



The Impact of Green Human Resource Management on Employee Green Behavior: The Mediating Role of Job Satisfaction

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Abstract. Green Human Resource Management (GHRM) integrates sustainability principles throughout the employee lifecycle (recruitment, development, utilization, and retention) to promote Employee Green Behavior (EGB), serving as a crucial driver for corporate high-quality development and enhanced ESG performance. Grounded in social exchange theory, organizational support theory, and self-determination theory, this study establishes a conceptual framework linking GHRM with EGB, while examining the mediating effect of job satisfaction (JS) and the moderating role of perceived organizational support (POS). Analysis of 258 survey responses from manufacturing, utility, and energy enterprises in Shandong Province, China reveals that: (1) GHRM significantly positively influences EGB; (2) job satisfaction mediates the GHRM-EGB relationship; and (3) POS positively moderates this effect. The findings offer theoretical insights and practical recommendations for implementing GHRM policies to enhance employee satisfaction and foster green behaviors.

Keywords: green human resource management, employee green behavior, job satisfaction, perceived organizational support

1 Introduction

Amid escalating global environmental challenges, enterprises are key to advancing sustainable development and high-quality economic growth. As an incentive mechanism, GHRM shapes employee attitudes and green behaviors, significantly influencing Employee Green Behavior. Drawing on social exchange theory ^[1], organizational support theory ^[2], and self-determination theory ^[3], this study proposes a moderated mediation model to examine how GHRM affects EGB, with JS as a mediator and POS as a moderator.

2 Theoretical Foundation and Research Hypotheses

2.1 Green Human Resource Management and Employee Green Behavior

GHRM advances organizational environmental sustainability by fostering environmentally conscious employees through green recruitment and training^[4], reinforcing pro-environmental actions via green performance appraisal and rewards, and cultivating a green culture that strengthens environmental identity and spontaneous engagement^[5]. Notably, EGB comprises task-related and voluntary behaviors, each with distinct motivational drivers^[6]. Thus, we propose:

H1: GHRM positively influences EGB.

H1a: GHRM positively affects task-related EGB.

H1b: GHRM positively affects voluntary EGB.

2.2 The Mediating Role of JS

JS reflects employees' subjective evaluation of their work environment. Social identity theory suggests GHRM signals corporate environmental commitment, strengthening organizational identification and JS^[4]. Self-determination theory indicates GHRM satisfies needs for autonomy, competence, and relatedness, enhancing intrinsic motivation and satisfaction^[6]. Social exchange theory further supports this: employees reciprocate organizational support with increased satisfaction. Empirical studies confirm this positive impact^[7]. Thus:

H2: GHRM positively influences JS.

As an affective response to work conditions, JS is a key predictor of EGB. The theory of planned behavior explains that satisfied employees have more favorable attitudes toward environmental goals, perceive stronger support, and demonstrate greater behavioral control^[8]. Empirical research supports this. Paillé^[7] identified JS as a significant EGB predictor, especially with organizational backing. Kim^[5] revealed satisfaction indirectly promotes EGB via organizational commitment. Psychological ownership theory adds that satisfied employees develop belonging, motivating them to uphold environmental performance. Thus:

H3: JS positively influences EGB.

H3a: JS positively affects task-related EGB.

H3b: JS positively affects voluntary EGB.

JS mediates the GHRM-EGB relationship by bridging HR practices with behavioral outcomes. GHRM-induced satisfaction stems from green training, resource provision, and participatory management, bolstering organizational identification^[9]. Performance-based green rewards also validate employees' eco-actions, increasing satisfaction and subsequent EGB. Social exchange processes further explain this: employees reciprocate GHRM support with satisfaction-driven green behaviors. Moderators like environmental attitudes and leadership support may alter mediation strength^[8].

H4: JS mediates the relationship between GHRM and EGB.

2.3 The Moderating Role of POS

Research indicates that POS moderates the relationship between GHRM and EGB^[11]. First, high POS facilitates employee acceptance and internalization of GHRM practices, promoting proactive green behaviors^[9]. Second, high POS mitigates resource constraints and psychological pressures associated with implementing green behaviors, thereby enhancing GHRM effectiveness^[11]. Thus, we propose:

H5: POS positively moderates the impact of GHRM on EGB.

Based on these hypotheses, this study proposes the model shown in Figure 1.

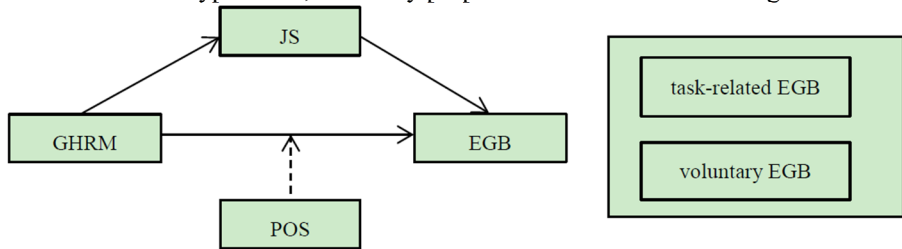


Fig. 1. The proposed model

3 Research Design

3.1 Sample and Data Collection

We surveyed managers and employees at environmentally sensitive firms in Shandong, China via online platforms, social networks, and onsite visits. After a 50-responder pilot, 290 participants yielded 258 valid responses (88.97%). Sample demographics: 52.71% male; age: 25.19% (20-30), 25.97% (31-40), 20.16% (41-50), 28.68% (>51); tenure: 27.71% (<1 yr), 16.28% (1-3), 26.36% (3-5), 18.22% (5-10), 11.43% (>10); education: 17.05% ($\leq$ junior high), 30.23% (high school/technical), 23.26% (college), 21.32% (bachelor's), 8.14% (graduate); firm size: 12.4% (<100), 23.64% (100-300), 22.87% (300-500), 17.05% (500-1000), 24.04% (>1000).

3.2 Variable Measurement

GHRM was measured with 6 items from Dumont et al.^[9] (e.g., "The organization sets green performance goals for employees"). EGB was assessed using Bissing-Olson et al.'s scale^[6], covering task-related (3 items, e.g., "I completed tasks in an environmentally friendly manner") and voluntary green behaviors (3 items, e.g., "I took initiative to adopt eco-friendly approaches"). JS was measured with 8 items from Zhang and Gu^[10] (e.g., "Satisfaction with current organizational policies"). POS was evaluated with 6 items from Eisenberger et al.^[2] via Liu et al.^[11] (e.g., "The organization would help me if I needed assistance"). Controls included gender, age, education, tenure, and firm size.

4 Empirical Tests and Results Analysis

4.1 Common Method Bias Test

Since data were collected via self-reported questionnaires, we conducted several statistical tests to assess common method bias. Harman's single-factor test showed the first factor explained 38.627% of variance, below the 40% threshold, indicating no serious bias. Confirmatory factor analysis (CFA) revealed the four-factor model achieved the best fit, confirming discriminant validity, as shown in Table 1.

Table 1. Confirmatory Factor Analysis

	χ^2/df	RMSEA	SRMR	CFI	TLI
four-factor model(GHRM;EGB;ES;POS)	1.192	0.027	0.037	0.986	0.984
three-factor model(GHRM+EGB;ES;POS)	3.178	0.092	0.086	0.836	0.82
two-factor model(GHRM+EGB+ES;POS)	5.11	0.126	0.114	0.689	0.661
single-factor model(GHRM+EGB+ES+POS)	6.513	0.146	0.127	0.582	0.545

4.2 Descriptive Statistics

Descriptive statistics and correlation analyses were conducted to examine the relationships among the study variables. The results show that green human resource management (GHRM) is significantly positively correlated with job satisfaction ($r = 0.428$, $p < 0.01$). GHRM is also significantly positively correlated with employee green behavior (EGB) ($r = 0.413$, $p < 0.01$). Furthermore, job satisfaction demonstrates a significant positive correlation with EGB ($r = 0.444$, $p < 0.01$). The means and standard deviations for all variables are within reasonable ranges. These findings provide preliminary empirical support for the proposed research hypotheses.

4.3 Main Effects Test

After controlling for demographics, GHRM positively predicted EGB and JS, supporting H1 and H2. JS also positively predicted EGB, confirming H3. In Table 3, GHRM and JS positively predicted task-related and voluntary EGB, supporting H1a and H1b and confirming H3a and H3b.

Table 2. Analysis of Regression Results

Variable	JS			EGB			
	1	2	3	4	5	6	7
GHRM		0.413***		0.410***	0.279***	0.27***	0.258***
JS					0.319***		
POS						0.336***	0.316***
GHRM×POS							0.115*
Constant	3.896***	2.309***	3.737***	2.139***	1.393***	1.694***	1.711***
R ²	0.036	0.202	0.019	0.183	0.264	0.275	0.287
ΔR ²	0.017	0.183	0.000	0.163	0.244	0.255	0.264

Table 3. Analysis of Regression Results

Variable	task-related EGB	voluntary EGB	task-related EGB	voluntary EGB
	1	2	3	4
GHRM	0.421***	0.362***		
JS			0.424***	0.406***
Constant	1.986***	2.293***	1.950***	2.089***
R ²	0.184	0.161	0.185	0.192
ΔR ²	0.164	0.141	0.165	0.173

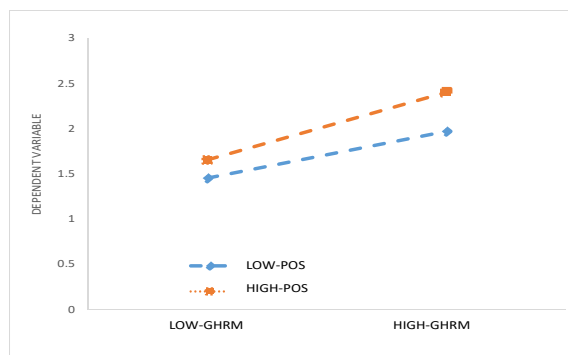
4.4 Mediating Effects Test

As shown in Table 4, the 95% confidence interval for the indirect effect of JS is [0.072, 0.197], indicating a significant mediating effect per Bootstrap principles. The direct effect's 95% CI is [0.156, 0.390], suggesting partial mediation. Additionally, after including JS, GHRM remained a significant predictor of EGB, further confirming partial mediation. Thus, H4 is supported.

Table 4. Mediation effect test

Type of effect	Effect	se	t	p	LLCI	ULCI
Total effect	0.403	0.057	7.088	0	0.291	0.515
Direct effect	0.273	0.059	4.604	0	0.156	0.39
Indirect effect	0.129	0.032			0.072	0.197

4.5 Moderating Effects Test

**Fig. 2.** The effect of JS on the relationship between GHRM and EGB

As shown in Table 2, the GHRM×POS interaction term significantly positively predicts EGB. Simple slope tests reveal that the positive effect of GHRM on EGB is weaker in the low-POS group than in the high-POS group, supporting H5 (Figure 2).

5 Research Conclusions and Management Implications

Under the ESG framework, GHRM is essential for corporate sustainability. This study reveals that GHRM not only directly fosters EGB but also indirectly enhances it by increasing JS and POS. Managerial implications: establish a comprehensive GHRM system (e.g., recruit for environmental values, provide green training); boost JS by emphasizing the significance of employees' environmental contributions; and strengthen POS through leadership role-modeling and strategic ESG commitments. Limitations include sample specificity to Shandong Province, potential common method bias from self-reported data, and a focus solely on the individual level, calling for future multilevel research.

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