeing.

1.2.6 The mediating effect of time pressure and workload as a challenge demand

Conservation of resources theory (Hobfoll, 2011) indicates that there is a resource spiral in individuals such that resource losses (gains) in one aspect of the job would lead to future resource losses (gains) in another aspect of the job. Studies also suggest that HR practices not only influence wellbeing directly, but also influence wellbeing indirectly by shaping/creating employee perceptions of other job resources or demands (Van De Voorde et al., 2016). **Hypothesis 3.** Time pressure and workload mediates the relationship between job resource HR practices with

wellbeing, such that job resource HR practices have a negative relationship with this challenge demand that, in turn, has a positive relationship with psychological wellbeing (3a) but has negative relationships with physical (3b) and social wellbeing (3c) **Hypothesis 4.** Time pressure and workload mediates the relationship between challenge demand HR practices with wellbeing, such that challenge demand HR practices have a positive relationship with this challenge demand that, in turn, has a positive relationship with psychological wellbeing (4a) but has negative relationships with physical (4b) and social wellbeing (4c).

1.3 RESEARCH METHODOLOGY

1.3.1 Sample and procedure

This study is based on a large database of 5110 employee responses drawn from a National Workplace Survey of Employees conducted in Ireland in 2009. After listwise deletion, 4823 employees were in our final sample. The National Workplace Survey of employees is a telephone survey targeting employees aged 15 and over in the public and private sectors (excluding agriculture). The sample was generated on a stratified random basis with quota control. Allowing for ineligibility and invalid telephone numbers, the survey yielded a 50% response rate. Each interview lasted an average time of 35 min (for further technical details see O'Connell et al., 2010).

1.3.2 HR practices

For participation, four questions were used, based on a measure adapted from the Workplace Employment Relations Study (WERS) 1997 survey (Ho & Kuvaas, 2019; Kilroy et al., 2017). A sample question was "How often are you and your colleagues consulted before decisions are taken that affect your work". For autonomy, five questions were asked to respondents about their perceived influence over their work (Kilroy et al., 2017; Ogbonnaya & Messersmith, 2019). An example item included: "You decide how much work you do or how fast you work during the day". Both measures used a five-point Likert scale for responses ranging from 1 (rarely) to 5 (almost always). Two questions were asked about training. One was a

dichotomous question asking respondents if they had received any education or training paid for or provided by their present employer over the last 2 years (Ho & Kuvaas, 2019). The second was a continuous question on the length of training (0 = no training, 1 = up to 1 day, 2 = 2 days–1 week, 3 = over 1 week = 4 weeks, and 4 = over 4 weeks–6 months, Guerci et al., 2019). One dichotomous item representing the presence of merit/performance-related pay was used to measure the pay for performance (Guerci et al., 2019).

1.3.3 Time pressure and workload

This variable was measured by four items closely following Karasek's et al. (1985) Job Content Questionnaire, which describes the nature, speed, and occurrence of a demanding job (Harney et al., 2018). The sample items were “My job requires that I work very hard” and “I work under a great deal of pressure”. A four-point Likert scale was used. Cronbach's alpha for the scale was 0.74.

1.3.4 Employee psychological well-being

Following previous research (Ho & Kuvaas, 2019; Van De Voorde et al., 2012; Veld & Alfes, 2017), employee commitment was used to operationalize employee psychological wellbeing, measured by six items adapted from Meyer et al. (1993) on a four-point Likert scale. A sample item was “I am proud to be working in this organisation”. Cronbach's alpha for this scale was 0.73.

1.3.5 Employee physical well-being

Employee physical wellbeing was operationalized by exhaustion (reverse coded), measured by five items

(Kilroy et al., 2017) on a five-point Likert scale. For instance, participants were asked to indicate how often they involve in activities: “find your work stressful”, “come home from work exhausted”, and “feel too tired after work to enjoy the things you would like to do at home”. Cronbach's alpha for this five-item scale was 0.83.

1.3.6 Employee social well-being

Employee social wellbeing was measured by two items (Ho & Kuvaas, 2019) on a five-point Likert scale. Respondents were asked to describe the relationships between staff and management at their workplace as well as their relationships in general between different staff members. Cronbach's alpha for this scale was 0.67, deemed acceptable (Nunnally, 1978).

1.3.7 Control variables

We controlled for individual characteristics that may have an impact on employee wellbeing (Ogbonnaya & Messersmith, 2019; Ramsay et al., 2000). Specifically, gender, employment type, union membership, and education were included as dummy variables (detailed notation can be found in Table 1). Individual organizational tenure was also controlled using the years working in the present workplace. In addition, one item of job security was included. To reflect the influence of HR practices on employee short-term physical wellbeing, we further controlled general health, wherein respondents were asked to rate their own health using a five-point Likert scale. In addition, we included sector and firm size.

TABLE 1. Fit statistics from measurement model comparison.

Models	χ^2/df	CFI	TLI	RMSEA	SRMR	$\Delta\chi^2$	Δdf
Full measurement model	1814.61/164	0.94	0.93	0.04	0.04		
Model A ^a	2060.17/169	0.94	0.92	0.05	0.05	245.56***	5
Model B ^b	4873.82/169	0.84	0.80	0.07	0.07	3059.21***	5
Model C ^c	3765.07/169	0.88	0.85	0.07	0.06	1950.46***	5
Model D ^d	8357.12/173	0.72	0.66	0.10	0.11	6542.51***	9
Model E ^e (Harman's single factor test)	11,349.27/179	0.60	0.55	0.11	0.13	9534.66***	15

1.3.8 Analyses

To test the hypotheses, we conducted structural equation modeling (SEM) in Mplus 8.3 (Muthén & Muthén, 2012). CFA was first conducted to confirm the discriminant validity of the multi-item measurement constructs and rule out the common method variance concerns. Results are presented in Table 1. The CFA results provided a good model fit for a six-factor structure where the two types of HR practices, challenge demand (time pressure and workload), and the three types of employee wellbeing were specified as separate measures ($\chi^2 [164] = 1814.61, p < 0.001, CFI = 0.94, TLI = 0.93, RMSEA = 0.04, \text{ and } SRMR = 0.04$). We also conducted CFAs for other potential measurement models and compared them to our theoretically preferred model. For instance, challenge demand HR practices and challenge demand (time pressure and workload) were combined in Model A, and three wellbeing dimensions were combined into one factor in Model D. The results of all these alternative models confirmed that the full measurement model in this study had the best model fit among all model specifications, supporting the discriminant validity of the studied constructs. Furthermore, to examine our common method variance problem, we combined all

factors into a single factor (Harman's single factor test) in Model E. This model had the worst fit to our data ($\chi^2 [179] = 11,349.27, p < 0.001, CFI = 0.60, TLI = 0.55, RMSEA = 0.11, \text{ and } SRMR = 0.13$), indicating meaningful differences among these variables.

1.4 RESULTS

Table 2 reports descriptive statistics, including the means, standard deviations, and correlations.

TABLE 2. Descriptive statistics.

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
1 Psychological wellbeing (commitment)	2.93	0.46										
2 Physical wellbeing (exhaustion-reversed)	3.36	0.90	0.19**									
3 Social wellbeing (workplace relations)	4.11	0.75	0.39**	0.27**								
4 Challenge demand (time pressure and workload)	2.75	0.55	0.06**	-0.54**	-0.12**							
5 Job resource HRM	0.00	0.56	0.32**	0.24**	0.38**	-0.03						
6 Participation	3.78	0.99	0.36**	0.24**	0.47**	-0.06**	0.84**					

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
7 Autonomy	2.63	0.78	0.12**	0.12**	0.10**	0.02	0.74**	0.25**				
8 Challenge demand HRM	0.01	0.74	0.06**	-0.05**	0.04**	0.09**	0.18**	0.17**	0.12**			
9 Training	0.00	0.96	0.05**	-0.05**	0.02	0.10**	0.11**	0.12**	0.05**	0.74**		
10 Pay for performance	0.82	0.38	0.05**	-0.03*	0.05**	0.04**	0.16**	0.13**	0.13**	0.77**	0.13**	
11 Gender ^a	0.52	0.50	0.07**	0.00	0.06**	0.05**	-0.07**	-0.03*	-0.09**	-0.11**	-0.03	-0.13**
12 Education dummy 1 ^b	0.40	0.49	0.01	0.12**	0.05**	-0.20**	-0.14**	-0.06**	-0.17**	-0.16**	-0.14**	-0.10**
13 Education dummy 2 ^c	0.22	0.41	0.01	-0.02	-0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.01
14 Education dummy 3 ^d	0.38	0.49	-0.02	-0.11**	-0.04**	0.18**	0.12**	0.05**	0.15**	0.15**	0.14**	0.10**
15 Employment type ^e	0.85	0.36	0.01	-0.05**	-0.10**	0.10**	0.10**	0.04**	0.12**	0.16**	0.11**	0.13**

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10
16 Union membership ^f	0.44	0.50	-0.07**	-0.08**	-0.19**	0.09**	-0.17**	-0.12**	-0.17**	-0.03*	0.12**	-0.16**
17 Tenure	11.56	1.06	0.03*	-0.02	-0.10**	0.07**	0.08**	0.02	0.12**	0.02	0.04**	-0.02
18 Job security	2.86	0.79	0.26**	0.09**	0.12**	0.02	0.16**	0.16**	0.08**	0.06**	0.09**	0.00
19 Health	4.03	0.91	0.10**	0.12**	0.15**	-0.02	0.09**	0.09**	0.04*	0.05**	0.05**	0.02
20 Sector dummy 1 ^g	0.58	0.49	-0.02	0.03*	0.09**	-0.12**	0.08**	0.05**	0.08**	0.10**	-0.10**	0.24**
21 Sector dummy 2 ^h	0.36	0.48	0.01	-0.04**	-0.09**	0.15**	-0.07**	-0.05**	-0.07**	-0.10**	0.09**	-0.24**
22 Sector dummy 3 ⁱ	0.05	0.22	0.01	0.02	0.00	-0.04**	-0.01	0.00	-0.03	0.01	0.02	-0.01
23 Firm size dummy 1 ⁱ	0.33	0.47	0.07**	0.10**	0.15**	-0.07**	0.08**	0.05**	0.08**	-0.15**	-0.12**	-0.10**
24 Firm size dummy 2 ^k	0.33	0.47	0.01	-0.03	0.01	0.03*	-0.05**	-0.02	-0.06**	-0.05**	-0.03*	-0.05**

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	
25 Firm size dummy 3 ^l	0.35	0.48	-0.08**	-0.07**	-0.16**	0.04*	-0.03*	-0.02	-0.02	0.20**	0.15**	0.15**	
Variable	11	12	13	14	15	16	17	18	19	20	21	22	23
12 Education dummy 1 ^b		-0.07**											
13 Education dummy 2 ^c		0.08**	-0.43**										
14 Education dummy 3 ^d		0	-0.65**	-0.41**									
15 Employment type ^e		-0.09**	0.00	0.03*	-0.03								
16 Union membership ^f		0.06**	0.00	-0.03*	0.03*	0.15**							
17 Tenure		-0.11**	0.09**	-0.04**	-0.05**	0.29**	0.36**						
18 Job security		0.02	0.01	-0.03*	0.02	0.28**	0.16**	0.19**					

Variable	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	
19 Health	0.09**	-0.11**	0.02	0.09**	-0.03*	-0.04**	-0.09**	0.08**					
20 Sector dummy 1 ^a	-0.17**	0.11**	0.03*	-0.14**	0.02	-0.46**	-0.23**	-0.18**	0.00				
21 Sector dummy 2 ^b	0.21**	-0.14**	-0.03*	0.17**	-0.03	0.43**	0.20**	0.16**	0.01	-0.90**			
22 Sector dummy 3 ⁱ	-0.08**	0.06**	0.00	-0.06**	0.02	0.11**	0.08**	0.06**	-0.02	-0.28**	-0.18**		
23 Firm size dummy 1 ⁱ	0.07**	0.09**	0.02	-0.10**	-0.06**	-0.21**	-0.10**	-0.05**	0.00	0.13**	-0.11**	-0.04*	
24 Firm size dummy 2 ^k	0.03*	-0.01	-0.03	0.03*	-0.06**	0.02	-0.02	-0.01	0.01	-0.06**	0.06**	0.00	-0.49**
25 Firm size dummy 3 ^l	-0.10**	-0.08**	0.01	0.07**	0.12**	0.18**	0.11**	0.05**	-0.01	-0.07**	0.05**	0.04**	-0.51**

- *Note:* $N = 4823$. The mean and SD for participation, autonomy, and pay for performance were based on the original scale which used the same responses. The mean and SD for training, job resource HRM and challenge demand HRM were based on the standardized scale where different responses were involved.

1.5 Model test

Figures 1 and 2 present the findings for SEMs based on our best fitting CFA, with paths between construct measures drawn per our hypotheses.

FIGURE 1

Structural equation modeling results of direct relationships. $N = 4823$. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Standardized coefficients were reported.

FIGURE 2

Structural equation modeling results of indirect relationships. $N = 4823$. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Standardized coefficients were reported.

Hypothesis 1 proposed that there would be positive direct links between the job resource HR practices with psychological (1a), physical (1b), and social (1c) wellbeing. As shown in Figure 1, job resource HR practices were positively associated with psychological ($\beta = 0.37, p < 0.001$), physical ($\beta = 0.36, p < 0.001$),

and social wellbeing ($\beta = 0.58, p < 0.001$). Thus, Hypothesis 1 was supported.

Hypothesis 2 proposed that there would be negative links between challenge demand HR practices and physical (2b) wellbeing and social (2c) wellbeing, but a positive link with psychological (2a) wellbeing. As shown in Figure 1, challenge demand HR practices were negatively associated with physical wellbeing ($\beta = -0.19, p < 0.001$) but not significantly associated with psychological ($\beta = -0.07, n.s.$) or social ($\beta = -0.03, n.s.$) wellbeing. Thus Hypothesis 2 was partially supported.

Hypothesis 3 proposed that job resource HR practices would be negatively associated with time pressure and workload, which would in turn has a positive relationship with psychological (3a) wellbeing but a negative relationship with physical (3b) and social (3c) wellbeing. Referring to Figure 2, job resource HR practices were, indeed, negatively associated with time pressure and workload ($\beta = -0.18, p < 0.001$), and time pressure and workload were found to be negatively related to physical ($\beta = -0.63, p < 0.001$) and social wellbeing ($\beta = -0.07, p < 0.001$) but positively related to the psychological wellbeing ($\beta = 0.11, p < 0.001$). Indirect effects for the two types of HR practices through this challenge demand on wellbeing were reported in Table 3. As reported in that table, the indirect relationships for job resource HR practices with all three types of wellbeing were all significant. Thus, the predictions in Hypothesis 3 were supported.

TABLE 3. Indirect effects.

Independent variables	Dependent variables	Indirect effect	95% CI
Job resource HRM	Psychological wellbeing	-0.01	(-0.014, -0.004)
	Physical wellbeing	0.16	(0.102, 0.213)
	Social wellbeing	0.02	(0.008, 0.026)
Challenge demand HRM	Psychological wellbeing	0.02	(0.009, 0.035)

Independent variables	Dependent variables	Indirect effect	95% CI
	Physical wellbeing	-0.38	(-0.551, -0.201)
	Social wellbeing	-0.04	(-0.067, -0.013)

- Note: 95% CI that did not include zero indicates significant indirect effects.

It is important to contrast the coefficients for the direct and indirect effects as well as their signs and significance. For job resource HR practices, the indirect relationships with psychological and social wellbeing were significant but of trivial magnitude ($z = -0.01$ with 95% CI [-0.014, -0.004] for psychological wellbeing and $z = 0.02$ with 95% CI [0.008, 0.026] for social wellbeing) compared to these HR practices' direct effects ($\beta = 0.40, p < 0.001$ for psychological wellbeing and $\beta = 0.57, p < 0.001$ for social wellbeing). However, the indirect relationship coefficient ($z = 0.16$ with 95% CI [0.102, 0.213]) for physical wellbeing through challenge demand (time pressure and workload) appeared to explain a meaningful proportion of the direct relationship of job resource HR practices with physical wellbeing (β was reduced from 0.36 to 0.20).

Hypothesis 4 proposed that challenge demand HR practices would be positively associated with time pressure and workload, which would, in turn, be positively related to psychological (4a) wellbeing but be negatively related to physical (4b) and social (4c) wellbeing. As shown above as well as in Figure 2, challenge demand HR practices were positively associated with time pressure and workload ($\beta = 0.21, p < 0.001$), while time pressure and workload were found to be negatively related to physical ($\beta = -0.63, p < 0.001$) and social wellbeing ($\beta = -0.07, p < 0.001$) but positively related to psychological wellbeing ($\beta = 0.11, p < 0.001$). Again, estimated coefficients for the indirect paths are shown in Table 3. Therefore, Hypothesis 4 was supported.

1.5.1 Post-hoc analysis

The aim of this study was to untangle HRM practices and employee wellbeing relationships. In existing research, HRM-wellbeing research has mainly adopted the traditional HRM index approach whereby all HRM practices are aggregated to a single index or construct. For comparison with such research,³ we conducted a post-hoc analysis where we ran an SEM with all four of the HR practices on a single latent construct—an overall HR index. Figure 3 presents the results for this model. Here, the HR index was negatively associated with time pressure and workload ($\beta = -0.09, p < 0.001$), while positively directly associated with all three types of wellbeing. The results in this paper's main model suggest that resource HRM and demand HRM influence time pressure and workload differently, where resource HRM is associated with more of this challenge demand, while demand HRM increases it. Moreover, analytically, the main model that differentiates between resource HRM and demand HRM practices had a significantly better model fit than the model with the overall HR index ($\Delta X^2 = 97.05, p < 0.001$). Thus, the post-hoc analysis results provide further support for the necessity of untangling HRM in exploring the relationships between HRM and employee wellbeing.

FIGURE 3

Structural equation modeling results of direct and indirect relationships for HRM index. $N = 4823$. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$. Standardized coefficients were reported. Numbers before the arrows refer to effect sizes without challenge demand in the model, whereas numbers after the arrows refer to effect sizes with challenge demand in the model.

1.6 DISCUSSION

This study set out to untangle the relationships between HRM and different types of employee wellbeing. Drawing on the JD-R model and challenge-hindrances framework, this study proposed and found that resource and demand HRM practices differentially influence employee wellbeing across the psychological, physical, and social wellbeing dimensions. Specifically, job resource HRM (participation and autonomy) was positively associated with all three dimensions of wellbeing. Job resource HRM was also positively associated with physical and social wellbeing indirectly through its negative relationship with another challenge demand (time pressure and workload). By contrast, challenge demand HRM (training and pay for performance) was directly and negatively associated with physical wellbeing. Those effects were fully mediated by time pressure and workload. It was also indirectly and positively associated with psychological wellbeing through the time pressure and workload mediator, while indirectly and negatively associated with physical and social wellbeing through this mediator.

1.6.1 Implications for theory and research

In the SHRM literature, current empirical findings regarding wellbeing have been described as “patchy” and “conflicting” (Cafferkey et al., 2021). We believe an important theoretical reason for these mixed results is that the conventional “HR systems” approach widely adopted in organizational level SHRM research (cf., Combs, et al., 2006) is not adequate for individual level wellbeing studies. Accordingly, we leverage the JD-R model (Demerouti et al., 2001) along with the extended challenge-hindrances demands framework (LePine et al., 2005) to categorize HR practices into job resource HR practices and challenge demand HR practices and observed their different effects on wellbeing. Our findings demonstrate that this categorization of HR practices is more directly pertinent to individuals' wellbeing experiences and adds greater explanatory nuance. This provides an important rejoinder to aggregated and uniform HRM-wellbeing assertions. Specifically, our results highlight the prospective value of further categorizing and

exploring HR practices as either resources, challenges, or indeed hindrance demands. In this paper, we only considered job resource HR practices and challenge demand HR practices using the four most commonly adopted HR practices (cf. Posthuma et al., 2013) as exemplars. We suggest that a broader taxonomy of how other HR practices serve as either job resources or challenge demands would be an important next step in wellbeing research.

1.6.2 Practical implications

Our results suggest that the relationship between HRM and wellbeing is not simply mutual gains. There are nuanced trade-offs that need to be balanced on both the management side and on the employee wellbeing side. For example, a great number of contemporary organizations have implemented some degree of training and incentive plans to strengthen employee abilities and motivation. However, our findings suggest that the organizational benefits earned from these challenge demand HR practices may be at the expense of employee physical and social wellbeing in the short term, at least.

1.6.3 Limitations and future directions

Of course, due to the cross-sectional design of our study, our ability to determine causal directions in our model was constricted. We encourage future research to take a longitudinal research design to offer empirical evidence on the proposed causality. In addition, while our sample was somewhat dated (2009), and we believe that the key constructs examined in this research remain relatively time-invariant (cf. Ogbonnaya et al., 2022), we encourage future research to examine the same relationships using a more recent sample.

Second, our single source data cannot fully rule out the potential for common method variance. It is possible that some variables in the model can be measured from different sources in future research. For example, physical wellbeing can be measured through results of employee health reports or combined with other forms of objective data (ethics and access difficulties acknowledged).

Third, given the limitations of our dataset, we only considered two core HR practices in each HR bundle with other HR practices unexamined. It would be interesting to see if the relationships we found in these data are similar for other HR practices. For instance, while self-managed teams provide employees more discretion, they expand employees' responsibilities to the whole team and thus can serve as a challenge demand HR practice, leading to physical and social wellbeing depletion (cf. Guerci et al., 2019; Ramsay et al., 2000). Moreover, the alpha value of our measure of social wellbeing is relatively low due to only two items and different scales were used to measure these two HR practices. Future research could employ measures with more items and greater consistency. This could include drawing upon a greater variety of measures for each well-being dimension for example, commitment and job satisfaction for the psychological aspect (see Ho & Kuvaas, 2019).

Fourth, we focused on the perceived instrumental characteristics of HR practices without examining individual workers' direct perceptions of the resource and challenge dimensions of the HR practices, which is an additional point of which that future researchers could explore. It should be noted that while organizations rarely intend to design hindrance demand HR practices, it is still possible that individuals perceive challenge demand HR practices or even job resource HR practices as hindrance demands. This part of variance would not be captured without directly measuring individuals' appraisal of HR practices. In addition, we only tested the mediating role of the demand side through time pressure and workload. It is likely that other potential mediators of HRM/wellbeing relationships exist, particularly for job resource HR practices.

1.7 CONCLUSION

This research set out to untangle the HRM-wellbeing relationship, drawing on the job resources and demands model and the fine-tuned challenge-hindrance demands framework to explore multi-dimensional aspects (psychological, physical, social) of wellbeing. The results from a unique employee dataset highlight the empirical validity of this task. This supports a

general movement in HRM away from aggregated, sweeping assertions toward employee-centric, nuanced understanding. Such efforts are especially important in the context of the significant and prominent topic of employee wellbeing.

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