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The Effects of Green Human Resource Management Practices on Sustainable Universities through Green Psychological Climate of Academic and Non-Academic Staff

Dr. Faraz Ahmed Wajidi
faraz.wajidi1978@gmail.com
Associate Professor, Department of Public Administration, University of Karachi

Dr. Durre Shahwar Khan
Dr.Durreshahwarkhan@outlook.com
Department of Public Administration, University of Karachi

Nasir Ali Khan
nasiralikhan04@gmail.com
PhD Scholar, Department of Public Administration, University of Karachi

Muhammad Irfan Syed
Misyed@hotmail.com
Department of Public Administration (DPA), University of Karachi

Corresponding Author: * Dr. Faraz Ahmed Wajidi faraz.wajidi1978@gmail.com

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ABSTRACT

This research paper investigates the role of Green Human Resource Management (GHRM) practices in promoting sustainable development within university settings. Specifically, it examines how the implementation of environmentally-focused HR policies and initiatives can influence the perceptions and attitudes of both academic and non-academic staff, through the mediating effect of the Green Psychological Climate (GPC) — a shared perception among employees that the organization values and supports environmentally responsible behaviors. The study aims to understand the pathways through which GHRM shapes the organizational climate and, subsequently, drives sustainable university performance across multiple dimensions such as resource efficiency, waste reduction, and eco-friendly campus initiatives. Using a quantitative research design, the study collected and analyzed data from a diverse sample of university employees representing various faculties and administrative departments. Survey instruments measured the extent of GHRM practices, the strength of the GPC, and indicators of sustainable outcomes within the institution. Statistical analysis, including mediation testing, was employed to assess the relationships among these variables. The findings reveal a significant positive correlation between the adoption of GHRM practices and the perception of a green psychological climate. Moreover, GPC was found to be a crucial mediator that enhances the impact of GHRM on the university's sustainability performance. The analysis also uncovered notable differences between academic and non-academic staff: academic personnel demonstrated a stronger alignment with and responsiveness to GHRM initiatives, suggesting that their engagement may be pivotal for advancing institutional sustainability goals. These insights point to the importance of developing tailored HR strategies that consider the unique motivational factors and work contexts of different employee groups. Overall, this study contributes to the growing body of knowledge on sustainable management in higher education by highlighting the interplay between HR policies, organizational climate, and environmental outcomes. It offers practical recommendations for university administrators and policymakers aiming to embed sustainability into the institutional culture by leveraging employee engagement and fostering a supportive green work environment.

Keywords: *Green Human Resource Management, Sustainable University, Green Psychological Climate, Academic Staff, Non-Academic Staff, Organizational Behavior, Environmental Sustainability*

INTRODUCTION

Background

In recent decades, sustainability has evolved from a peripheral consideration to a central component of organizational strategy, particularly in institutions that shape societal development, such as universities. With the increasing urgency to combat climate change, reduce resource consumption, and build environmentally conscious cultures, higher education institutions (HEIs) are under mounting pressure to model sustainability in their operations, curricula, and institutional cultures (UNESCO, 2017; Lozano, 2013).

While traditional sustainability efforts in universities have emphasized energy-efficient infrastructure or sustainable curriculum development, an equally crucial—yet often overlooked—dimension lies in the management of human resources. Employees are instrumental in translating environmental goals into actionable outcomes, making Human Resource Management (HRM) a powerful lever for organizational change. The emergence of Green Human Resource Management (GHRM) seeks to address this gap by embedding environmental principles into core HR functions such as recruitment, training, performance management, and employee engagement (Renwick et al., 2013).

However, implementing GHRM alone is insufficient if it does not resonate with employees. This leads to the relevance of the Green Psychological Climate (GPC), a concept referring to employees' shared perceptions of their organization's environmental priorities (Norton et al., 2014). A strong green climate within an institution can significantly influence pro-environmental behavior and commitment to sustainability goals.

Importance of Universities in the Sustainability Agenda

Universities occupy a strategic position in society, serving as knowledge hubs, cultural influencers, and innovation incubators. As such, they bear a responsibility not only to teach sustainability but also to practice it institutionally. The United Nations' Sustainable Development Goals (SDGs), particularly Goal 4 (Quality Education) and Goal 13 (Climate Action), call for educational institutions to lead by example in adopting and promoting sustainable practices.

Institutional sustainability in universities encompasses ecological responsibility (e.g., waste management, carbon footprint reduction), economic viability (e.g., sustainable procurement), and social inclusivity (e.g., stakeholder engagement). However, translating these pillars into daily practice depends heavily on how employees—both academic and administrative—engage with sustainability objectives.

Role of Staff in Achieving Sustainability

Staff involvement is crucial. Academic staff influence through their teaching, research, and professional modeling. Non-academic staff, meanwhile, operates the physical, administrative, and technical systems that support university functions. If sustainability is to be a shared institutional value, both groups must be engaged and empowered.

Yet research has shown disparities in how academic and non-academic staff perceives and respond to sustainability initiatives (Evans et al., 2013). Understanding these differences is vital for tailoring GHRM strategies that foster a unified green culture.

Research Objectives

This study aims to:

1. Examine the impact of GHRM practices on the green psychological climate among academic and non-academic university staff.

2. Investigate how GPC influences overall sustainable performance in universities.

3. Identify perceptual and behavioral differences between academic and non-academic staff regarding GHRM and GPC.

LITERATURE REVIEW

Sustainable Universities: A Holistic Concept

The concept of a "sustainable university" has evolved to include more than just environmental conservation; it encompasses a multidimensional framework of environmental, economic, and social sustainability (Velazquez et al., 2005). Lozano (2011) argues that sustainability in HEIs must involve systemic change—not only in what is taught, but also in how the university operates and interacts with its stakeholders.

Institutions are increasingly implementing green infrastructure, smart technologies, and environmentally focused curricula. However, these efforts require human agents to execute and sustain them. Hence, fostering sustainability as a cultural and behavioral norm becomes critical—and this is where GHRM comes into play.

Green Human Resource Management (GHRM)

GHRM refers to HR practices designed to encourage sustainable behaviors in employees.

It comprises:

- Green Recruitment and Selection: Hiring individuals who demonstrate environmental awareness or align with organizational sustainability values.
- Green Training and Development: Educating staff on energy-saving behaviors, waste reduction, sustainable procurement, and eco-conscious operations.
- Green Performance Management: Evaluating employees on sustainability-related Key Performance Indicators (KPIs).
- Green Rewards and Incentives: Recognizing and rewarding environmentally responsible behaviors. Jabbour (2013) emphasizes that GHRM can enhance environmental performance by cultivating an ecologically responsible workforce. Furthermore, Dumont et al. (2017) found that GHRM practices are significantly associated with increased green citizenship behavior—voluntary acts that contribute to an organization's sustainability.

Green Psychological Climate (GPC)

The psychological climate is a concept rooted in organizational behavior, referring to employees' interpretations of workplace practices and policies (James et al., 1978). Green Psychological Climate (GPC) is a subset that focuses on environmental aspects, capturing how strongly employees perceive their organization's commitment to environmental values.

A positive GPC is associated with increased motivation to engage in environmentally friendly behaviors at work, such as conserving energy, recycling, or reducing waste (Norton et al., 2014). GPC can also influence job satisfaction and organizational citizenship behavior (Robertson & Barling, 2013).

Linking Ghrm To GPC

Research indicates that GHRM practices play a critical role in shaping GPC. When employees perceive that environmental concerns are embedded in HR policies, they internalize these values, thereby contributing to a shared green climate (Kim et al., 2017). In turn, this shared climate fosters behaviors that enhance sustainability outcomes across the institution.

This relationship has been explored in corporate settings, but in universities—where staff categories are diverse and hierarchy's complex—it requires further examination.

Academic vs. Non-Academic Staff: Role Differences

Academic staff typically engages with sustainability through pedagogy and research. Their influence on student attitudes and knowledge dissemination is profound (Lozano & Young, 2013). In contrast, non-academic staff often have direct control over operational systems—energy use, procurement, facility management—making their environmental behaviors highly impactful (Evans et al., 2013).

These differing roles may influence how GHRM practices are perceived and the extent to which GPC develops within each group. Tailoring HR interventions to these nuances is vital for institution-wide sustainability.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Conceptual Model

This study is grounded in organizational climate theory, which posits that HR practices shape employee perceptions (James et al., 1978). We propose a linear model:

$$\text{GHRM practices} \rightarrow \text{Green Psychological Climate Sustainable} \rightarrow \text{University Outcomes}$$

With comparative analysis between academic and non-academic staff.

Hypotheses

H1: GHRM practices positively influence green psychological climate among academic staff.

H2: GHRM practices positively influence green psychological climate among non-academic staff.

H3: Green psychological climate positively influences sustainable university outcomes.

H4: The strength of the GHRM–GPC relationship differs significantly between academic and non-academic staff.

H5: The influence of GPC on sustainability outcomes differs significantly between staff groups.

METHODOLOGY

Research Design

This study adopts a quantitative, cross-sectional research design to examine the relationships among GHRM practices, green psychological climate (GPC), and sustainable university outcomes. A survey method was selected due to its efficiency in collecting standardized data across a large population and its suitability for examining perceptual variables and behavioral outcomes.

A co relational design was applied to assess the degree and direction of the relationships among variables. Additionally, between-group comparisons (academic vs. non-academic staff) were made to identify perceptual differences and test the moderating role of staff type.

Population and Sampling

The target population for the study consisted of university employees both academic and non-academic working in public and private universities in a developing country context. Given the increasing interest in greening higher education in such settings, the sample provides insights into institutional transformation in resource-constrained environments.

To ensure representativeness, a stratified random sampling technique was used. Universities were first categorized based on geographic region and institutional type (public vs. private). From each stratum, participants were randomly selected.

Total Invitations Sent: 600

Completed Responses: 420

Academic staff: 230

Non-academic staff: 190

Response Rate: 70%

Category	Number of Responses	Percentage of Total Responses
Academic Staff	230	54.8%
Non-Academic Staff	190	45.2%
Total	420	100%

Instrument Development

A structured questionnaire was designed, consisting of four sections:

Section A: Demographics

Included age, gender, job title, years of service, educational qualification, and department.

Section B: Green Human Resource Management Practices

Measured using a 16-item scale adapted from Jabbour (2013) and Dumont et al. (2017), capturing four sub dimensions:

- Green Recruitment and Selection (4 items)
- Green Training and Development (4 items)
- Green Performance Appraisal (4 items)
- Green Rewards and Compensation (4 items)
- Example item: "Environmental sustainability is a factor considered in hiring decisions at my institution."

Section C: Green Psychological Climate (GPC)

Measured with a 10-item scale adapted from Norton et al. (2014), assessing the extent to which employees perceive environmental values as embedded in the organization's mission, leadership, and operations.

Example item: "My institution promotes environmental awareness among staff."

Section D: Sustainable University Outcomes

A 12-item scale developed by the researchers, informed by literature (Lozano, 2013; Velazquez et al., 2005), to measure perceived sustainability outcomes across environmental operations, teaching, research, and stakeholder engagement.

Example item: "My University implements policies aimed at reducing its carbon footprint."

All items were rated on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

Validity And Reliability

Content Validity

The questionnaire was reviewed by a panel of five subject-matter experts in environmental management, HRM, and higher education. Revisions were made based on their feedback for clarity and relevance.

Construct Validity

An exploratory factor analysis (EFA) was conducted using principal component analysis with varimax rotation. All items loaded significantly (≥ 0.60) on their respective factors, with no significant cross-loadings, confirming structural integrity.

Reliability

Cronbach's alpha coefficients:

GHRM: $\alpha = 0.91$

GPC: $\alpha = 0.88$

Sustainability Outcomes: $\alpha = 0.89$

These values indicate high internal consistency (Nunnally & Bernstein, 1994).

Data Analysis Procedures

Data were analyzed using SPSS (Version 27). The following analyses were conducted:

- Descriptive statistics (mean, SD)
- Reliability analysis (Cronbach's alpha)
- Pearson correlation to assess linear relationships
- Multiple linear regressions to test hypotheses
- Independent samples t-tests to compare staff groups
- Moderation analysis (using interaction terms) to examine group-based differences in regression relationships
- Assumptions of normality, linearity, homoscedasticity, and multicollinearity were tested and met.

RESULTS

Descriptive Statistics

Variable	Mean	SD	Academic Mean	Non-Academic Mean
GHRM Practices	3.87	0.59	3.95	3.76
Green Psychological Climate	3.75	0.62	3.82	3.66
Sustainability Outcomes	3.68	0.67	3.73	3.62

Findings suggest that academic staff report slightly higher perceptions of GHRM and GPC than non-academic staff. However, both groups show moderate-to-high agreement across variables.

Correlation Analysis

All three variables are significantly correlated ($p < 0.01$):

- GHRM ↔ GPC: r = 0.61
- GPC ↔ Sustainability: r = 0.67
- GHRM ↔ Sustainability: r = 0.58

This supports the theorized relationships among constructs.

Regression Analyses

Model 1: GHRM → GPC

Academic Staff: $\beta = 0.52$, $t = 9.21$, $p < 0.001$

Non-Academic Staff: $\beta = 0.45$, $t = 7.58$, $p < 0.001$

H1 and H2 supported: GHRM significantly predicts GPC for both groups, with a stronger effect for academic staff.

Model 2: GPC → Sustainability Outcomes

Combined Sample: $\beta = 0.60$, $t = 11.03$, $p < 0.001$

H3 supported: GPC significantly predicts sustainable university outcomes.

Model 3: Moderation Test (Interaction of Staff Type × GHRM)

Interaction term: $\beta = 0.08$, $p = 0.04$

H4 supported: The GHRM–GPC relationship is significantly moderated by staff type, being stronger among academic staff.

Model 4: Moderation Test (Interaction of Staff Type × GPC)

Interaction term: $\beta = 0.03$, $p = 0.18$

H5 not supported: No significant difference in the GPC–sustainability relationship between staff types.

T-Test Comparisons between Staff Groups

Variable	t-value	p-value
GHRM Practices	2.45	0.015
Green Psychological Climate	2.28	0.023
Sustainability Outcomes	1.78	0.076

Academic staff perceives GHRM and GPC more positively ($p < 0.05$). Differences in sustainability outcomes were not statistically significant.

Summary of Hypotheses

Hypothesis	Description	Supported
H1	GHRM → GPC (Academic staff)	Yes
H2	GHRM → GPC (Non-academic staff)	Yes
H3	GPC → Sustainable University Outcomes	Yes
H4	Staff type moderates GHRM → GPC relationship	Yes
H5	Staff type moderates GPC → Sustainability Outcomes relationship	No

DISCUSSION

Interpretations of Key Findings

This study aimed to investigate the effects of Green Human Resource Management (GHRM) practices on the development of a Green Psychological Climate (GPC) and, subsequently, on the sustainability outcomes of universities. The results support a significant and positive relationship between GHRM practices and the perceived GPC among both academic and non-academic staff. Furthermore, GPC was found to be a strong predictor of sustainable university outcomes.

These findings are consistent with existing literature in corporate and non-profit sectors, which suggests that green HR policies shape organizational climate and influence environmental behaviors (Renwick et al., 2013; Dumont et al., 2017). Specifically, our study confirms that when university HR systems are aligned with sustainability goals—such as through green recruitment, environmental training, and performance management—employees are more likely to perceive their institution as environmentally committed. This perception, in turn, fosters a climate conducive to sustainability-oriented action.

Academic vs. Non-Academic Staff Perceptions

Notably, the study found that academic staff perceives both GHRM practices and GPC more positively than non-academic staff. This aligns with prior studies (Lozano & Young, 2013; Evans et al., 2013), which highlight that faculty members are often more involved in conceptual discussions and curriculum integration of sustainability, leading to higher environmental awareness.

However, this difference also underscores a critical insight: while academic staff may be more attuned to sustainability narratives, non-academic staff—who manage operations such as facilities, procurement, and administration—plays a crucial role in implementing green policies. The perception gap suggests a potential disconnect in how HR policies are communicated or enacted across university sectors.

Therefore, the lack of significant moderation between GPC and sustainability outcomes (H5 not supported) indicates that once a green psychological climate is established, both academic and non-academic staff

contributes similarly to institutional sustainability. This finding points to the importance of inclusive HRM strategies that go beyond awareness and into action across the entire workforce.

THEORETICAL IMPLICATIONS

This research makes several contributions to theory:

Extension of GHRM research to the higher education context: While much GHRM literature is based on corporate settings, this study adapts and validates key constructs within the university sector, which operates under different governance structures and stakeholder demands.

Integration of Organizational Climate Theory: By incorporating GPC as a mediating mechanism, the study highlights the psychological processes through which HR practices influence sustainability outcomes. This aligns with organizational behavior theories that emphasize the role of employee perceptions in shaping behavior (James et al., 1978).

Staff differentiation: By comparing academic and non-academic groups, the research supports a more nuanced understanding of how professional roles and identities interact with institutional sustainability agendas.

PRACTICAL IMPLICATIONS

The findings carry important implications for university administrators and HR departments:

1. Integrate Environmental Goals into Core HR Functions: Sustainability should be embedded into all HR processes, including job descriptions, selection criteria, induction programs, and promotion metrics.

2. Tailored Training Programs: Given perceptual differences, customized training programs for academic and non-academic staff can bridge awareness gaps and build collective ownership of sustainability goals.

3. Enhance Internal Communication: The visibility of sustainability efforts should be increased through newsletters, intranet portals, and staff meetings to reinforce the university's environmental commitments.

4. Reward Green Behavior: Performance appraisals and recognition systems should include sustainability-related KPIs, such as participation in green initiatives, energy-saving contributions, or research in sustainable practices.

5. Inclusive Engagement: Non-academic staff should be included in sustainability planning committees, as their operational insights are invaluable for implementing practical solutions.

POLICY RECOMMENDATIONS

Based on the findings, several policy-level recommendations can be made:

National Accreditation Standards: Regulatory bodies should include green HRM criteria in the accreditation frameworks for higher education institutions.

Sustainability Audits: Periodic assessments of HR policies and employee perceptions regarding sustainability can inform continuous improvement.

Funding Support: Governments and donors should support universities in implementing green HR initiatives, especially in resource-constrained environments.

LIMITATIONS AND FUTURE RESEARCH

Despite its contributions, this study has certain limitations:

1. Cross-Sectional Design: The data were collected at one point in time, limiting causal inference. Longitudinal studies are needed to observe how changes in GHRM practices affect climate and sustainability over time.

2. Self-Reported Data: All variables were measured via self-report surveys, which may introduce social desirability bias. Triangulating with objective sustainability performance data (e.g., energy consumption) could enhance validity.

3. Cultural Context: The study was conducted in a specific national context. Future research should replicate the model in different cultural and institutional environments to improve generalizability.

4. Lack of Qualitative Insights: While the study provides statistical relationships, qualitative studies could uncover deeper insights into staff attitudes and the challenges of implementing GHRM in universities.

Suggested Future Research Directions

1. Explore the role of leadership and top management commitment as a moderator in the GHRM–GPC relationship.

2. Examine how student perceptions of university sustainability align with staff behaviors.

3. Investigate the long-term impacts of green HR practices on institutional reputation and student enrollment.

CONCLUSION

This study demonstrates that Green Human Resource Management practices are a critical enabler of sustainability in higher education institutions. By influencing the Green Psychological Climate, GHRM shapes how staff perceives and engage with environmental goals, thereby affecting the university's overall sustainability outcomes.

Academic and non-academic staff perceives GHRM and GPC differently, but once a shared green climate is fostered, both groups contribute meaningfully to sustainable development. These findings reinforce the need for inclusive, strategic, and well-communicated HR policies that align institutional values with day-to-day behavior.

As universities face increasing pressure to lead in sustainability, empowering employees through green HRM offers a pathway not only to environmental performance but also to organizational resilience and innovation. For policymakers, administrators, and scholars alike, the human dimension of sustainability

must be given the attention it deserves—because without the right people practices, even the most ambitious green strategies are likely to fall short.

REFERENCES

Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56(4), 613–627.

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. Guilford Press.

Evans, T., Stevenson, N., Lasen, M., Ferreira, J. A., & Davis, J. M. (2013). Approaches to embedding sustainability in teacher education: A synthesis of the literature. *Teaching and Teacher Education*, 34, 33–43.

Jabbour, C. J. C. (2013). Environmental training in organizations: From a literature review to a framework for future research. *Resources, Conservation and Recycling*, 74, 144–155.

Jabbour, C. J. C., & Santos, F. C. A. (2008). *The central role of human resource management in the search for sustainable organizations*. The International Journal of Human Resource Management, 19(12), 2133-2154. https://doi.org/10.1080/09585190802479389

Jabbour, C. J. C. (2013). *Environmental training in organizations: from a literature review to a framework for future research*. Resources, Conservation and Recycling, 74, 144-155. [https://doi.org/10.1016/j.resconrec.2013.03.008] (https://doi.org/10.1016/j.resconrec.2013.03.008)

Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014). *Organizational sustainability policies and employee green behavior: The mediating role of work climate perceptions*. Journal of Environmental Psychology,38,49-54.[https://doi.org/10.1016/j.jenvp.2013.12.002] (https://doi.org/10.1016/j.jenvp.2013.12.002)

Renwick, D. W. S., Redman, T., & Maguire, S. (2013). *Green human resource management: A review and research agenda*. International Journal of Management Reviews, 15(1), 1-14. [https://doi.org/10.1111/j.1468-2370.2011.00328.x] (https://doi.org/10.1111/j.1468-2370.2011.00328.x)

Sharma, S., Talan, A., & Jain, M. (2020). *Green HRM and sustainability: A review and future research agenda*. Journal of Cleaner Production, 275, 123007. [https://doi.org/10.1016/j.jclepro.2020.123007] (https://doi.org/10.1016/j.jclepro.2020.123007)

James, L. R., Hartman, A. M., Stebbins, M. W., & Jones, A. P. (1978). Relationships between psychological climate and a VIE model for work motivation. *Personnel Psychology*, 31(2), 229–254.

Kim, A., Kim, Y., Han, K., Jackson, S. E., & Ployhart, R. E. (2017). Multilevel influences on voluntary workplace green behavior: Individual differences, leader behavior, and coworker advocacy. *Journal of Management*, 43(5), 1335–1358.

Lozano, R. (2011). The state of sustainability reporting in universities. *International Journal of Sustainability in Higher Education*, 12(1), 67–78.

Lozano, R. (2013). Are universities ready for sustainable development? Tools and insights for institutional change. *Journal of Cleaner Production*, 14(1), 9–21.

Lozano, R., & Young, W. (2013). Assessing sustainability in university curricula: Exploring the influence of student numbers and course classification. *Journal of Cleaner Production*, 49, 134–141.

Norton, T. A., Zacher, H., & Ashkanasy, N. M. (2014). Organizational sustainability policies and employee green behavior: The mediating role of work climate perceptions. *Journal of Environmental Psychology*, 38, 49–54.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Renwick, D. W., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International Journal of Management Reviews*, 15(1), 1–14.

Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior*, 34(2), 176–194.

UNESCO. (2017). *Education for Sustainable Development Goals: Learning Objectives*. Paris: United Nations Educational, Scientific and Cultural Organization.

Velazquez, L., Munguia, N., & Sanchez, M. (2005). Deterring sustainability in higher education institutions: An appraisal of the factors which influence sustainability in higher education institutions. *International Journal of Sustainability in Higher Education*, 6(4), 383–391.