



ORIGINAL

Greening Organizational Culture in Relation to Employees' Green Human Resources Management: the Mediating Role of Environmental Commitment and Citizenship

La Ecologización de la Cultura Organizacional en Relación con la Gestión Ecológica de los Recursos Humanos de los Empleados: el Papel Mediador del Compromiso Ambiental y la Ciudadanía

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Cite as: Abousoliman AD, Ali Zoromba M, El-Gazar HE. Greening Organizational Culture in Relation to Employees' Green Human Resources Management; The Mediating Role of Environmental Commitment and Citizenship. *Salud, Ciencia y Tecnología*. 2025; 5:1138. <https://doi.org/10.56294/saludcyt20251138>


Submitted: 25-02-2024

Revised: 17-07-2024

Accepted: 03-12-2024

Published: 01-01-2025

Editor: Prof. Dr. William Castillo-González 

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ABSTRACT

Introduction: the growing awareness of environmental issues is prompting organizations to proactively implement environmental management strategies. Green human resource management (GHRM) practices are being used to convert strategy into results.

Method: employing a quantitative approach, data were gathered from 271 faculty members through structured questionnaires. The analysis involved descriptive statistics using SPSS and SEM using AMOS to understand the relationships among green culture, environmental commitment, environmental citizenship, and GHRMP along with the mediating role of faculty' commitment and environmental citizenship.

Results: the study revealed that green organizational culture is significantly associated with both employees' environmental commitment and citizenship. Specifically, green culture had a strong positive correlation with environmental commitment and environmental citizenship. Moreover, environmental commitment and citizenship were significantly correlated with GHRMP, indicating the pivotal role of green culture in fostering a supportive environment for green HR practices. The mediation analysis highlighted the significant indirect effects of green culture on GHRMP through environmental commitment and environmental citizenship.

Conclusion: the study underscores the significant influence of green organizational culture on fostering environmental commitment and citizenship among employees. The mediating role of GHRMP is pivotal in translating this culture into practical and measurable outcomes. These findings suggest that institutions aiming to enhance their environmental stewardship, and sustainable practices should focus on nurturing a green culture and implementing robust green HRM practices.

Implications: the results provide valuable insights for university administrators and policymakers on the importance of integrating green principles into organizational culture and human resource management. By doing so, they can significantly improve the commitment and active participation of staff in environmental sustainability initiatives.

Keywords: Green Human Resources Management; Greening Organizational Culture; Environmental Commitment; Citizenship.

RESUMEN

Introducción: la creciente conciencia de los problemas ambientales está impulsando a las organizaciones a implementar de manera proactiva estrategias de gestión ambiental. Las prácticas de gestión de recursos humanos ecológicas (GHRM) se están utilizando para convertir la estrategia en resultados.

Método: empleando un enfoque cuantitativo, se recopilaron datos de 271 miembros del personal docente a través de cuestionarios estructurados. El análisis implicó estadísticas descriptivas utilizando SPSS y SEM utilizando AMOS para comprender las relaciones entre la cultura ecológica, el compromiso ambiental, la ciudadanía ambiental y GHRMP junto con el papel mediador del compromiso del personal docente y la ciudadanía ambiental.

Resultados: el estudio reveló que la cultura organizacional ecológica está significativamente asociada con el compromiso ambiental y la ciudadanía de los empleados. Específicamente, la cultura ecológica tenía una fuerte correlación positiva con el compromiso ambiental y la ciudadanía ambiental. Además, el compromiso ambiental y la ciudadanía estaban significativamente correlacionados con GHRMP, lo que indica el papel fundamental de la cultura ecológica en el fomento de un entorno de apoyo para las prácticas de RR.HH. ecológicas. El análisis de mediación destacó los efectos indirectos significativos de la cultura ecológica en GHRMP a través del compromiso ambiental y la ciudadanía ambiental. **Conclusión:** El estudio destaca la importante influencia de la cultura organizacional ecológica en el fomento del compromiso ambiental y la ciudadanía entre los empleados. El papel mediador de la GHRMP es fundamental para traducir esta cultura en resultados prácticos y mensurables. Estos hallazgos sugieren que las instituciones que aspiran a mejorar su gestión ambiental y sus prácticas sostenibles deberían centrarse en fomentar una cultura ecológica e implementar prácticas sólidas de gestión de recursos humanos ecológicas.

Implicaciones: los resultados proporcionan información valiosa para los administradores universitarios y los responsables de las políticas sobre la importancia de integrar los principios ecológicos en la cultura organizacional y la gestión de los recursos humanos. Al hacerlo, pueden mejorar significativamente el compromiso y la participación activa del personal en las iniciativas de sostenibilidad ambiental.

Palabras clave: Gestión Ecológica de los Recursos Humanos; Cultura Organizacional Ecológica; Compromiso Ambiental; Ciudadanía.

INTRODUCTION

Saudi Vision 2030 is a strategic plan aimed at achieving sustainable development in Saudi Arabia. Crown Prince Mohammad bin Salman first announced it in April 2016. The objective of this plan is to reduce Saudi Arabia's dependence on the oil industry and to enhance the non-oil sector. Furthermore, it aims to improve the public sector's facilities such as education, health, tourism, and infrastructure.⁽¹⁾ The Kingdom of Saudi Arabia has taken significant steps to address concerns about the state of the planet by incorporating an eco-friendly action plan in all its operations. Although the country is currently undergoing significant education, economic, political, social transformations, and sustainability, these changes are being guided by the 2030 Saudi Vision and its various initiatives, including the Saudi Green Initiative. However, the success of these initiatives requires the active participation of the public and residents.⁽²⁾

The developing consciousness about sustainable environment has given way to the concept of green human resource management (GHRM). GHRM is used to describe people management involved with environmental issues.⁽³⁾ GHRM practices are the programs, processes, and techniques applied in agencies to minimize bad environmental effects or enhance effective environmental impacts. Ultimately, GHRMP will enhance the overall performance of the organization's sustainable environment.⁽⁴⁾ Mathapati states that GHRM is directly accountable for the growth of the green employee to show understanding, appreciating, and practicing a green initiative through keeping its green goals at some point of the HRM technique of personnel recruiting, hiring, training, promoting, developing, and advancing the institution's human capital and business.⁽⁵⁾ Without a superb GHRMP, growing and keeping surroundings with sustainable overall performance will be difficult. So, we assert that by understanding the scope and depth of GHRMP, agencies will be capable of functioning in an extra pleasant environment than ever before.⁽⁶⁾

The implementation of environmentally pleasant practices at some stage in the organization helps to instill a greening culture by reworking personnel behavior.⁽⁷⁾ Fang et al. divulges that green culture is crucial in grasping the correlation between employee performance and GHRM.⁽⁴⁾ it brings alignment in the moves of personnel as properly as orients the agency towards environmental activities as well as organizational success.⁽⁸⁾ According to researchers, supplying personnel with great and pleasant services is one of the satisfactory help organizations can provide them, personnel will experience and interact in green behaviors with increased enthusiasm and desire, growing commitment and interest in the organization.⁽⁹⁾ Studies have confirmed

that individual-level green constructs have a superb relationship with GHRM's, and the degree of personnel environmental commitment is greatly affected if the culture improves or strengthens.^(10,11,12,13,14,15) Additionally, the personnel environmental commitment relationship with GHRM has yet to be broadly studied, the system of environmental management must support the green mindset of personnel to commit to the workplace environment.⁽¹³⁾

Employees' organizational citizenship behavior for the environment (OCBE) is a sort of voluntary oriented behavior toward the environment effect on organizations' environmental total performance. OCBE is a modern thinking in which employees take part and volunteer their abilities for the development and gain of their agencies besides compensation.⁽¹⁶⁾ On the same vein, to inspire organizational citizenship behavior at work, Pinzone et al. empirically confirmed that GHRMP have become vital and crucial for this process.⁽¹⁷⁾ Results from a study carried out by Danilwan et al. mentioned that most participants validated that green overall performance management have a great influence on organizational citizenship behavior and environmental sustainability.⁽¹⁸⁾ In addition to Dumont et al. and Malik et al. revealed that there is an effective relationship between green employees' citizenship and GHRMP,^(19,20) and⁽²¹⁾ who confirmed that proper organizational culture will inspire worker behavior to be better, and the research carried out by Mahmudi, and Nisa et al. indicates the effective and great relationship between organizational culture and organizational citizenship behavior.^(22,23)

People are more devoted to an organization when their behavior and its environmental culture align. If green practices are valued within the company, they will be more inclined to participate.⁽²⁴⁾ Furthermore, workers who are trained in green behavior and whose company actively supports environmental preservation through policy will gradually take up more environmentally friendly habits. Hence, training can raise commitment levels since knowledgeable workers are more likely to maintain their environmentally friendly behaviors on a regular basis.⁽²⁵⁾ While the body of research on GHRM is expanding, only a view of studies has looked at the degree to which OCBE and green HRM practices are mediated by green culture. Thus, the declaration concludes that green culture positively and appreciably influences GHRMP and in a roundabout way influences organizational commitment and citizenship via organizational commitment and citizenship as mediators. So, the purpose of this study is to explore the impact of green organizational culture on green human resources management (GHRMP) along with the mediating role of faculty' commitment and environmental citizenship within the context of health colleges at Prince Sattam bin Abdulaziz University.

METHOD

Research Design

This research utilizes a quantitative analysis method, a descriptive survey model as well as a correlational research design was used.

Setting

The study was conducted in five health colleges in Prince Sattam bin Abdulaziz University include all the followings (Medicine, Nursing, Dentistry, Pharmacy, Applied medical sciences).

Research population

Prince Sattam bin Abdulaziz University was chosen as a leading university in the Kingdom, where the data was collected. There is no distinguish characteristics among the participant, so colleges at Prince Sattam bin Abdulaziz University in Al-kharj City, Saudi Arabia, were hired through convenience sampling. An inclusions criteria had been as follows: working at the university for at least one academic year or more; had been on duty throughout the study period; and had not much less than 6 months of tenure in their job; proficiency in spoken, written, and reading capabilities in the Arabic or English language; and confirmed willingness to actively interact in the study. Based on the parameters of four constructs, 25 observed variables, an expected effect size of 0,1, 0,95 power, and desired probabilities of 0,05, and a required sample size of 241 participants, the sample size was estimated using a previous sample size calculator for a structural equation modeling software program (Soper, 2022). The study targets 313 faculty considering the 30 % dropout rate. Out of these 271 faculties staff, who individually agreed to participate and fill out questionnaires that were dispatched through email, 86,6 % had a positive completion rate.

Tools of data collection

The study' questionnaires survey included five parts:

Section one: A total of five questions were included in the demographic information form: (years of experience, years of gender, marital status, age, and administrative role).

Section two: GHRMP: The environmental practices in field of GHRM Scale was developed by Bombiak and Marciniuk-Kluska in English, serves as an assessment tool to gauge the environmental practices of the Green HRM.⁽²⁶⁾

Section three: Management of Green Organizational Culture: The 5-item scale of management of green

organizational culture scale was developed by Musthaq and Jegadeeshwaran in English, serves to assess the management practices to spread green organizational culture.⁽²⁷⁾

Section four: Environmental Citizenship: An English version of the environmental citizenship scale was developed by Karatekin, and Uysal was used to measure the level of employees' environmental citizenship.⁽²⁸⁾

Section five: Employee Green Commitment: An English version of the Employee commitment scale, a 7-item scale developed by Raineri and Paille (2016) was used to measure the level of employees' commitment.⁽²⁹⁾

The four tools with five-point Likert scales, each item rate ranging from one (indicating Strongly Disagree), to five (indicating Strongly Agree). Excellent results are obtained when using Cronbach's alpha to gauge the tool's internal consistency (0,97, 0,91, 0,98,0,91) retrospectively.

Pilot study

Prior to the survey, thirty faculty members who were chosen from the university under investigation and were not included in the main study were asked to participate in a pre-test designed to assess the study's viability. After completing the survey, the pre-tested faculty members were provided feedback on the design and substance of the questionnaire at a debriefing. They guaranteed that the survey's items were clear. The average duration to complete the survey was between 10 and 15 minutes, and none of the participants displayed survey tiredness. Reliability analysis of the pre-test data revealed that the modelled constructs' Cronbach's alphas were higher than 0,7.⁽³⁰⁾

Data collection

From 5th November to 22nd December of 2023, data was collected. The authors contacted the university's administration to request their approval and assistance in conducting a research survey. The study was reviewed and approved by the standing committee of bioethics research (SCBR). Once their agreement was received, the questionnaire link was sent via an email to the faculties, outlining the purpose, importance, and design of the study while also requesting cooperation and consent. In addition to outlining the goals of the study and guaranteeing confidentiality, anonymity, and voluntary participation, the survey cover page requested respondents to complete the surveys and return them to the researcher.

Statistical analysis

Amos 23.0 and SPSS 28.0 were used to analyze the data. Several multivariate analysis techniques, including regression, factor analysis, correlation, and analysis of variance, were integrated into AMOS for multivariate analysis. For assessing the intricate connections between the structures, AMOS offers a user-friendly graphical or programmatic interface.⁽³¹⁾ Sample characteristics and mean scores for the variables under study were compiled using descriptive statistics. To evaluate the connections between the research variables, Pearson correlation was used. The study hypotheses and confirmatory factor analyses (CFA) were tested using structural equation modeling (SEM). The $\chi^2 / df < 3$, IFI, TLI, and CFI $> 0,90$, and RMSEA $< 0,08$ were used to assess the goodness-of-fit indices (Collier, 2020). A cutoff point for statistical significance was established, two-tailed P values less than 0,05 were considered statistically significant.

Ethical considerations

Prior to the commencement of data collection from the study sample, consent procedures were meticulously established, any potential participants seeking clarification were afforded explanations, and their inquiries were satisfactorily addressed. Preserving the confidentiality of participants' personal information and data will be of utmost priority. Additionally, participants retained autonomy to take part in the study or to leave at any time. Adhering to the ethical principles of the Helsinki Declaration, participants will possess a comprehensive understanding of the study's objectives and will provide written informed consent before their involvement.

Table 1. Demographics of the sample and variations in research factors (N = 271)

Characteristic	Category	No. (%)	Green Culture		Environmental Commitment		Environmental Citizenship		GHRMP	
			M (SD)	t/F (P)	M (SD)	t/F (P)	M (SD)	t/F (P)	M (SD)	t/F (P)
Age (years); mean \pm SD (41,85 \pm 5,78)	30:40	120 (44,3)	3,7 (,9)	F = ,363 (,697)	4 (,6)	F = ,399 (,671)	4,1 (,7)	F = ,587 (,557)	4 (,6)	F = ,789 (,455)
	>40-50	141 (52)	3,7 (,8)		4 (,8)		4 (,8)		3,9 (,7)	
	>50	10 (3,7)	3,5 (,3)		4,2 (,3)		4 (,5)		4,1 (,4)	
Gender	Male	246 (9,8)	3,7 (,8)	t = ,567 (,573)	4 (,7)	t = ,123 (,903)	4 (,8)	t = 1,21 (,224)	4 (,7)	t = 1,195 (,235)
	Female	25 (,92)	3,6 (,5)		4 (,4)		4,2 (,8)		4 (,2)	
Marital status	Single	11 (4,1)	4 (,3)	F = 1,926 (,148)	4,3 (,3)	F = 1,77 (,171)	4,6 (3)	F = 2,743 (,066)	4,2 (,3)	F = 2,326 (,100)
	Married	250 (92,3)	3,7 (,8)		4 (,7)		4 (,8)		3,9 (,7)	
	Divorced / widowed	10 (3,7)	4,1 (1,1)		4,3 (1,2)		4,2 (1,2)		4,3 (1,2)	

Years of Experience	<5	71 (26,2)	3,7 (1,0)	F = 2,516	4 (,7)	F = 1,18	4,2 (,9)	F = 2,15	3,9 (,7)	F = ,80
	5-10	88 (32,5)	3,9 (,5)	(,083)	4 (,4)	(,328)	4,1 (,4)	(,118)	3,9 (,5)	(,450)
	>10	112 (41,3)	3,6 (,9)		4,1 (,8)		3,9 (,9)		4 (,8)	
Administration position	Yes	56 (20,7)	3,7 (,9)	t = ,169	4,1 (,7)	t = ,881	4,1 (,8)	t = ,200	4,1 (,7)	t = 1,376
	No	215 (79,3)	3,7 (,8)	(,867)	4 (,7)	(,381)	4 (,8)	(,842)	3,9 (,7)	(,173)

RESULTS

GHRMP, Green human resources management practices, F stands for one-way analysis of variance, and t for the independent group t-test.

Table 2. Means, standard deviations, validation, and correlations of studied variables (N = 271)

Variable	M ± SD	α	1	2	3	4
1. Green Culture	3,70 ± ,82	,91				
2. Environmental Commitment	4,03 ± ,70	,91	,786**			
3. Environmental Citizenship	4,05 ± ,77	,98	,772**	,850**		
4. GHRMP	3,97 ± ,69	,97	,757**	,843	,830**	

With a mean age of 41,85 (SD = 5,78), 52 % of study participants were between the ages of 40 and 50, and most of them were male (74,0 %), married (92,3 %), and without an administrative position (79,3 %). Of those with work experience, 41,3 % had more than ten years of experience. Regarding the degrees of Green Culture, Environmental Commitment, Environmental Citizenship, and GHRMP, no statistically significant variations were found in the demographic variables (table 1).

According to table 2, results indicated strong positive correlations, all significant at the 0,01 level (2-tailed). Green Culture was positively correlated with Environmental Commitment ($r = ,786$), Environmental Citizenship ($r = ,772$), and GHRMP ($r = ,757$). This suggests that a stronger green culture within the university is associated with higher levels of commitment and citizenship towards the environment, as well as more robust green human resource management practices. Furthermore, Environmental Commitment and Environmental Citizenship exhibited a strong correlation with each other ($r = ,850$) and with GHRMP ($r = ,843$ and $r = ,830$, respectively). These strong correlations underscore the interconnected nature of these constructs and suggest that enhancing one aspect of a green organizational culture can have a positive ripple effect on other areas.

As shown in table 3 and figure 1, it was found that there is a little direct and without statistically significant effect of green culture on GHRMP, with a B value of ,014 ($p = ,825$). However, the direct pathway from green culture to environmental commitment was both substantial and statistically significant, with a B value of ,729 and a p-value less than ,001. This indicated a strong predictive relationship between green organizational culture and environmental commitment among the staff.

Similarly, the direct effect of green culture on environmental citizenship was significant and positive ($\beta = ,729$ and $P < ,001$), echoing the magnitude and significance of its effect on environmental commitment. Further examination revealed that both environmental commitment and citizenship significantly influenced the application of GHRMP with B values of ,363 and ,236 respectively, and both p-values less than ,001. These results underscored the positive relationships between environmental commitment, citizenship, and the application of GHRMP.

Indirect Effects (Mediation): Mediation analysis revealed that environmental commitment and citizenship were found to mediate the relationship between green culture and GHRMP. The indirect effect of green culture on GHRMP through environmental commitment was quantified at 0,28 ($p < 0,001$), while through environmental citizenship it was 0,18 ($p < 0,001$). These findings highlight the crucial mediating roles that commitment and citizenship play in translating green culture into green HRM practices.

Total Effects: Considering all direct and indirect pathways, the total effect of green culture on GHRMP was significantly positive, with a total effect value of 0,474 ($p < 0,001$). This comprehensive effect suggests that green organizational culture robustly contributes to the adoption and effectiveness of green human resource management practices when both direct and mediated pathways are accounted for.

The goodness-of-fit indices and the R-squared value of the model ($R^2 = ,762$) indicated a good fit to the data, affirming the model's appropriateness for understanding the intricate relationships among the variables.

Table 3. Estimates from the mediation model (N=271)					
Effect	B	S.E	t	P	BC 95 % CI Lower/Upper
Direct effect					
Green Culture -> GHRMP	,014	,062	,222	,825	,789/,909
Green Culture -> Environmental Commitment	,729	,050	15,65	<,001	,862/,944
Environmental Commitment -> GHRMP	,363	,072	5,040	<,001	,306/,809
Green Culture -> Environmental Citizenship	,729	,044	16,554	<,001	,772/,898
Environmental Citizenship -> GHRMP	,236	,042	5,579	<,001	,256/,534
Indirect effect					
Green Culture -> Environmental Commitment -> GHRMP	0,28			<,001	,15/,42
Green Culture -> Environmental Citizenship -> GHRMP	0,18			<,001	,12/,26
Total effect					
Green Culture -> GHRMP	0,474			<0,001	,789/,909

Unstandardized coefficients were reported; Bootstrap resamples = 5,000.
Abbreviations: GHRMP, Green human resources management practices; CI, confidence interval; S.E, standard error.

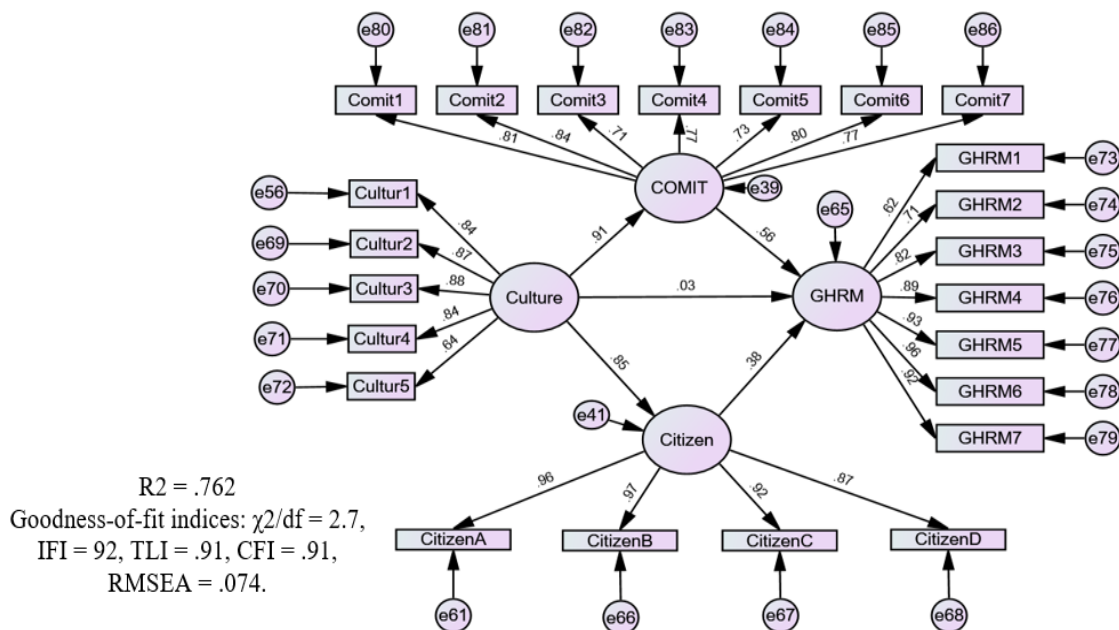


Figure 1. Parallel mediation model

DISCUSSION

The study aimed to explore the impact of green organizational culture on green human resources management (GHRMP) along with the mediating role of faculty commitment and environmental citizenship within the context of health colleges at Prince Sattam bin Abdulaziz University. Consistent with our hypotheses, the results suggest that there is a significant predictive relationship between green organizational culture and environmental commitment and citizenship among faculties. These findings are consistent with Pham et al. who cited that green organizational culture is a critical element to enhance personnel commitment to environmental activities in organizations, and the green organizational culture has an effective and great impact on OCBE.⁽³²⁾ Nisa et al and Mahmudi confirmed that there is an effective and considerable relationship between organizational culture and organizational citizenship behavior.^(23,22) On the other hand, these findings are contradicted with Nurfitriyana and Muafi, who found that green organizational culture has no effect on organizational commitment, and there used to be no impact of green culture on citizenship behavior.⁽³³⁾

Moreover, the findings revealed that environmental commitment and citizenship were significantly correlated with GHRMP, indicating the pivotal function of green culture in fostering a supportive environment for green HR practices. These findings endorse that a viable way to reinforce personnel environmental commitment at workplace is to supply green policies to personnel, as reward and training programs, and to advance a green culture in their agencies (Pham et al., 2019). This confirmed the suggestion made by Lepak et al. (2006) suggested that a dearth of opportunities for workers, such as a green workplace culture, has a negative effect

on their behavior and attitude, especially regarding environmental commitment. Therefore, agencies need to focus on the interactions of GHRMP, the essential role of developing a green organizational culture, to improve employee environmental commitment at work.⁽³⁴⁾

Additionally, the results aligned with previous research conducted by Chan et al. and Zientara and Zamojska, emphasize the value of fostering a green workplace culture and supporting upper management with environmental policies that support employees' voluntary eco-behavior and have a major impact on OCBE.^(35,36) Research indicates that GHRM plays a significant and beneficial role in encouraging OCBE and employee commitment to environmental sustainability.⁽³⁷⁾

The mediation analysis highlighted the significant indirect effects of green culture on GHRMP through environmental commitment and environmental citizenship, this means that there is partial mediation of green culture on GHRMP. Organizations who have a green culture; their personnel usually have possibilities to be skilled in the wished expertise and abilities and to be concerned in green tasks. This motivates personnel to voluntarily take part in green tasks, especially people who have greater personal environmental norms.⁽³⁸⁾ Thus, we argue that organizations must pay extra attention to growing a green organizational culture; this enhances the greater impact of green training on OCBE than a low-green culture. Tang and Amini discovered that organizational citizenship behavior towards the environment and personnel green commitment play a considerable role in mediating the relationship between GHRM and green culture.⁽³⁷⁾ Green culture is an effective mediating factor in the association between GHRM and employee performance; green culture helps personnel to proactively decline waste, use minimal resources, and adapt recycling programs, eventually enhancing the organization's environmental overall performance.⁽⁴⁾

Limitations

The study met with several limitations. *First*, the data collection process was from colleges at a one university headquartered in the Kingdom of Saudi Arabia using a non-probability convenience sampling method. This means that the generalizability of the results will also be limited. *Second*, the method of collecting data for the study took place over one period, and this may limit causality. *Third*, the data collection process was done using a self-report survey, which may lead to the emergence of the issue of social desirability. Therefore, multiple sources of similar research should be used to monitor the constructions.

Implications

The study has profound implications that environmental practices should be a concern for researchers, particularly given the critical role that HRM plays in the development of green universities. Administrators need to pay attention to expanding green training programs because they inspire staff members to take voluntary and environmental initiatives in addition to being more likely to support colleagues who are concerned about environmental issues at work (Fang et al. 2020). Universities also must focus on developing an environmentally conscious organizational culture. To be more precise, it is essential to communicate the university's green policy to all staff members, managerial and non-managerial, through its vision and mission statements to direct employees' green tasks and activities not only in universities but also in the local community.

CONCLUSION

The current study provided clear evidence that fostering a green organizational culture significantly enhances both environmental commitment and citizenship among teaching staff, which in turn promotes the implementation of green human resources practices. These relationships were notably mediated by the levels of commitment and citizenship, pointing to their crucial roles in the overall impact of green culture within the university setting.

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FUNDING

Funding by Prince Sattam bin Abdulaziz University through the project number (PSAU/2023/03/25959)

ACKNOWLEDGEMENTS

The authors extend their appreciation to Prince Sattam bin Abdulaziz University for funding this research.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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