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The Influence of Green Human Resource Management on Employee Green Behavior—A Study on the Mediating Effect of Environmental Belief and Green Organizational Identity

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Abstract: Ecological environment issues put forward higher requirements for enterprises to assume environmental responsibilities, and stimulating employee green behavior (EGB) to practice the concept of green development is of great significance. EGB has become the focus of academic attention. EGB is divided into voluntary green behavior (VGB) and task-related green behavior (TGB). However, existing studies have not distinguished the impact mechanism of green human resource management (GHRM) on employee VGB and TGB. Based on self-determination theory and social identity theory, this study discusses how GHRM affects VGB and TGB. This study used a questionnaire survey and collected valid data of 228 employees from manufacturing enterprises in China for empirical analysis. Results show that GHRM positively affects VGB and TGB, environmental belief (EB) mediates the positive relationship between GHRM and VGB, and green organizational identity (GOI) mediates the positive relationship between GHRM and TGB. Theoretical contributions, practical implications, and future research are also discussed.

Keywords: green human resource management; environmental belief; green organizational identity; employee green behavior



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1. Introduction

With the development of modern industry, ecological environment problems are emerging globally, such as the rise of global temperature, resource shortages, and pollution of water and soil resources. Global environmental treaties and regulations have become increasingly stringent, putting forward higher requirements for enterprises to assume environmental responsibilities. The green development of enterprises plays a vital role in promoting the green development of social economy and ecological sustainability [1,2]. Therefore, an increasing number of enterprises are promoting green development by practicing corporate social responsibility [3]. However, research has shown that the implementation of green measures in enterprises largely depends on the participation of employees [4]. Therefore, employee green behavior (EGB), which refers to employees' behaviors in the organization to promote environmentally sustainable development at work, has become the key factor in promoting the green development of enterprises [5]. On the one hand, employees are the undertakers of corporate environmental responsibility. EGB can improve the environmental reputation of enterprises and help enterprises gain a competitive advantage [6]. On the other hand, employees' green behavior will also improve the living environment and contributes to the sustainable development of society [7]. According to the standards of autonomous behavior (organizational requirements and individual autonomy), EGB can be divided into two aspects: one is task-related green behavior (TGB), which refers to the green behavior implemented by employees to complete

the core tasks required by the organization (such as performing the environmental responsibility specified in the responsibilities, complying with the environmental standards, etc.). The other is voluntary green behavior (VGB), which refers to the autonomous and environmental behavior (such as double-sided printing, and reminding colleagues to save energy, etc.), and has not been clearly recognized by the formal reward system [8].

Given the importance of EGB, scholars have begun to pay attention to which management measures can stimulate these behaviors [4–10]. One such measure, green human resource management (GHRM) is a series of human resource management activities such as training, performance management, and recruitment, which is consistent with the company's environmental objectives [9] and can motivate EGB [10–12]. Therefore, GHRM practices are crucial to ensuring employees' engagement in environmentally friendly workplace behavior. GHRM directly affects EGB and indirectly affects it through various potential mechanisms [13]. Thus, exploring the mechanism between GHRM and EGB is of great theoretical significance. However, studies on the mediating mechanism of the impact of GHRM on EGB are few. Dumont et al. (2017) studied the impact of GHRM on EGB with the mediating role of psychological green climate [10]. Zhang et al. (2019) proved that information needs to play a mediating role in the impact mechanism of GHRM on EGB [14]. Furthermore, previous studies have not distinguished the impact mechanism of GHRM on employees' VGB and TGB but have observed differences between VGB and TGB. Therefore, the impact mechanism of GHRM on VGB and TGB should be different [15].

In order to make up for this research gap, we discuss how GHRM influences these two kinds of EGB through different mechanisms according to different theories. One mediating variable is environmental belief (EB). According to self-determination theory, GHRM will affect employees' judgment criteria and behavioral motivations in dealing with environmental problems, thus increasing their EB and prompting them to actively practice VGB. Another mediating variable is green organization identity (GOI). According to the social identity theory, GHRM will improve employees' recognition of the organization's green goals, thereby enhancing employees' GOI, thus enabling employees to show more TGB in their work.

To sum up, based on social identity theory and self-determination theory, this study constructed a dual-mediation model, which used EB as a mediating variable to explore the mechanism of GHRM's impact on employee VGB and used GOI as a mediating variable to explore the transmission mechanism of GHRM to employee TGB. Empirical research was carried out with manufacturing companies as the research object, with a view to enriching the theoretical research on the relationship between GHRM and EGB, while simultaneously providing ideas for manufacturing companies to promote EGB and develop GHRM.

2. Literature Review and Hypothesis

2.1. GHRM and EGB

EGB includes two aspects: VGB and TGB. VGB is an out-of-role behavior, which refers to employees actively participating in environmental protection beyond the scope of their required work tasks. Proactive behaviors result from the employees' inner drive, which is not formally required [4]. These actions include prioritizing environmental interests, initiating environmental plans and policies, and encouraging others. On the contrary, TGB is an in-role behavior, which is defined as the extent to which employees complete their job tasks in an environmentally friendly manner, emphasizing the extent to which core job tasks related to the protection of the environment are completed [8]. It reflects the willingness of employees to perform their tasks in an environmentally friendly way.

GHRM is a series of human resource management activities adopted by enterprises to enhance positive environmental performance, aiming at encouraging employees to practice environmental protection and green behaviors actively [9]. GHRM mainly includes three measures: attracting employees with green values and goals that are similar to those of the organization; formulating training programs to cultivate employees' environmental knowledge, skills, awareness, and attitudes [16]; and incorporating environmental factors into

employees' performance evaluation, salary management, and employee authorization [17]. Through these green-oriented management activities, GHRM has the ability to measure and influence employees' VGB and TGB. First, measures such as emphasizing individual green values in recruitment and selection and using environmental protection as the employer brand are likely to attract some environmentally conscious employees, and such employees will naturally show VGB. Second, by the green training practices designed, an enterprise can enrich employees' environmental protection knowledge and train their practical ability to solve environmental problems so as to make employees likely to demonstrate VGB and TGB. Third, promotion, appraisal, and rewards that take into account green performance motivate employees to clarify their responsibilities and to engage in green behavior [10]. Hence, GHRM will facilitate employees' compliance with TGB and inspire employee VGB in the workplace. As such, we developed the following hypotheses:

Hypothesis 1 (H1). *GHRM positively affects VGB.*

Hypothesis 2 (H2). *GHRM positively affects TGB.*

2.2. GHRM and EB

Belief is an individuals' attitude to something on the basis of certain knowledge. Therefore, EB is defined as the measure of an individuals' attitude toward environmental protection [18], reflecting the employees' attitude toward environmental protection.

As a microcosm of society, the enterprise's GHRM has a subtle influence on employees' views on environmental issues. The implementation of GHRM enables employees to have a higher environmental protection tendency, a more prominent environmental protection ability, and a strong sense of environmental protection responsibility so as to generate their internal demand for environmental protection. Thus, these employees show higher EB. First, enterprises can recruit employees with strong environmental protection intentions through green recruitment and selection. On the one hand, enterprises promote the green culture of the company during recruitment to attract more high-quality employees. On the other hand, enterprises pay attention to the investigation of job-hunters' EBs to recruit employees with higher EB. Second, enterprises can improve employees' environmental ability and increase their EB through green training [19]. Concretely, environmental knowledge and environmental regulations are added to the training to cultivate employees' EB and enhance their sense of responsibility for environmental protection [20]. Third, through performance evaluation, salary management, and employee authorization for green trends, enterprises can stimulate employees' environmental protection initiative, enthusiasm, and sense of responsibility. Environmental performance evaluation and salary management link specific environmental objectives with job descriptions, such as environmental events, pollutant reduction, and environmental protection policies to stimulate employees' enthusiasm for environmental protection, thereby stimulating employees to think actively about the connection between the enterprise and the ecology [21]. According to the self-determination theory, the importance of human motivation is determined by individuals' internal needs [22]. Therefore, GHRM transmits green values to employees through a series of practices, which continuously enhances employees' environmental protection willingness and sense of responsibility and improves their environmental protection ability continuously. This sense of responsibility and ability stimulates employees to have an inherent need for environmental protection and enhances their EB. Therefore, this study brings forth the following hypothesis:

Hypothesis 3 (H3). *GHRM positively affects EB.*

2.3. EB and VGB

EB represent individuals' general beliefs about environment protection. Such beliefs lead to their pro-environmental attitudes on various issues. Individuals with stronger environmental beliefs are likely to conserve the environment by their actions [23]. In addition, based on the self-determination theory, an activity is performed because it is interesting and meaningful and because the activity's implementation can continuously meet the executor's internal needs [24]. Therefore, employees with high EB tend to think that environmental protection is more meaningful and interesting, and they are willing to perform more VGB and obtain self-satisfaction by implementing these behaviors. Some studies have shown that employees with a positive environmental attitude show more environmental behaviors [23,25]. Therefore, the EB is positively related to VGB, which leads to the following hypothesis:

Hypothesis 4 (H4). *EB positively affects VGB.*

2.4. Mediating Effect of EB in the Relationship between GHRM and VGB

According to self-determination theory, the more ecologically friendly people's belief system is, the greater their inner concern for environmental issues and the greater their sense of environmental responsibility. Thus, their autonomous motivation will motivate them to act in a compatible way with that belief system. Furthermore, based on the above derivation of hypothesis H3 and H4, we can infer that the implementation of GHRM by organizations will convey vital green values and environmental ethics to employees through various practices to guide them continuously to pay attention to environmental issues, which can effectively influence the EB of employees and then make them actively show VGB consistent with this belief. Thus, the following hypothesis can be proposed.

Hypothesis 5 (H5). *EB mediates the positive relationship between GHRM and VGB.*

2.5. GHRM and GOI

Organizational identity is an individual's cognitive process of the feeling of membership and belonging in an organization, reflecting the consistency of values between the individual and the organization [26]. According to organizational identity theory, the organizational identity can help members understand organizational goals better and help them keep pace with the organization [27]. Few previous studies have included environmental management in the research field of organizational identity. However, as more and more enterprises focus on sustainable development, environmental protection has become an integral part of organizational identity. Organization members can change their understanding or promote new conceptualization in the face of environmental changes, thereby reshaping organizational identity. Organizational identity depends on the understanding of corporate members of their responsibilities and tasks in relation to the company. When environmental issues gradually become the key concern of enterprises and green environmental protection is constantly emphasized in daily work tasks, GOI also becomes an integral part of the organization's identity [28]. Chen (2011) introduced a new concept of "GOI", which refers to an interpretive scheme about environmental management and protection that members collectively construct in order to provide meaning to their behavior, which reflects the extent to which employees perceive the internalization of their values and goals [29].

GHRM enables employees to form an environmental cognition consistent with the organization by transferring its environmental norms and green values. Therefore, GHRM improves employees' GOI. It can be explained from three aspects. First, GHRM recruits employees with similar green values through green recruitment. Employees are likely to have a sense of membership and belonging when they feel that their pursuit aligns with the corporate culture. Second, GHRM publicizes the enterprise's environmental management regulations and green culture through green training to let them have a sense of identity

with the organization's environmental management. Third, through green performance appraisal and green reward and recognition, GHRM allocates resources to reward employees who engaged in meaningful environmental objectives. Thus, GHRM continuously strengthens employees' recognition of the enterprise's environmental management regulations and green culture so as to form green values consistent with the organization. According to the social identity theory, an individual recognizes that they belong to a particular social group, and at the same time, they also recognize the emotional and value-based significance that being a group member brings to them. Existing research has proven that the practice of human resource management is the key for organization members to form their identity, which arises explicitly from the organization's communication of organizational norms and values to employees [26]. Therefore, GHRM transmits the organization's green values and environmental management goals to the organization members through various practices, which gradually affects the ways and attitudes of the organization's members when dealing with environmental problems and improves their enthusiasm for environmental protection and their recognition of the enterprise's environmental management goals. Thus, this research brings forth the following hypothesis:

Hypothesis 6 (H6). *GHRM positively affects GOI.*

2.6. GOI and TGB

Individuals are constantly seeking consistency of cognition and behavior. Previous research has shown that organizational identity is significantly correlated with employees' attitudes (e.g., job satisfaction, job engagement) and employees' behaviors (e.g., in-role and out-of-role behaviors) [30]. GOI provides a context for members to explain green behaviors at work and endows employees with profound meaning. According to social identity theory, when individuals highly identify with the group they belong to, they will consciously abide by the group norms and, thus, show positive behavior in favor of the organization [31]. First, when employees increasingly identify with an organization, the organization's values, concepts, and practices will be perceived as more unique, distinct, and positive. Second, when employees have a strong sense of belonging and dependence on their organization, they are likely to respond in a positive way to enterprise management [6]. Third, organizational identification makes employees willing to take the organization's interests as their own code of conduct and actively protect and strive toward them. They expect to establish a stable and positive relationship with the organization through such efforts. Therefore, when employees have a high degree of GOI, they have a positive feeling toward the organization's environmental values and hope to strive for more environmental benefits for the organization to perform the tasks they need to accomplish their work in a more environmentally friendly way. Thus, the following hypothesis can be proposed:

Hypothesis 7 (H7). *GOI positively affects TGB.*

2.7. Mediating Effect of GOI in the Relationship between GHRM and TGB

GHRM is a vital promoter to realize the green development of enterprises and provides direction for employees' TGB. The way and the degree to which employees complete the TGB are all affected by GHRM. In this process, the employees' GOI plays a key role. GOI can help employees understand their role for the organization to achieve green goals and, thus, understand what they do. In other words, GOI provides a context for members to explain green behaviors at work and endows employees with profound meaning [32]. Through a series of measures, the practice of GHRM conveys the company's environmental goals to employees and clarifies the green responsibilities of the workplace, which makes employees have consistent environmental cognition with the organization. Subsequently, employees will have a better understanding and recognition of green behaviors at work and have higher satisfaction, employing a more environmentally friendly way to complete their work tasks. At the same time, studies have shown that GOI plays an intermediary

role between environmental leadership and green innovation performance [33]. Therefore, the following hypotheses are proposed in this study:

Hypothesis 8 (H8). *GOI mediates the positive relationship between GHRM and TGB.*

The research framework of this study is shown in Figure 1.

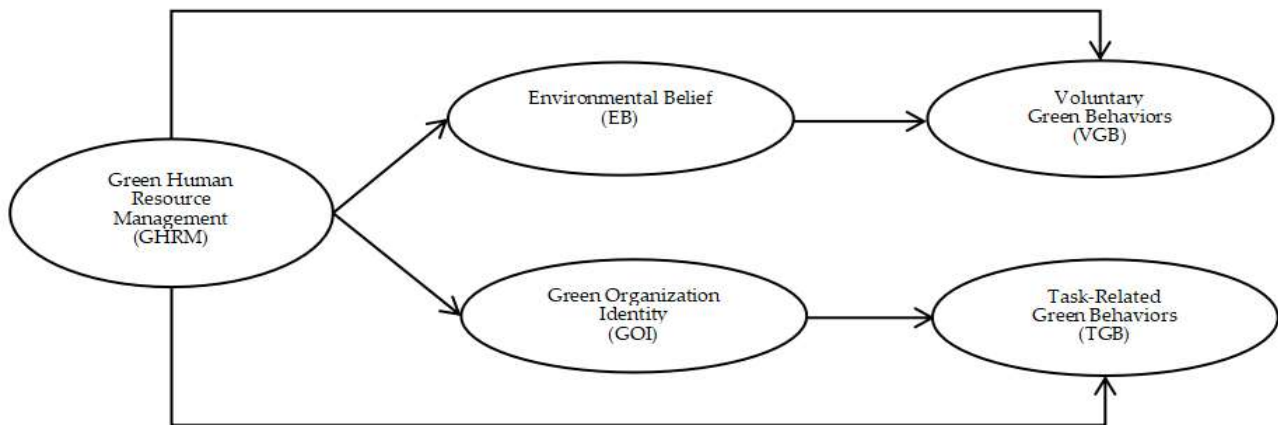


Figure 1. Research framework.

3. Methodology and Measurement

3.1. Data Collection and Sample

To examine the theoretical model, data were collected from employees of enterprises in China's manufacturing industry. This study selected manufacturing industry enterprises for two reasons: First, China has a massive manufacturing industry. Second, in recent years, China has been committed to green transformation and upgrading the manufacturing industry.

We administered a questionnaire from June to August 2020. First, we identified 30 enterprises that belong to the manufacturing industry. Second, we contacted the human resource department directors of these enterprises and explained to them the purpose of data collection. Then we sent a private email to all participants several days before the questionnaire survey to explain the research procedure. The email emphasized that our survey was for academic research purposes only and promised complete confidentiality.

A total of 278 electronic questionnaires were collected from the questionnaire survey, and invalid questionnaires such as those with irregular answers were eliminated. Finally, 228 samples were used for research and analysis, and the questionnaire's effectivity rate was 80.94%. Valid questionnaires were obtained from 118 males and 110 females. Among them, 21.1% were aged 25 or below, 24.6% were aged 26 to 30, 31.6% were aged 31 to 40, 15.8% were aged 41 to 50, and 7% were aged 51 or above. Overall, 17.1% completed high school education and below, 29.4% completed college education, 36.0% completed undergraduate education, and 17.5% completed graduate degree and above. Production positions accounted for 38.6%, technical positions accounted for 28.9%, and management positions accounted for 32.5%.

3.2. Variable Measurement

The variables included GHRM, EB, GOI, VGB, and TGB. In the questionnaire, the scale for these variables used the existing studies to ensure the rationality of the questionnaire structure. We applied the back translation method to translate the original items to Chinese and modified some items according to the Chinese context. All items were measured using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) except for control variables.

3.2.1. GHRM

This study selected the scale of six items from Dumont et al.'s scale [10] to measure GHRM. The six items are as follows: (1) My company sets green goals for employees. (2) My company considers candidates' green attitudes in recruitment and selection. (3) My company provides employees with green training to develop the knowledge and skills required for green management. (4) My company considers employees' workplace green behavior in performance appraisals. (5) My company relates employees' workplace green behaviors to rewards and compensation. (6) My company considers employees' workplace green behaviors in promotion. Cronbach's alpha for this scale was 0.940.

3.2.2. EB

This study selected six items from Kim et al.'s scale [18] to measure EB. The six items are as follows: (1) We are approaching the limit of the number of people the Earth can support. (2) Humans interfering with nature produces disastrous consequences. (3) Humans are seriously abusing the environment. (4) The Earth is like a spaceship with very limited room and resources. (5) The balance of nature is very delicate and easily breakable. (6) If things continue on their present course, we will soon experience a major ecological catastrophe. Cronbach's alpha for this scale was 0.904.

3.2.3. GOI

Six items on GOI from Chen et al.'s scale [29] were adopted. The six items are follows: (1) Senior managers, middle managers, and employees of the organization are proud of its history regarding environmental management and protection. (2) Top managers, middle managers, and employees of the organization are proud of its environmental objectives and missions. (3) Senior managers, middle managers, and employees think that the organization has maintained a significant position for environmental management and protection. (4) Senior managers, middle managers, and employees of the organization think that the organization has formulated well-defined environmental objectives and missions. (5) Senior managers, middle managers, and employees of the organization are knowledgeable about its environmental tradition and culture. and (6) Senior managers, middle managers, and employees of the organization identify that it provides considerable attention to environmental management and protection. Cronbach's alpha for this scale was 0.875.

3.2.4. VGB

VGB was measured based on a revised version of the scale developed by Bissing-Olson et al. (2013) [8]. The revised scale included three items. The items were as follows: (1) I took a chance to get actively involved in environmental protection at work. (2) I took initiative to act in environmentally friendly ways at work. (3) I did more for the environment at work than I was expected to. Cronbach's alpha for this scale was 0.840.

3.2.5. TGB

TGB was measured based on a revised version of the scale developed by Bissing-Olson et al. (2013) [8]. The revised scale included three items. The items were as follows: (1) I adequately completed assigned duties in environmentally friendly ways. (2) I fulfilled responsibilities specified in my job description in environmentally friendly ways. (3) I performed tasks that are expected of me in environmentally friendly ways. Cronbach's alpha for this scale was 0.890.

3.2.6. Control Variables

According to existing research, this study selected gender, age, education, job nature, and industry as the control variables. Generally, gender and age were the common control variables because these variables are regarded as the basic factors in predicting employee behavior in organizational behavior research. Education will affect employees'

environmental attitude. Post and industry also have their potential effects on EGB. Thus, this study controlled for employee gender (1 = male, 2 = female), age (1 = under 25 years, 2 = 26–30 years, 3 = 31–40 years, 4 = 41–50 years; 5 = over 51 years), education (1 = senior high school or below, 2 = junior college, 3 = bachelor, 4 = postgraduate), post (1 = productive post, 2 = technical post, 3 = management post), and industry, which mainly included 18 manufacturing industries.

3.3. Data Analysis

The statistical software SPSS 23.0 and Mplus 7.4 were used to analyze data. First, SPSS 23.0 was used to test the reliability of the five key variables involved in this study. Second, Mplus 7.4 was used for confirmatory factor analyses, which can test the discriminant validity and the common method variance. Third, SPSS 23.0 was used for descriptive statistics and correlation analysis. Finally, we used regression analysis and bias-corrected bootstrapping analysis to test the hypotheses.

4. Results

4.1. Reliability and Validity Test

In terms of a reliability test, SPSS 23.0 was mainly used to calculate Cronbach's α coefficient, and the results are shown in Table 1. As can be seen from Table 1, the Cronbach's α coefficients of all variables were greater than 0.7, and the combined reliability (CR) was greater than 0.7, indicating that the questionnaire had good reliability.

Table 1. Reliability and validity tests of variables.

Constructs	Load Factor	Cronbach's α	CR	AVE
GHRM	0.769~0.864	0.940	0.922	0.664
EB	0.436~0.832	0.904	0.894	0.593
GOI	0.670~0.809	0.875	0.879	0.549
VGB	0.753~0.840	0.840	0.840	0.638
TGB	0.760~0.809	0.890	0.835	0.627

Note: CR = combination reliability; AVE = average variance extracted.

In terms of the validity test, firstly, it can be seen from Table 1 that the factor loading values of all variables were greater than 0.6, and the average variance extracted (AVE) values of all variables were greater than 0.5, indicating that the questionnaire had a good aggregation validity. Second, as shown in Table 2, the numbers in the cells of the diagonal line are the square root of AVE. The results show that the square root value of AVE for each latent variable is greater than the correlation of all the remaining constructs in the row and column in which it is located. Therefore, the structure has an appropriate discriminant validity. Finally, Mplus 7.4 was used to carry out confirmatory factor analysis (CFA). Compared with other competition models, the theoretical five-factor model (GHRM, EB, GOI, VGB, and TGB) had a better fit to the data ($\chi^2/df = 1.872$, root mean square error of approximation (RMSEA) = 0.062, comparative fit index (CFI) = 0.945, tucker-lewis index (TLI) = 0.937) (see Table 3). The results of CFA showed that the theoretical five-factor model had satisfactory discriminant validity.

Table 2. Descriptive statistics and correlation coefficients of variables.

	M	SD	1	2	3	4	5	6	7	8	9	10
1.Gender	1.483	0.501	-									
2.Age	2.632	1.182	0.034	-								
3.Education	2.540	0.972	-0.039	-0.394 **	-							
4.Post	1.939	0.843	-0.013	-0.018	0.057	-						
5.Industry	3.882	3.147	0.09	-0.160 *	0.092	-0.034	-					
6.GHRM	3.659	0.760	0.054	0.022	-0.062	-0.194 **	-0.013	(0.815)				
7.EB	3.977	0.653	0.059	-0.012	0.013	0.008	-0.077	0.243 **	(0.77)			
8.GOI	3.608	0.650	-0.045	0.007	-0.078	0.07	-0.042	0.617 **	0.230 **	(0.74)		
9.VGB	3.773	0.653	0.017	-0.013	-0.086	-0.061	0.084	0.329 **	0.515 **	0.353 **	(0.799)	
10.TGB	3.636	0.840	0.035	-0.062	-0.111	-0.048	0.042	0.528 **	0.117	0.657 **	0.260 **	(0.792)

Note: N = 288; M = mean; SD = standard deviation; ** $p < 0.05$; * $p < 0.1$. Values in parentheses are square roots of AVE.

Table 3. Confirmatory factor analysis results.

Model	Factor	χ^2	df	χ^2/df	RMSEA	CFI	TLI
Five-factor model	GHRM, EB, GOI, VGB, TGB	452.945	242	1.872	0.062	0.945	0.937
Four-factor model	GHRM, EB, GOI, VGB + TGB	757.006	276	2.743	0.095	0.866	0.85
Three-factor model	GHRM, EB + GOI, VGB + TGB	1644.691	249	6.605	0.157	0.634	0.595
Two-factor model	GHRM + VGB + TGB, EB + GOI	1900.823	251	7.573	0.17	0.568	0.525
Single-factor model	GHRM + EB + GOI + VGB + TGB	1998.600	252	7.931	0.174	0.543	0.499

Note: RMSEA = root mean square error of approximation; CFI = comparative fit index; TLI = tucker-lewis index.

4.2. Common Method Deviation Test

Although the anonymous measurement method was used to reduce common method variance in the data collection process, common method variance may occur. The reason was that all variables were measured by individual self-evaluation and that the same survey object provided all items in each questionnaire. Thus, the Harman single-factor test was used to judge the existence of common method variance. One factor solution in exploratory factor analysis indicated that it explained only 38.7% (<50%) of the loading, which proved the absence of common method variance [34].

4.3. Descriptive Statistics and Correlation Analysis

The mean, standard deviation, and correlation coefficient of the main variables in this study are shown in Table 2. It can be seen from Table 2 that GHRM has a significant positive correlation with VGB ($r = 0.329$, $p < 0.01$); GHRM has a significant positive correlation with TGB ($r = 0.528$, $p < 0.01$); GHRM and EB are significantly positively correlated ($r = 0.243$, $p < 0.01$); EB and VGB are significantly positively correlated ($r = 0.515$, $p < 0.01$); GHRM and GOI are significantly positive correlated ($r = 0.617$, $p < 0.01$); and GOI is significantly positively correlated with TGB ($r = 0.657$, $p < 0.01$). The above results are, therefore, consistent with the research hypothesis, which, thereby, initially verifies the research hypothesis.

4.4. Hypothesis Testing

We used the SPSS PROCESS tool to test the direct effect and the mediating effect of GHRM on VGB via EB and the mediating effect of GHRM on TGB via GOI. The results are presented in Table 4. Moreover, the bootstrap method based on deviation correction was also used to test the mediation effects. The sample size was set to 5000, and a 95% confidence interval was obtained. Tables 5 and 6 show the results of the bootstrap method.

Table 4. Regression analysis results.

Variable	VGB	EB	VGB	TGB	GOI	TGB
Gender	−0.015	0.072	−0.050	0.003	−0.101	0.076
Age	−0.023	−0.012	−0.017	−0.083	−0.016	−0.072
Education	−0.062	0.018	−0.070	−0.114 *	−0.041	−0.084
Post	0.008	0.041	−0.012	0.062	0.153 ***	−0.04
Industry	0.019	−0.017	0.027 *	0.012	−0.004	0.015
GHRM	0.281 ***	0.216 ***	0.178 ***	0.591 ***	0.561 ***	0.191 **
EB			0.478 ***			
GOI						0.713 ***
R	0.351	0.268	0.579	0.550	0.654	0.690
R ²	0.123	0.072	0.335	0.303	0.428	0.477
F	5.176	2.852	15.847	15.992	27.559	28.613

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$; $N = 228$.

Table 5. Bootstrap: The mediating effect of EB.

	Boot Effect	Boot S.E.	Percentile 95% CI		Effect Proportion
			Lower	Upper	
Indirect Effect	0.103	0.048	0.021	0.207	36.65%
Direct Effect	0.178	0.061	0.056	0.297	63.35%
Total Effect	0.2821	0.067	0.153	0.415	

Table 6. Bootstrap: The mediating effect of GOI.

	Boot Effect	Boot S.E.	Percentile 95% CI		Effect Proportion
			Lower	Upper	
Indirect Effect	0.400	0.062	0.290	0.531	67.68%
Direct Effect	0.191	0.074	0.037	0.328	32.32%
Total Effect	0.591	0.056	0.482	0.697	

4.4.1. Direct Effect Tests

H1 argues that GHRM positively affect VGB. As shown in Table 4, the total effect coefficient of GHRM on VGB was significant ($\beta = 0.281$, $p < 0.001$). Furthermore, the 5000 bootstrap sampling revealed that the distribution of the product of coefficients' 95% CI was [0.153, 0.415], not containing zero. This suggests that GHRM positively affects VGB. Therefore, H1 is supported.

H2 argues that GHRM positively affect TGB. As shown in Table 4, the total effect coefficient of GHRM on TGB was significant ($\beta = 0.591$, $p < 0.001$). Furthermore, the 5000 bootstrap sampling revealed that the distribution of the product of coefficients' 95% CI was [0.482, 0.697], not containing zero. This suggests that GHRM positively affects TGB. Therefore, H2 is supported. Furthermore, the total effect coefficient of GHRM on VGB ($\beta = 0.281$, $p < 0.001$) was less than that of GHRM on TGB ($\beta = 0.591$, $p < 0.001$). That is to say, the direct effect of GHRM on VGB is less than the direct effect of GHRM on TGB.

4.4.2. Mediating Effect Tests

H3 predicts that GHRM is positively related to EB, H4 predicts that EB is positively related to VGB, and H5 argues that EB mediates the positive relation between GHRM and VGB. As presented in Table 4, GHRM was significantly related to EB ($\beta = 0.216$, $p < 0.001$), and EB was significantly related to VGB ($\beta = 0.478$, $p < 0.001$). Therefore, H3 and H4 are supported. Furthermore, in Table 5, after controlling EB, the indirect effect was significant ($\beta = 0.103$, $p < 0.001$), and the 5000 bootstrap sampling revealed that the distribution of the product of coefficients' 95% CI was [0.021, 0.207] (excluding zero). H5 consequently receives support. EB is proved to play a mediating role between GHRM and VGB. Furthermore, in

Table 5, the direct effect of GHRM on VGB accounted for 63.35% of the total effect, and the indirect effect of GHRM on VGB via EB accounted for 36.65% of the total effect.

H6 predicts that GHRM is positively related to GOI, H7 predicts that GOI is positively related to TGB, and H8 argues that GOI mediates the positive relation between GHRM and TGB. As presented in Table 4, GHRM was significantly related to GOI ($\beta = 0.561, p < 0.001$), and GOI was significantly related to TGB ($\beta = 0.713, p < 0.001$). Therefore, H6 and H7 are supported. Furthermore, in Table 6, after controlling GOI, the indirect effect was significant ($\beta = 0.400, p < 0.001$), and the 5000 bootstrap sampling revealed that the distribution of the product of coefficients' 95% CI was [0.290, 0.531] (excluding zero). GOI was suggested to play a mediating role between GHRM and TGB, H8 consequently receives support. Furthermore, in Table 6, the direct effect of GHRM on TGB accounted for 32.32% of the total effect, and the indirect effect of GHRM on TGB via GOI accounted for 67.68% of the total effect.

5. Conclusions and Implications

5.1. Research Conclusions

In recent years, the academia pay more and more attention to the role of human resource management in environmental management. GHRM, which refers to the alignment of HRM practices such as recruitment, training, and performance appraisal with the enterprise's environmental goals, was put forwarded, and GHRM is suggested to facilitate environmental management by stimulating employees' workplace green behavior [10,12,14]. However, studies on the relationship between GHRM and EGB are limited. Furthermore, previous studies have not distinguished the impact mechanism of GHRM on employee VGB and TGB. To achieve this research objective, based on social identity theory and self-determination theory, this study constructed a dual-mediation model, which used EB as a mediating variable to explore the mechanism of GHRM's impact on employee VGB and used GOI as a mediating variable to explore the effect mechanism of GHRM on employee TGB.

The results firstly show that GHRM positively affects VGB and TGB. This finding agrees with those of Jiang et al. [13] and Domont et al. [10], showing the direct relation of GHRM and employee green behavior. Furthermore, the results revealed that GHRM has more substantial effects on TGB than on VGB. The reason may be that TGB is restricted by organizational performance appraisal and salary management, which are closely related to employees' income and career development. By contrast, VGB is an environment-friendly behavior that moves beyond the realm of their required work tasks, and this behavior will not get rewards according to performance appraisal; thus, GHRM-related practices may have had less direct impact on VGB than on TGB.

Second, GHRM indirectly and positively affects VGB in part through the mediating effect of EB. In other words, through green recruitment, green training, and green performance appraisal in human resource management practices, enterprises convey to employees the values and corporate culture that enterprises attach importance to environmental protection, influencing employees' attitudes toward environmental issues and building their EB. Through the influence of these factors, employees can actively display VGB consistent with this belief. Furthermore, this study also found that the indirect effect of GHRM on VGB via EB only accounted for 36.65% of the total effect. Given that the belief is stable and difficult to change, EB formation takes a long time.

Third, GHRM indirectly and positively affects TGB in part through the mediating effect of GOI. GHRM transmits the organization's green values and environmental goals to the organization's members through various practices. In this process, employees' recognition of the enterprise's environmental goals is improved, and they then hope to win more environmental benefits for the organization by performing their tasks in a more environmentally friendly way. Furthermore, this study also found that the indirect effect of GHRM on TGB via GOI accounted for 67.68% of the total effect.

5.2. Theoretical Contributions

This study contributes to the literature from several aspects. First, based on the literature analysis of green human resource management and employees' green behavior, this study confirms that GHRM can positively predict VGB and TGB through the combination of theoretical model construction and empirical research. As GHRM is an emerging concept, its actualization in the literature is minimal, and there are few empirical studies that have explored the relationship between GHRM and EGB. This research adds to the GHRM literature in relation to employee workplace consequences of GHRM, as well as the motivational and cognitive processes through which it exerts influences on VGB and TGB.

Second, an interesting finding of this study is that both VGB and TGB are related to GHRM practices, but they are realized through different processes. The explanation for this result as follows: VGB is a voluntary behavior, which is mainly influenced by intrinsic motivation. According to the self-determination theory, GHRM stimulates employees' intrinsic motivation of environmental protection by influencing EB, and then promotes their VGB. However, TGB is directly related to green training, green evaluation, and reward. Based on the theory of social identity, the GHRM practice of the organization makes employees form a consensus that the organization attaches importance to environmental protection. Therefore, employees show TGB that is beneficial to the organization. Existing studies have not distinguished the impact mechanism of GHRM on employee VGB and TGB. This study of GHRM on VGB and TGB is from two different perspectives, which enriches the research on EGB and expands the research in the field of green management.

5.3. Management Implications

In order to implement the basic state policy of "resource conservation and environmental protection" and realize sustainable development, enterprises must actively assume social responsibility and implement environmental management. In the aspect of enterprise environmental management, the human resource management department plays the most critical role. In order to integrate sustainable development, environmental management, and human resource management, the trend of enterprises developing GHRM is irreversible. The results show that GHRM can significantly affect EGB at work and organizations can effectively improve employees' environmental behaviors by transmitting the organization's green values through human resource management. Furthermore, GHRM has different impacts on employee VGB and TGB. Therefore, when enterprises practice GHRM, they should pay attention to improving employees' EB and GOI, thereby promoting employee VGB and TGB at the same time.

First, employees' green tendency should be given attention in recruitment and selection, which is helpful to improve the possibility of employees engaging in green behaviors, ensuring that companies recruit employees with a positive green attitude, emphasizing information about the green agenda in recruitment campaigns and striving to recruit employees with high EB. In the selection process, we should pay attention to the employees who can accept the green values of the enterprise, so as to ensure that they are more likely to have GOI after starting their work.

Second, comprehensive green training should be provided for employees to improve their environmental awareness and practical operation ability. To be specific, enterprises should guide employees to think and handle their work in a more environmentally friendly way while cultivating their professional skills and knowledge. The organization's green values are conveyed to inform employees about the enterprise's environmental culture and understand its environmental protection strategy, enhancing their green behaviors.

Thirdly, through performance evaluation, salary management, and employee authorization, employees' environmental awareness should be strengthened and they should be stimulated to actively display green behaviors in their work. Organizations should take appropriate measures to evaluate EGB and link them with performance and salary, so as to motivate employees to participate in more green activities. By increasing employee empowerment, employees can realize the impact of the enterprise on the ecological environment,

which is conducive to improving employees' initiative to think about environmental issues and their belief in environmental protection, so that they will put forward more reasonable suggestions for environmental management.

5.4. Research Limitations and Future Prospects

First, more industries can be covered in future research. Due to the driving factors such as strategy and performance as well as the relationship between corporate culture and stakeholders, different companies choose different ways for employees to participate in the sustainable development of the environment [35]. There may be great differences in GHRM practices among different industries. Future studies can be carried out in other industries and compared with this study. Furthermore, perceptions of HRM practices tend to be different between different organizations; consequently, employee outcomes of GHRM practices are subject to organizational contextual effects [36]. There may be significant differences in GHRM practices among different enterprises. For the limited number of units in the sample, the multilevel method cannot be used in this study. We suggest that future research should consider a multilevel approach to explore the impact of GHRM on employee outcomes.

Second, in the selection of variables, the moderator variable should be appropriately increased. This study explored the mechanism of GHRM on VGB and GHRM on TGB, respectively, but lacked the analysis of boundary conditions. The research was conducted in China's context, where the government's environmental rules and regulations and consumers' environmental demands have an important impact on corporate environmental social responsibility and employees' environmental awareness. In the future, environmental regulations and environmental demands of stakeholders can be added as moderating variables to study the mechanism of GHRM on EGB in different situations and clarify the boundary conditions of GHRM on EGB.

Finally, as GHRM covers different management practices, it can be learned from theoretical analysis that different HRM practices focus on different directions and have different impacts on employees. In future studies, we can separately study the impact of green recruitment, green training, and green employee performance evaluation on EGB.

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