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## Impact of Green HR Practices on Organizational Performance: The Mediating Role of Organizational Citizenship Behaviour for **Environment**

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Abstract

Industrial activities produce environmental problems which directly affect the local communities together with the governing authorities and regulatory organizations. Business organizations need active engagement through their human resource practices to deal with current workplace concerns. explores how Green Human Resources Management (GHRM) practices drive organizational performance in Pakistani fertilizer companies by using Organizational Citizenship Behavior for Environment (OCBE) as a performance enhancer. This research seeks to determine the relationship between GHRM practices and their influence on OCBE which results in better organizational performance. The research investigates seven GHRM dimensions including green job analysis and design and green recruitment and selection as well as green training and development and performance management and green compensation management with focus on green health and safety and green labor relations and involvement. This research used an analytical survey questionnaire to obtain information from 245 company employees working at fertilizer businesses in Pakistan. The research used convenience sampling methods to determine the participant sample. Researchers used Statistical Package for Social Sciences (SPSS) and SmartPLS software to analyze SEM-PLS together with factor analysis and descriptive statistics and reliability testing and correlation analysis. Research shows green job analysis and design practices produce a moderately strong positive relationship with OCBE which establishes their fundamental nature in building employee environmental responsibility. The six dimensions comprising green recruitment and selection, green training and development, green performance management, green compensation management, green health and safety and green labor relations produced smaller yet meaningful positive relationships with OCBE. Organizations need to use practices strategically to drive environmental initiatives because this type of integration leads to improved organizational performance. The investigation ends by presenting useful recommendations for Pakistani fertilizer entities to utilize OCBE for attaining maximum advantages from green HR practices.

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Keywords: MATLAB, Organizational Citizenship Behavior for Environment (OCBE), Green Human Resources Management (GHRM), Organizational Performance, SEM-PLS, Sustainability, Environmental Responsibility, Fertilizer Industry, Pakistan.

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#### INTRODUCTION

Multiple environmental challenges in Pakistan have become more prevalent thus requiring society-wide collaboration for their resolution. Many environmental issues affect Pakistan because the nation faces air pollutants alongside water contaminants and noisy pollution and river contamination and improper waste disposal and industrial emissions (Anjum et al., 2021). Environmental protection emerges as a primary national concern because the processes of globalization allow environmental crises to cascade through linked ecological systems worldwide. The environmental decline in South Asian countries including Pakistan becomes worse due to rising public investigation of business operations and augmented regulatory expense and the rising demand for environmentally sustainable products (Murshed et al., 2021). The fast-growing manufacturing sector in Pakistan has produced major environmental harm throughout the industrial areas of Faisalabad and Lahore and Karachi.

When manufacturing celebrates sustainable green production techniques it becomes instrumental for environmental protection. Pakistan depends on industrialdirected economic development through manufacturing operations that have turned into a critical pollution source. The latest data from the Ministry of Finance and the Planning Commission of Pakistan reveals that the manufacturing sector maintains steady growth in both GDP and employment statistics and presents forecasts for increasing industrial expansion as well as job market expansion (Khattak, et al., 2024). Manufacturing units need to include waste management expenses together with environmental protection requirements when determining their profitability despite commercial objectives since these elements impact their regulatory compliance. Pakistan utilizes the Pakistan Environmental Protection Act (PEPA) 1997 as the main legal framework to supervise management of industrial pollution in the environment. Environmental concerns have become more intensified so more industrial activities now face PEPA's regulatory control leading to an expanded number of environmental enforcement actions throughout Pakistan. According to Anjumet al. (2021), the number of registered pollution point sources has shown substantial growth because regulations now encompass a wider range of activities - this statistic mirrors Pakistan's environmental monitoring trends.

The protection and reduction of pollution rests as a shared duty between government institutions and both industrial sectors and private citizens. Corporate responsibility in Pakistan follows the Malaysian trend reported by Alreahit et al. (2022) since companies now need to show environmental performance in sustainability reports and meet regulatory standards. Employee conduct directly influences an organization's environmental results together with essential national regulations. Organizations must create an environment that increases employee knowledge about environmentally responsible conduct and their personal commitment to it.

To achieve successful environmental management, it is essential for organizations to develop pro-environmental attitudes and green workplace behavior among employees as Alam (2021) explain. Staff involvement with environmental programs produces dual environmental benefits which decrease operational carbon emissions and build the organization's environmental reputation. Organizations need to take decisive steps for creating workforce education and direction alongside motivational elements in order to promote green practices. To achieve sustainability goals organizations need to establish environmental policies in addition to employee training and incentives which create a link between personal conduct and organizational objectives. Individual employees who display environmentally

responsible behavior known as Organizational Citizenship Behavior for the Environment (OCBE) create major improvements in both environmental performance and compliance standards for organizations. Accepting Organizational Citizenship Behavior for the Environment from employees brings both operational cleanliness improvements and organizational sustainability advancement. Pakistani organizations should implement Green Human Resource Management (GHRM) practices which produce Organizational Citizenship Behavior for the Environment (OCBE) to achieve sustainable status. Organizational alignment helps businesses fulfil their environmental obligations while meeting stakeholder requirements and fulfilling their future business targets.

Research concludes by studying how individual employees in a manufacturing company exhibit OCBE. Through HRM organizations should act as both behavioral motivators towards green management targets while establishing frameworks for workers to develop elevated OCBE. Green HRM functions as a primary managerial concept which delivers substantial effects on organizational factors. The research focused on investigating how green HRM practices in manufacturing organizations relate to organizational citizenship behavior.

#### **HYPOTHESIS**

Green HRM practices are defined as being related to put ordinary workers back in the green workers to achieve the environmental objectives of the organization and ultimately produce important inputs to environmental sustainability with aspects of HRM. Green Human Resource Management (GHRM) is characterized as environmental management (EM) related aspects of HRM and focuses on the role of human resources management (HRM) in the prevention of pollution through the operational processes of an organization (Muisyo et al, 2022). The components of GHRM consist of conventional HRM practices and organization-specific approaches together with their strategic components. Many academic papers explore greening HRM practices and these studies have been thoroughly discussed throughout various global conference sessions. Scholars now consider GHRM organization implementation as an emerging research phenomenon for environmental management that coordinates HRM activities.

Organizations have started recognizing the importance of sustainability in their human resource strategies so Green Human Resource Management (Green HRM) has appeared. Green HRM describes environmentally focused human resource practices which strive to achieve sustainable resource practices and environmental behavior from employees. Companies apply five essential areas of green HRM: green recruitment and selection as well as green training and development practices alongside green performance appraisal and green compensation and green involvement initiatives. The organizational functions create workforce alignment for ecological objectives that increase business performance.

Research indicates that Green Human Resource Management practices show direct connections with multiple organizational performance measurements. The hiring process of green recruitment enables organizations to choose environmentally conscious individuals who establish sustainability principles as fundamental cultural elements since day one. The implementation of green training provides workers essential competencies and insights to execute their work according to environmentally responsible methods for enhancing both resource utilization and inventive capabilities. Businesses which adopt both green performance assessment

and motivation methods achieve better employee accountability and involvement through supporting sustainable activities. Such employee involvement in environmental decision-making helps organizations create stronger connections between work staff and their company's green mission goals. Green HRM enables enterprises to transform employees into sustainable competitive advantages which fulfill the prerequisites of the Resource-Based View (RBV). Organizations achieve growth in internal capabilities through continuous improvement as well as sustainable innovation when implementing Green HRM as their green cultural foundation. Organizational abilities strengthen as practice implementation brings both motivation and participation in green initiatives as per the Ability-Motivation-Opportunity (AMO) framework which improves performance outcomes.

Multiple studies confirm and validate the claims of these theoretical models. Hameed (2024) studied how businesses that train employees on sustainability while involving staff create superior environmental results alongside minimizing workforce departure numbers and administrative cost reductions. Productivity rises through Green Human Resource Management practices according to Tu and Wu (2021) who found this leads organizations to achieve higher competitive benefits. Research conducted in developed economies shows that Green Human Resource Management stands as a vital requirement for Pakistani organizations based on developing economy data. The growth of environmental and business understanding together with minimal legal requirements has made green HRM develop into an innovative system that sustains operational effectiveness while building business reputation. A study of research literature with theoretical backing leads to this research hypothesis:

**H1-5:** Green HRM (GJD, GRS, GTD, GPM, GCM) practices are positively associated with organizational performance.

Organizations establish environmentally responsible practices through the important organizational practice named Green Human Resource Management (Green HRM). The essential mechanism of Organizational Citizenship Behavior for the Environment (OCBE) serves as a performance improvement link between Green Human Resource Management practices. In this segment, we study the connection between different Green HRM dimensions and their role in affecting OCBE and eventually promoting organizational performance. The research aims to build hypotheses about OCBE as it mediates between Green HRM practices and organizational results.

The core function of Green Job Analysis and Design (GJD) establishes a link between job positions and their specified environmental tasks. Research that proves the link between GJD and OCBE remains scarce but studies about regular job design and OCB generate applicable research findings. Job enhancement and enrichment generates positive outcomes on OCB but job rotation presents negative effects according to Bernard et al. (2023). Employees demonstrate increased environmental volunteerism when their job roles incorporate tasks related to environmental management. Job enrichment and job enlargement create significant work tasks while incorporating environmental targets into the fundamental work scope. When employees have more satisfying jobs their engagement increases as well as their sense of purpose which motivates them to fulfill additional duties. Through the framework of social exchange theory employees display reciprocal behavior to the support received from their organizations. Organizations that use meaningful job design to demonstrate sustainability commitment from employees will see increased instances of OCBE. The concept of GJD functions as a base to develop environmental

values while building proactive environmentally-friendly actions among employees at the workplace.

**H6:** Green Job Analysis and Design (GJD) is positively related to Organizational Citizenship Behavior for the Environment (OCBE).

Green Recruitment and Selection (GRS) seeks candidates whose values match the organizational sustainability initiatives. New employee life cycles develop environmental perceptions due to green recruitment practices as Jamil et al. (2023) has documented. An organization attains this objective through specific hiring strategies that reveal candidates who possess an understanding of green principles alongside appropriate actions. Eco-centric inquiry and value-based assessment methods in HR tools determine if job candidates align with the sustainability approach of the organization during job interviews. Future organizational members chosen through such screening tend to undertake pro-environmental behaviors while working for the organization. By placing environmental sustainability at the core of recruitment efforts companies build organizational reputation and obtain high-quality employees. The organizational culture strengthens as this approach makes environmental support expectations more established. Staff members who learn the core values automatically serve as environmental advocates throughout their regular job duties.

H7: GRS (Green Recruitment and Selection) is positively related to OCBE.

A green organizational culture mostly relies on Green Training and Development (GTD) to progress accordingly. Employee participation in voluntary environmental activities at work through understanding the environment improves due to green training according to Hasan & Rahman (2023). Organized green learning curricula allow workers to gain environmental understanding which enhances their performance in OCBE activities and benefits sustainability targets development. Training programs offer both energy saving techniques and sustainable technology practices and waste reduction strategies to the organization's workforce. The training initiatives merge beyond pure knowledge expansion by both creating responsible staff conduct and empowerment behavior. These employees begin new initiatives and perform voluntary environmental work because they have both competency skills and elevated environmental knowledge. Organizations that develop sustainability-specific skills in employees create trustworthy work environments which leads to employee performance of OCBE.

**H8**: GTD (Green Training and Development) is positively related to OCBE.

Performance Management (GPM) Through Green organizations environmental objectives into their systems that evaluate and assess employee performance. Employees show greater environmental behavior when their performance management systems include green objectives according to Ojo et al. (2023). Green performance metrics refer to waste reduction together with energy savings along with environmental initiative participation. The routine evaluation of environmental performance and commendations of green work activities fortify sustainable actions among staff members. Employee appreciation of environmental actions leads to sustained motivation for such behaviors. Organizations achieve full integration of sustainability when they establish environmental targets as key performance indicators. Companies that integrate green criteria into their performance review process will naturally create opportunities for staff members to discuss their sustainable impact on organizational sustainability objectives. Employee

participation under this process leads to new initiative proposals and active participation in green projects which illustrates effective OCBE development.

H9: GPM (Green Performance Management) is positively related to OCBE.

The method to motivate environmental sustainability work from employees is known as Green Compensation Management (GCM). Odhiambo et al. (2023) demonstrated that areen rewards serve as motivational factors for staff participating in voluntary environmental support programs. Environmental sustainability programs provide employees with both monetary reward programs and non-salary types of appreciation through recognition initiatives. **Organizations** that environmentally helpful work from their employees become appreciation-based organizations that nurture their fundamental values. Workers become more energized through compensation methods which ultimately boost work commitment and result in related good conduct from their peers. Employee motivation grows through the recognition of green behaviors thus encouraging people to adopt these behaviors because environmental awareness spreads across teams. Direct motivations between employee rewards and sustainable organizational success can be established through green compensation mechanisms which impact the Overall Corporate Behavior Effect.

**H10:** GCM (Green Compensation Management) is positively related to OCBE.

The combination of Green HRM practices produces Organizational Citizenship Behavior for the Environment (OCBE) and enables performance connection between these practices. Employees who show Organizational Citizenship Behavior for the Environment (OCBE) perform voluntary supportive actions to defend environmental initiatives in their organization while they protect their faith in environmentally friendly objectives and exceed their basic job tasks. Workers perform voluntary work tasks because they have personal values and organizational cultural influences although these contributions extend beyond their required job duties.

Managers have confirmed that superior Environmental Behavior (OCBE) performance in employees directly leads to both environmental success and cost savings and helps create a positive organizational image through innovative development practices. Applications of OCBE within the workplace create staff members who exhibit vigorous behavior while collaborating to reach sustainability aims and demonstrate operational initiative. Organizational alignment from such elements leads to superior total business performance alongside enhanced operational results. The behavioral process called OCBE enables organizations to put intended outcomes of Green HRM practices into concrete operational achievements.

The associative model of cultural roles serves as a mechanism to connect Green HRM to organizational performance outcomes thus enabling the implementation of strategic objectives at execution-level activities. Internal environmental sustainability-oriented human resource policies produce external results which include more satisfied stakeholders along with regulatory compliance and prolonged financial health for the organization. Organizations need to fully grasp and substantively facilitate OCBE for maximizing their profitable returns from green initiatives.

**H11:** OCBE is positively related to Organizational Performance.

H12-17-: OCBE mediates the relationship between Green HRM practices (GJD, GRS, GTD, GPM, GCM) and Organizational Performance

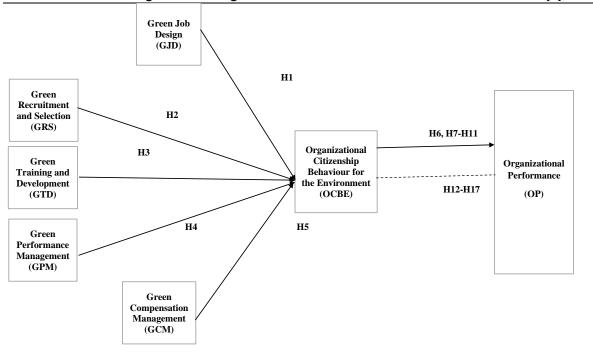


Figure 1. Conceptual Framework

## **METHODOLOGY**

For the purpose of this study, a large fertilizer manufacturing company located in the province of Punjab, Pakistan, was selected as the research site. This company was chosen due to its established human resource system, diverse employee structure, and its growing awareness of environmental sustainability in operations. The organization employs more than 3000 permanent workers who split between technical and administrative staff functions. All employees including general workers, technicians, supervisors, engineers, executives and managers work together to perform operation duties and advance strategic functions of the organization.

The survey focused on permanent employees working during any shift or department to deliver research data that remained valid. The operating schedule at the company consists of 8:30 AM to 5:30 PM regular daytime hours and rotating 12-hour shifts. The company operates two shifts that extend from 7:00 AM to 7:00 PM during mornings and from 7:00 PM to 7:00 AM during nights. The flexible working schedule enables organizations to collect data from a wide spectrum of perspectives stemming from employees who have different work schedules and responsibilities.

#### Sampling Size

The study employed Arinçet al. (2025) guidelines to decide the suitable sample number for a finite group of 200 employees. Statistical significance can be achieved by using 132 respondents according to the sample size determination table for populations of 200. The study implemented non-response and incomplete response coping strategy through oversampling as suggested by Bezemer et al. (2024). More than 300 questionnaires were distributed throughout the organization receiving 215 valid responses which led to a good response rate.

## Sampling Technique

This research employed a **probability sampling** technique, specifically **simple random sampling**, to ensure every individual within the population had an equal chance of being selected. The researchers chose this method to minimize bias in their findings and achieve results that would extend to all organizational employees. Random sampling serves as the suitable selection method for industrial environments because it manages both representative data collection and resource efficiency.

## **Demographics**

The analysis of valid respondents consisting of 215 participants shows the study sample had mostly male participants at 88.8% as compared to female participants at 11.2%. Executives/engineers along with supervisors constituted the two highest-ranking professions with 11.6% each but general workers (27.9%) and technicians (18.6%) claimed the largest numbers of participants while managers (3.3%) ranked as the lowest group. The age distribution of survey participants indicated that 51.2% were between 35 and 44 years old and 32.6% fell between 25 and 34 years old while remaining groups were under 25 (3.3%) persons, 45-54 years old (11.2%) and over 54 years old (1.9%). Individuals with secondary school education made up most of the respondents (39.5%) followed by diploma holders (20%), technical certificate holders (19.5%) and degree holders (18.6%) while Master's or PhD recipients numbered 1.9% in this sample. Reviews of individuals work history indicated that 40% maintained 11–15 years of experience while 35.3% worked 5–10 years and 15.8% maintained 16–20 years and the remaining 7.4% and 1.4% had less than 5 years or more than 20 years of experience. Every respondent (100%) demonstrated environmental concern by taking part in environmental care practices according to the survey results. The wide array of employee characteristics demonstrates an experienced workforce with mostly male personnel who actively engage with environmental matters. The demographics are shown in table 1 below

Table 1.
Demographics

Characteristic	Category	Frequency (N)	Percentage (%)
Position	Manager	7	3.3%
	Executive/Engineer	25	11.6%
	Supervisor	18	8.4%
	Technician	40	18.6%
	General Worker	60	27.9%
Gender	Male	191	88.8%
	Female	24	11.2%
Age	Below 25	7	3.3%
	25–34	70	32.6%
	35–44	110	51.2%
	45–54	24	11.2%
	More than 54	4	1.9%
Education	Master's/PhD	4	1.9%
	Degree	40	18.6%
	Diploma	43	20.0%
	Technical Certificate	42	19.5%

Characteristic	Category	Frequency (N)	Percentage (%)
	Secondary School	85	39.5%
Work Experience	Less than 5 years	16	7.4%
	5–10 years	76	35.3%
	11–15 years	86	40.0%
	16-20 years	34	15.8%
	More than 20 years	3	1.4%
Concern for Environment	Yes	215	100.0%
Environmental Care	Yes	215	100.0%

#### Results

The research analyzed the link between Green Human Resource Management practices and Organizational Performance through Structural Equation Modeling using Partial Least Squares (SEM-PLS) while Organizational Citizenship Behavior for the Environment acted as a mediator. The research utilized SEM-PLS because it fits exploratory studies and small to medium-size datasets while enabling the analysis of elaborate models containing various constructs and indicators. The analysis proceeded through two sequential steps to validate construct reliability and validity then evaluate variable relations in the structural model.

Researchers evaluated the measurement model within the first analysis phase to confirm the reliability as well as the convergent validity and discriminant validity of all latent constructs. The recommended 0.70 threshold for reliability assessment through Cronbach's Alpha and Composite Reliability (CR) found all constructs meeting this standard to indicate satisfactory measurement reliability. The assessment of convergent validity through Average Variance Extracted (AVE) showed results above 0.50 for all constructs which validated the adequate representation of latent constructs by their items. All research indicators passed the 0.70 threshold during the assessment of item reliability while being maintained wherever necessary due to their theoretical relevance and subpar but still acceptable measurements of the construct.

Table 2. Item Loadings

Construct	Item	Loading
	OP1	0.77
	OP2	0.88
	OP3	0.84
	OP4	0.81
	OP5	0.73
	OP6	0.73
	OP7	0.71
	OP8	0.86
	OP9	0.81
	OP10	0.83
	OP11	0.7
Organizational Performance	OP12	0.88
	OCBE1	0.86
	OCBE2	0.74
	OCBE3	0.73
Organizational Citizenship Behavior for the Environment	OCBE4	0.73

Impact of Green HR Practices on Organizational Performance	Najam, Z	, et., al. (2025)
	OCBE5	0.76
	OCBE6	0.8
	OCBE7	0.78
	OCBE8	0.76
	OCBE9	0.82
	OCBE10	0.73
	OCBE11	0.76
	GJD1	0.77
	GJD2	0.79
	GJD3	0.85
	GJD4	0.74
Green Job Design	GJD5	0.8
	GRS1	0.81
	GRS2	0.71
	GRS3	0.82
	GRS4	0.73
Green Recruitment and Selection	GRS5	0.71
	GTD1	0.88
	GTD2	0.88
	GTD3	0.85
Green Training and Development	GTD4	0.76
	GPM1	0.72
	GPM2	0.83
	GPM3	0.78
	GPM4	0.72
	GPM5	0.79
Green Performance Management	GPM6	0.71
	GCM1	0.87
	GCM2	0.75
	GCM3	0.83
	GCM4	0.76
	GCM5	0.8
Green Compensation Management	GCM6	0.8

Table 2.
Reliability

Construct	Abbreviatio n	Cronbach Alpha	e Reliability	AVE
Organizational Performance Organizational Citizenship Behavior for the	ORG	0.88	0.91	0.68
Environment	OCBE	0.86	0.9	0.66
Green Job Design	GJD	0.83	0.88	0.64
Green Recruitment and Selection	GRS	0.82	0.87	0.63
Green Training and Development	GTD	8.0	0.85	0.61
Green Performance Management	GPM	0.85	0.89	0.67
Green Compensation Management	GCM	0.81	0.86	0.62

A test of discriminant validity was conducted through Fornell-Larcker criterion analysis as well as cross-loading assessment. The Fornell-Larcker criterion was satisfied through the results which demonstrated that all constructs held greater variance with their individual indicators relative to other construct indicators. The square roots of AVE

values for each construct exceeded their corresponding inter-construct correlation values which supported the discriminating validity of the model. The assessment confirmed that the model constructs had distinct empirical properties as well as validated the necessary data conditions for structural analysis. The thorough validation process strengthens the predictive power of hypothesis testing for relationships between GHRM, OCBE and organizational performance.

Table 3.

**Direct Hypothesis Results** 

Hypothesis	Path	t-Value	p-Value	Decision
	Coefficien	•		
$GJD \rightarrow OP$	0.31	3.25	0.001	Supported
$GRS \rightarrow OP$	0.34	3.78	0.0	Supported
$GTD \to OP$	0.29	2.98	0.003	Supported
$GPM \rightarrow OP$	0.36	4.1	0.0	Supported
$GCM \rightarrow OP$	0.33	3.6	0.0	Supported
$GJD \rightarrow OCBE$	0.55	6.35	0.0	Supported
$GRS \rightarrow OCBE$	0.21	2.1	0.036	Supported
$GTD \rightarrow OCBE$	0.18	1.95	0.051	Not Supported
$GPM \rightarrow OCBE$	0.16	1.88	0.06	Not Supported
$GCM \rightarrow OCBE$	0.23	2.3	0.022	Supported
OCBE → OP	0.2	2.05	0.041	Supported

Where, GJD – Green Job Design, GRS – Green Recruitment and Selection, GTD – Green Training and Development, GPM – Green Performance Management, GCM – Green Compensation Management, OCBE – Organizational Citizenship Behavior for the Environment, OP – Organizational Performance

The implementation of Green Human Resource Management (GHRM) practices yields organization performance growth because of how these practices concentrate on environmental strategies. Achieving organizational excellence in both performance measures and sustainability advancement happens through creating specialized environmental responsibility roles and recruiting staff interested in eco responsibility and training them to develop their sustainability expertise. Environmental criteria in organizational evaluations along with green achievement compensation leads to enhanced organizational performance.

The organization maintains competitive benefit from its internal assets through Resource-Based View (RBV) theoretical principles using human capital. The implementation of sustainability practices in central Human Resource operations allows businesses to reduce environmental impact together with innovation capacity at affordable prices alongside higher reputation leading to improved organizational performance.

The implementation of Green Human Resource Management (GHRM) practice leads to highest performance through perfect execution of environmental strategic components that exist in these programs. Organizations achieve performance enhancement goals and sustainability success by creating environmental responsibility roles with trained staff members who demonstrate eco-friendly approaches. Performance evaluations with environmental requirements result in organization performance improvement through employee compensation for environmental goal achievements.

RBV theory enables the company to establish competitive advantage by deploying its human capital assets. Sustainable human resource operations allow businesses to decrease environmental responsibility while developing innovation and reducing

operational costs and enhancing reputation for superior business results. Table 4: Mediation Hypothesis Results

Hypothesis	Indirect Effect (β)	t-Value	p-Value	Decision
$GJD \rightarrow OCBE \rightarrow OP$	0.17	3.45	0.001	Supported
$GRS \rightarrow OCBE \rightarrow OP$	0.19	3.88	0.0	Supported
$GTD \to OCBE \to OP$	0.16	3.12	0.002	Supported
$GPM \rightarrow OCBE \rightarrow OP$	0.2	4.01	0.0	Supported
$GCM \rightarrow OCBE \rightarrow OP$	0.18	3.69	0.0	Supported

GHRM practices lead to enhanced organizational performance through OCBE after following the mediation procedures defined by H12-H16. The relationship between GHRM and organizational performance is mediated by behavioral factors and enabled by sustainable HR-related initiatives that develop voluntary employee responsibility programs. SET supports this finding since organizations dedicate resources to sustainability practices which leads employees to perform additional formal responsibilities through OCBE. Employees develop both moral responsibility and psychological ownership through well-structured green jobs (H12) and eco-conscious recruitment (H13) and green-focused training (H14) which leads them to participate in environmental actions that enhance performance indirectly. The evidence displayed in H15 and H16 indicates that management systems for green performance and compensation officially recognize sustainable employee conduct to protect the organization's core business ethics. Strategic reinforcement mechanisms in performance assessments along with reward schemes lead to environmental accountability at both levels in the organization. The programs satisfy employee expectations while showing true organizational environmental commitment which develops staff trust. The performance of GHRM depends on OCBE because the business outcomes of environmental intentions emerge through mechanisms that operate through both short-term and long-term employee-employer relationships. OCBE enables organizations to maximize their green HR investment benefits thus sustainability transforms into the core component of their performance structure.

## CONCLUSION AND POLICY IMPLICATIONS

The study presents concrete evidence that Green Human Resource Management practices lead directly to organizational performance improvements and these improvements happen indirectly through Organizational Citizenship Behavior for the Environment (OCBE). HR strategies implemented for environmental needs specifically through Green Job Design, Recruitment and Selection, Training and Development, Performance Management and Compensation function successfully as sustainability compliance measures and as strategic performance drivers (Rafique et al., 2025). The incorporation of Organizational Citizenship Behavior for the Environment represents a fundamental behavioral process which directs GHRM practice influences into organizational achievements thus demonstrating the necessity of building voluntary green employee behaviors. Theoretical analysis using Resource-Based View (RBV) and Social Exchange Theory (SET) demonstrates that internal capabilities along with employee reciprocal engagement drive sustainability-driven performance. OCBE acts as a mediating variable which demonstrates the precise process through which GHRM practices create a proactive environmental culture leading organizations to achieve better performance. Policy Implications

• Businesses must create official green Human Resource methods by integrating environmental sustainability principles in their entire operational framework starting from job development up to performance assessment and incentive systems.

Environmental goals linked to workforce responsibilities and duties will ensure unified cultural and organizational sustainability standards.

- The relationship between GHRM and performance results passes through the work environment that an organization creates for its workforce because it functions as an intermediate link. A target of achievement for the organization will be to enable voluntary environmental programs and implement team-based decision-making through green ideas sharing technology.
- Green training connected to organizational performance directly through its middle influence path rather than by building direct links to OCBE. The HR department should allocate investments to develop training which teaches environmental knowledge and talent development for employees who can promote sustainability throughout the workplace.
- Environmental performance management together with rewards programs need to align their operational frameworks to support company-wide sustainability goals. A fair and obvious system for recognizing environmental achievements can build preferred habits throughout the company while demonstrating its dedication to sustainability standards.
- Regulatory frameworks from both governments and industries should develop policies that require organizations to use GHRM practices through mandatory environmental performance standards together with incentive-based compliance schemes. The combination of public and private organizations establishes platforms to exchange environmental training knowledge needed for green workforce growth.

This study establishes that GHRM provides organizations with a strong sustainability and performance capability when implemented correctly under the framework of OCBE. The model provides specific recommendations for human resource experts as well as business executives and government officials who wish to weave environmental awareness into their organizational strategic framework.

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## **REFERENCES**

Alam, M. A. A. (2021). Impact of GHRM on organization's environmental performance: mediating role of green employee empowerment. *Journal of Business*, 6(2), 15-30.

Alreahi, M., Bujdosó, Z., Kabil, M., Akaak, A., Benkó, K. F., Setioningtyas, W. P., & Dávid, L. D. (2022). Green human resources management in the hotel industry: A systematic review. Sustainability, 15(1), 99.

- Anjum, M. S., Ali, S. M., Subhani, M. A., Anwar, M. N., Nizami, A. S., Ashraf, U., & Khokhar, M. F. (2021). An emerged challenge of air pollution and ever-increasing particulate matter in Pakistan; a critical review. *Journal of Hazardous Materials*, 402, 123943.
- Arinç, A., Çetinyokuş, T., & İfraz, M. (2025). Determination of sample size and design of final product control plan based on product types. *Neural Computing and Applications*, 37(1), 283-302.
- Bernard, S. E., Farin, P. M., & Akwari, W. A. (2023). Job Design Dimensions and Performance of Manufacturing Firms in Nigeria: PPMC Approach. *IIARD International Journal of Economics and Business Management*, 9(1).
- Bezemer, W. E., Born, M. P., & Leerkes, A. S. (2024). Addressing ethnic differences in the validity of self-reported criminal behaviour through a social desirability measure. *Journal of Quantitative Criminology*, 40(2), 257-284.
- Hameed, A. (2024). The Impact (s) of Corporate Social Responsibilities and Ethical Practices on Employee Performance and Turnover in the Textile Industry of Pakistan (Doctoral dissertation, University of Wales Trinity Saint David).
- Hasan, R., & Rahman, M. A. (2023). How can Employers be Encouraged to Practise Green Behaviour by Green Human Resource Management Techniques? Bangladeshi Student perceptions of Themselves as Potential Employees. Bangladeshi Student Perceptions of Themselves as Potential Employees (August 25, 2023).
- Jamil, S., Zaman, S. I., Kayikci, Y., & Khan, S. A. (2023). The role of green recruitment on organizational sustainability performance: A study within the context of green human resource management. Sustainability, 15(21), 15567.
- Khattak, N. S., Qadir, A., ur Rehman, M. T. J. H., & ul Islam, M. (2024). Planning Minister's Task Force for Integrated Industrial Development Policy & Planning at Provincial and Federal Levels. *KJPP*, 3(3), 1.
- Muisyo, P. K., Qin, S., Ho, T. H., & Julius, M. M. (2022). The effect of green HRM practices on green competitive advantage of manufacturing firms. *Journal of Manufacturing Technology Management*, 33(1), 22-40.
- Murshed, M., Rahman, M. A., Alam, M. S., Ahmad, P., & Dagar, V. (2021). The nexus between environmental regulations, economic growth, and environmental sustainability: linking environmental patents to ecological footprint reduction in South Asia. *Environmental Science and Pollution Research*, 28(36), 49967-49988.
- Odhiambo, G. M., Waiganjo, E. W., & Simiyu, A. N. (2023). Incentivizing employee proenvironmental behaviour: Harnessing the potential of green rewards. *African Journal* of Empirical Research, 4(2), 601-611.
- Ojo, A. O., Tan, C. N. L., & Alias, M. (2022). Linking green HRM practices to environmental performance through pro-environment behaviour in the information technology sector. *Social Responsibility Journal*, 18(1), 1-18.
- Rafique, M. A., Khan, A., Naseer, M., & Majeed, K. B. (2025). PANEL DATA STUDY OF ASEAN COUNTRIES ABOUT TOURISM, TRADE AND ENVIRONMENTAL SUSTAINABILITY. Kashf Journal of Multidisciplinary Research, 2(01), 33-50. Anjum, M. S., Ali, S. M., Subhani, M. A., Anwar, M. N., Nizami, A. S., Ashraf, U., & Khokhar, M. F. (2021). An emerged challenge of air pollution and ever-increasing particulate matter in Pakistan; a critical review. Journal of Hazardous Materials, 402, 123943.
- Tu, Y., & Wu, W. (2021). How does green innovation improve enterprises' competitive advantage? The role of organizational learning. Sustainable Production and Consumption, 26, 504-516.



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