



## Prácticas de Gestión de Recursos Humanos Verdes y su Impacto en el Desempeño Sostenible del Sector

### *Green Human Resource Management Practices on the Sustainable Performance of India's Sports Sector*

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#### Abstract

**Introduction:** As sustainability becomes a major global concern, the sports sector also plays a significant role in environmental degradation. This makes it a crucial area of focus for research aimed at achieving sustainability goals.

**Objective:** This study examines the influence of green human resource management practices—specifically green hiring, green training, performance management, and employee involvement—on the sustainable performance of enterprises in India's sports service sector.

**Methodology:** A stratified random sampling technique was used to ensure representation across various sports service industries. A total of 500 respondents from the Delhi National Capital Region were surveyed. Descriptive statistics, one-way analysis of variance, and regression analysis were conducted to test the proposed hypotheses. The theoretical framework was based on the ability, motivation, and opportunity model.

**Results:** The results showed that green hiring, green training, and performance management practices had a statistically significant and positive influence on sustainable performance. However, employee involvement did not demonstrate a significant relationship with sustainable outcomes.

**Discussion:** The variation in the use of green human resource management practices among organizations suggests the need for more focused and customized strategies to improve environmental performance.

#### Keywords

ability-motivation-opportunities theory; employee involvement; green hiring; green human resource management; sustainable performance.

#### Resumen

**Introducción:** A medida que la sostenibilidad se convierte en una preocupación global, el sector deportivo también tiene una participación significativa en la degradación ambiental. Por ello, es un ámbito clave para la investigación orientada a lograr objetivos sostenibles.

**Objetivo:** Este estudio analiza la influencia de las prácticas de gestión verde de los recursos humanos —contratación verde, formación verde, gestión del desempeño e implicación de los empleados— en el desempeño sostenible de las empresas del sector de servicios deportivos en la India.

**Metodología:** Se aplicó un muestreo aleatorio estratificado para garantizar representatividad entre diferentes industrias del sector. Se encuestó a 500 personas en la región de Delhi Capital Nacional. Se emplearon estadísticas descriptivas, análisis de varianza de un solo factor y análisis de regresión. El marco teórico se basó en el modelo de habilidad, motivación y oportunidad.

**Resultados:** Los resultados muestran que la contratación verde, la formación verde y la gestión del desempeño tienen un impacto positivo y significativo en el desempeño sostenible. No se observó una relación significativa con la implicación de los empleados.

**Discusión:** Las diferencias en la aplicación de estas prácticas entre organizaciones indican la necesidad de estrategias más específicas para mejorar los resultados ambientales.

**Conclusiones:** La integración de prácticas verdes en los procesos operativos puede reforzar el desempeño sostenible, especialmente mediante sistemas eficaces de contratación, formación y evaluación.

#### Palabras clave

teoría de habilidad, motivación y oportunidad; implicación de los empleados; contratación verde; gestión verde de los recursos humanos; desempeño sostenible.

## Introduction

Organizations across the world recognize sustainability as their strategic essential because both environmental consciousness and corporate social responsibility continue to grow. Business practices that incorporate sustainability receive vital support from human resource management (HRM) as its primary facilitator. Human resource department provides substantial support to organization-wide sustainability culture development through its implementation of environmentally responsible programs across recruitment training and performance management, employee involvement practices (Papademetriou et al., 2024). Faisal (2023) recently noted a shift in scholarly research toward recognizing the significance of HRM practices in promoting sustainability such as green human resource management (GHRM). This study aims to examine the connection between GHRM practices and the sustainable performance of sport service sector organizations in India.

Further, GHRM as the strategy in modern organizations is characterized by the integration of environmental sustainability into various human resource (HR) practices, aiming to harmonize the interests of individuals, society, and organizations. This approach includes key practices such as green hiring, which focuses on attracting and hiring environmentally conscious talent, and eco-friendly training programs that raise awareness and promote sustainable behaviors among employees (Shah & Shukla, 2024). By integrating sustainability principles into HRM practices, organizations can cultivate a culture that emphasizes environmental consciousness, promotes innovation, and positions themselves as socially responsible corporate entities.

Integrating GHRM requires addressing obstacles associated with the retention of knowledge capital and the efficient utilization of resources. Notwithstanding these difficulties, organizations are progressively acknowledging the significance of GHRM in attaining the United Nations' sustainable development goals (SDGs) by 2030. Companies such as ITC and ONGC in India have implemented a range of environmentally friendly measures to encourage sustainability (Anup et al., 2024; Shukla & Bankar, 2022). To achieve sustainable performance, organizations must balance environmental integrity, financial profitability, and social well-being. This creates long-term value and resilience in a changing business environment. The objective of this study is to examine how implementing GHRM practices impacts the sustainable performance of sports service sector organizations in India. Organizations globally have acknowledged the necessity of embracing sustainability principles in response to escalating environmental concerns and heightened corporate social responsibility endeavors.

The service sector in India plays a major role in job creation, although its impact on employment is multifaceted. It is the fastest-growing sector, contributing significantly to employment. In 2017-18, the service sector contributed over 54% to India's Gross Value Added and employed more than 28.6% of the total population (ILO, 2024). The Indian sports sector, like many other industries, contributes to the country's carbon footprint and it is a significant concern given India's position as the third-largest emitter of greenhouse gases globally (Roy, 2023). This Indian sports sector also includes sports service sector, considering this background, the adoption of GHRM practices presents a promising strategy for organizations to decrease their environmental impact, enhance operational efficiency, and generate value for stakeholders. The sports sector demonstrates a lack of investigation regarding the implementation of GHRM although this approach proves effective in different industries, yet research shows that GHRM approaches are needed for sports organizations because of their unique operating frameworks (Benevene & Buonomo, 2020; Jamal et al., 2021).

Despite the effectiveness of GHRM in other industries, there is limited research on its implementation in the sports service sector. Specifically, the impact of green hiring, green training and development, performance management systems, and employee involvement on sustainable performance (SP) in sports organizations remains underexplored. This study seeks to address this gap by trying to understand GHRM practices and SP in this field of Indian sports service sector. As noted by prior research that future research must analyze both GHRM practices SP and of GHRM by studying employee engagement in sustainability programs to boost long-term performance alongside ecological responsibility in different contexts and industry (Amjad et al., 2021).

Thus, current study tries to address these objectives,



- (1) To understand the which GHRM practices that have significant impact in Indian sports service sector.
- (2) To know which GHRM practices have least impact on SP in Indian sports service sector.

As for the research questions this study want address are,

(RQ1) Which are the GHRM practices have significant impact of SP in Indian sports service sector?

(RQ2) Which GHRM practices have minimal impact on SP in the Indian sports service sector?

Overall, while the adoption of GHRM in India is still developing, its potential benefits for environmental sustainability and organizational performance make it a crucial area for future growth and development which this research wants to explore. The current research has been structured into 6 parts (1) Introduction gives background to GHRM practices, research objectives and research questions. (2) Literature part provides hypothesis construction and AMO theory based theoretical background. (3) Method section presents research design utilized in the study and ethical statement entails exemption explanation. (4) Results comprise of various test outcomes that supports the study. (5) Discission offers inferences that are supported by prior studies. (6) Conclusion provides insights for Indian sports service sector.

## Literature

### **Hypothesis Construction**

*Hypothesis 1 Green hiring has a positive impact on the sustainable performance of sports service sector organizations.*

Green hiring, a key component of GHRM, significantly enhances the sustainable performance of service sector organizations by integrating environmentally friendly principles into recruitment processes. This approach not only attracts and retains top talent but also fosters a culture of sustainability and social responsibility among employees, which is crucial for long-term organizational success (Mousa & Othman, 2020). By embedding eco-friendly practices in HRM, organizations can boost employee motivation and engagement, which are essential drivers of productivity, innovation, and corporate social responsibility (Saqlain et al., 2024). Moreover, green hiring practices contribute to improved job satisfaction and organizational social evaluation, as employees feel more aligned with the company's sustainable values and goals (Agwa et al., 2024).

Furthermore, incorporating green hiring practices is crucial for fostering organizational capabilities in sustainability by ensuring the selection of individuals who prioritize green values and objectives. This approach effectively reduces both environmental and societal consequences (Valle et al., 2024). Obeidat et al. (2022) conducted research in Qatar and other empirical studies in the service sector have found that green strategic intent and GHRM practices, including green hiring, have a positive impact on the circular economy. This, in turn, leads to improved sustainable performance. Furthermore, the importance of GHRM in fostering environmental knowledge and awareness (EKAW) and green employee behavior (GEB) resulting in sustainable performance (SP) (Abdelrahim et al., 2024). The strong positive relationship between GHRM practices and sustainable performance is reinforced by the support of the top management team (TMT), which guarantees that GHRM is highly regarded and efficiently put into practice (Chatterjee et al., 2023).

*Hypothesis 2. Green training and development programs have a beneficial impact on the long-term performance of sports service sector organizations.*

J and Florence (2024) noted that training and development programs are essential for improving the long-term performance of service sector organizations. These programs provide employees with the skills, knowledge, and motivation needed to excel in their roles. Which also includes green training and developing programs, these programs are acknowledged by senior executives as crucial for enhancing employee performance and job contentment, thereby facilitating the attainment of organizational objectives. Empirical research shows that green training and development programs have a significant impact on employee skills, knowledge, motivation, and job satisfaction. As a result, these initiatives have



a positive effect on organizational outcomes, including productivity, profitability, innovation, and employee retention (Kinisa, 2019). The success of these programs relies heavily on the meticulous design and proficient implementation, as well as the active involvement and motivation of employees. Efficient training techniques promote the acquisition of skills, transfer of knowledge, and modification of behavior, all of which are crucial for enhancing job performance (Khan et al., 2011).

Research has indicated that engagement in educational programs is associated with different measures of employee performance, such as job contentment, efficiency, and ability to adjust to new circumstances, all of which are crucial for the achievement of organizational goals (Sanjana, 2024). In the field of education, it has been observed that training and development have a notable positive effect on employee performance. However, the impact could be enhanced by aligning training programs more effectively with performance assessments and training requirements (Jameel, Hakro, & Mahoto, 2024). green training and development programs are crucial to building a skilled, motivated workforce and sustaining organizational success in the competitive service sector. These programs improve employee performance and drive company growth and efficiency, making them a crucial investment for long-term success.

*Hypothesis 3. Efficient utilization of performance management systems results in enhanced sustainable performance in organizations operating in the sports service sector.*

Efficient utilization of performance management systems (PMS) is crucial for enhancing sustainable performance in organizations operating in the service sector. A well-designed and effectively implemented PMS positively correlates with improved employee performance, as it encompasses clear goal setting, regular feedback mechanisms, fair performance appraisals, and opportunities for skill development and career advancement (Krishan, Kumar, & Pandey, 2024). In the service sector, PMS can act as a catalyst for promoting debates and conversations that lead to the identification of improvement activities for corporate goals and performance, thus facilitating more rational growth and adaptation to challenging contexts such as technological advancements and environmental issues (Broccardo, Alfiero, & Culasso, 2024).

The integration of Lean methodologies, which focus on reducing non-value-added activities and waste, can further enhance environmental performance in public service organizations, aligning with sustainable development goals (SDGs) (Aljuwaied, Litos, & Salonitis, 2023). However, the implementation of PMS in the public sector often faces challenges such as bias, lack of commitment from managers, and demotivation among employees, which can negatively impact staff morale and job satisfaction (Pilko, 2023). To address these issues, it is essential to ensure fairness in the application of PMS, as perceptions of distributive, procedural, and interactional injustice can lead to negative workplace interactions characterized by cost consciousness, inequality, and competitiveness. Moreover, the relevance of PMS in the public sector is underscored by its role in promoting and developing the performance of civil servants, which is fundamental to efficient service delivery and meeting public expectations (Lepistö & Lepistö, 2023). Service sector organizations can sustain performance and adapt to changing operational environments by addressing these factors specially in the sports related field.

*Hypothesis 4: Increased employee engagement in environmental initiatives has a positive impact on the sustainable performance of sports service sector organizations.*

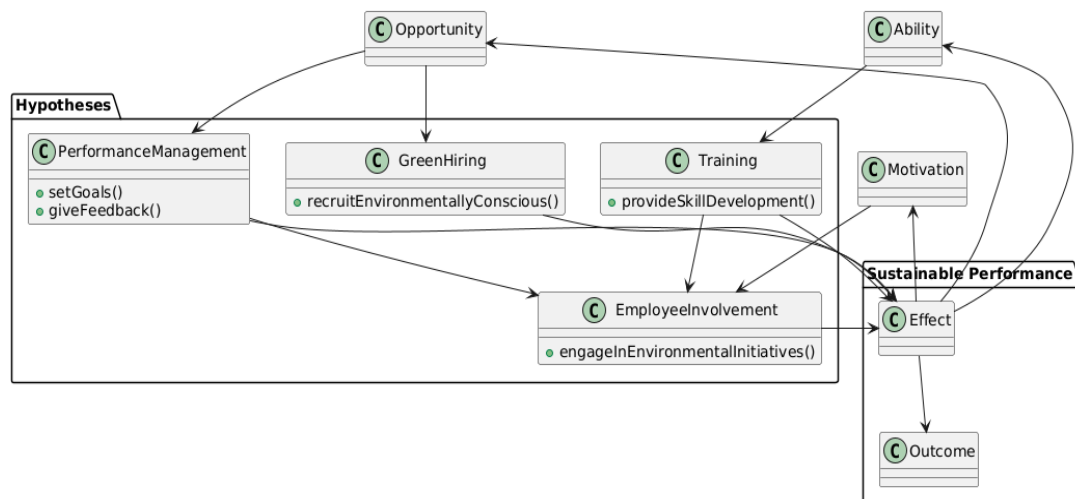
Enhancing employee engagement in environmental initiatives has a significant impact on the sustainable performance of service sector organizations. This is achieved by promoting a culture of environmental responsibility and operational efficiency. Studies suggest that employees play a crucial role in promoting corporate sustainability, and their adoption of environmentally friendly practices is influenced by company policies, leadership, personal values, and organizational culture (Li, 2024). Research has demonstrated that employee engagement acts as a mediator between GHRM practices and personal environmental behaviors. This emphasizes the significance of staff participation in driving environmental initiatives (Krishnan et al., 2024). A robust organizational environmental culture and effective quality management practices (QMP) have a direct and indirect positive impact on the correlation between green practices and the triple bottom line of sustainability performance, which includes economic, environmental, and social aspects (Morgan et al., 2023).

Furthermore, the implementation of sustainable GHRM practices has a positive effect on organizational sustainability through the promotion of employee engagement, enhancement of environmental performance, and reinforcement of corporate social responsibility. However, it is crucial for top management to demonstrate a strategic commitment to these practices (Sathapanickaboot & Ueasangkomsate, 2023). Green work engagement, characterized by employees' proactive involvement in sustainable initiatives, has a substantial impact on organizational performance, encompassing productivity, efficiency, and innovation. Additionally, it enhances job satisfaction and mitigates burnout rates (Silveira Pérez et al., 2022; Marini et al., 2023).

### Theoretical Framework

Ability, motivation, and opportunity (AMO) is another general theory explaining HR practices' robust influence on employee performance and organizational outcomes. According to the theory, an employee's ability, motivation, and opportunities will influence his performance. Research indicates that HR practices enhance discretion and the skills required to improve organizational commitment and work effort by enhancing the Ability and cooperation of employees. The very foundations of the AMO model consider motivation- impacted by intrinsic and extrinsic rewards, personal resources, and the workplace- to be part of its fundamental building blocks, according to (Koster, 2011 and Growney & Hess, 2019), motivation, opportunity, and ability comprised factors influencing respondents concerning pro-environmental actions. In their study, Jiao and Wang (2024) found that ability motivation and opportunity are provided to employees and in many ways were observed to inspire such green behavior. Studies have identified that HRM practices influence employees' extraordinary ability, motivation, and opportunities to increase innovativeness (Alkhalaf & Al-Tabbaa, 2023). Despite its recent popularity, the AMO framework faces theoretical and empirical challenges in development. These include a lack of conceptual clarity, measurement clarity, and integration within AMO variables, which can be explored. AMO theory has also extended to the framework developed by GHRM and other sectors, where GHRM enhances firm performance (Naila & Nuță, 2024)

Figure 1. Conceptual framework illustrating relationships of variables in studies of sustainable performance based on AMO theory.



The AMO theory provides a basis for GHRM practices to foster the influence on employee behavioral outcomes and corporate sustainability at large. It aligns people's skills, motivations, and opportunities for success. GHRM practices help people through environmental training, rewards, and people-friendly initiatives (Ali et al., 2024). Research has provided evidence that GHRM improves green outcomes by playing an essential role in green culture, satisfaction, and employee ecological behavior, and the AMO framework suggests that though there are some difficulties, GHRM enhances environmental performance (Harleen & Ragini, 2024; Juhari et al., 2024). Thus, the AMO theory was incorporated into this study to examine the impact of GHRM practices on the sustainable performance of sports service sector organizations. Integrating GHRM into different HR practices, like green hiring, green training, and performance evaluation and employee engagement, ultimately helps organizations solve the varying issues of climate change and assists in developing sustainable capabilities.

## Method

### Research Methodology

The researchers used a cross-sectional research methodology that works efficiently to gather data at a single point in time. The research design enables efficient analysis of variable relationships while reducing data collection duration so researchers can evaluate GHRM practices economically. To empirically investigate this connection this study, use a quantitative analysis with stakeholder perspectives. Furthermore, the quantitative approach in research offers numerous benefits across various fields, enhancing the robustness and applicability of findings. One significant advantage is its ability to test hypotheses and relationships (Plugge & Nikou, 2024). This study uses descriptive statistics, one-way ANOVA and regression analysis, to examine GHRM practices and sustainable performance. The analysis uses a large dataset that includes green hiring, green training and development, performance management system, and employee involvement and SP.

The descriptive statistics help explain the information of respondents with frequencies and percentage. Regression analysis explains how GHRM practices affect sustainable performance. The one-way analysis of variance (ANOVA) also sheds light on GHRM practice differences.

### Sampling procedure

A survey was conducted in Delhi NCR, with a sample size of 500 respondents. The given sample size is sufficient for most statistical analyses, considering the size of the population and the desired level of accuracy. The utilization of stratified random sampling was implemented to guarantee that the sample accurately represents the wide range of industries within the sports service sector in Delhi NCR ranging from small, medium, and larger who have implemented GHRM practices. Delhi NCR region was chosen as Delhi NCR is one of India's largest and most economically significant regions, housing a diverse range of industries, including a well-developed sports sector. Many professional sports organizations, training academies, and corporate sports initiatives operate within this region, making it an ideal setting to examine the impact of GHRM Practices. Random selection was used to choose organizations from each stratum, and then employees from these organizations were invited to take part in the study.

### Ethical Considerations

Based on the guidelines from the Finnish National Board on Research Integrity (TENK) and the Ethical Review Board of the University of Helsinki the study did not need ethical review and approval for this research. The study obtained an exemption because anonymous questionnaires gathered non-sensitive data which poses only a minimal risk to research participants.

## Results

### Demographic Analysis

The table 1 analyses the demographics of sports service sector managers. Gender (female and male), age (four ranges), educational attainment (UG, Graduate, Postgraduate degree, PhD), tenure at the organization (measured by years of employment), and designation (HR Manager, Office Manager, Production Manager, Middle-level managers) divide managers into five categories. A cell may show 195 and 39% for "male" in the "gender" category. The sample had 195 male managers, 39% of the total. Managers are distributed across these factors in the remaining cells.

Table 1. Demographic Variables

Variables	Values	Frequency	Percentage
Gender	Female	305	61
	Male	195	39
Age	19-25	140	28
	26-29	220	44
	30-39	110	22
	40-50	30	6
Education	UG	75	15
	Graduate	290	58
	Postgraduate degree	95	19



Experience at this establishment	PhD	40	8
	≥ 1 but less than 3 years	110	22
	≥ 3 but less than 5 years	105	21
	≥ 5 but less than 10 years	100	20
	≥ 10 years	110	22
Designation	HR Manager	9	1.8
	Office Manager	68	13.6
	Production Manager	64	12.8

Table 2. Cronbach's Alpha Values for Study Variables

Variable	Items	Cronbach's alpha
Green Hiring (GH)	6	0.871
Green Training and Development (T)	4	0.832
Performance Management System (PMS)	8	0.791
Employee Involvement (EI)	8	0.785
Sustainable Performance (SP)	6	0.756

As seen in the table 2 for green hiring (GH), the Cronbach's alpha coefficient is 0.871, indicating a high level of internal consistency among the 6 items measuring green hiring practices. For green training and development (T), the Cronbach's alpha coefficient is 0.832, indicating a high level of internal consistency among the 4 items measuring training practices. For performance management system (PMS), the Cronbach's alpha coefficient is 0.791, indicating a moderately high level of internal consistency among the 8 items measuring performance management practices. For employee involvement (EI), the Cronbach's alpha coefficient is 0.785, indicating a moderately high level of internal consistency among the 8 items measuring employee involvement practices. As for sustainable performance (SP), has a Cronbach's alpha of 0.756, signifying acceptable internal consistency across its 6-item measure, these values suggest that the multi-item measures used for each variable have good internal consistency, strengthening the reliability of the study's measures.

Table 3. KMO and Bartlett's Test of Sphericity

Statistical Measure	Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.854
Bartlett's Test of Sphericity	
Approx. Chi-Square	12144.728
Degrees of Freedom (Df)	433
Significance (Sig.)	0.000

Taking notes from above table 3 the study presents the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value as 0.854, which signifies a substantial level of suitability for performing factor analysis. Based on this value, it can be inferred that the variables incorporated in the analysis are appropriate for factor analysis, given their adequate correlation with one another. Furthermore, with 433 degrees of freedom, Bartlett's Test of Sphericity produced an estimated chi-square value of 12144.728, which translates to a significance (Sig.) value of 0.000. The observed significance value of this correlation matrix is below the conventional threshold of 0.05, suggesting that it differs substantially from an identity matrix. Put simply, the available evidence is sufficient to reject the null hypothesis which posits that the variables are uncorrelated. This provides support for the data's applicability for factor analysis. The dataset is suitable for factor analysis, as indicated by both the KMO measure and Bartlett's Test of Sphericity, which indicate that the variables are sufficiently interconnected to enable the investigation of latent factors or dimensions within the data.

Table 4. Inter-Correlation Matrix for Study Variables

Variable	GH	T	PM	EI	SP
Green Hiring (GH)	1.000	0.52	0.48	0.35	0.60
Green Training and Development (T)	0.52	1.000	0.67	0.42	0.71
Performance Management System (PMS)	0.48	0.67	1.000	0.50	0.74
Employee Involvement (EI)	0.35	0.42	0.50	1.000	0.29
Sustainable Performance (SP)	0.60	0.71	0.74	0.29	1.000

Multiple variables for sustainable performance measured with regard to HR practices are presented in the table 4. It finds that there is a moderate correlation between green hiring (GH) and sustainable



performance (SP) (0.60) indicating that there is a positive correlation between the employees hired with environmental values and an organization's sustainability effort. Green training and development (T) (0.71) and performance management system (PMS) (0.74) have stronger correlation with SP which suggests that structured training program and performance management system can contribute in attaining the sustainability outcome. The lowest correlation (0.29) is found between employee involvement (EI) and SP which shows that involvement of employees to environmental initiatives does not directly lead to higher sustainability performance. Finally, the correlation between T and PMS (0.67) indicates that the training and performance management are complementary for strengthening GHRM practices. The significance of these values is bringing the spotlight on how various GHRM components interrelate in an organization and which of the components can be enhanced in order to achieve sustainable performance.

Table 5. Model Summary of Regression test

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. Error of Estimate
Regression Analysis	0.751	0.564	0.563	0.270

Note: Predictors: Constant, Green Hiring (GH), Green Training and Development (T), Performance Management System (PMS), Employee involvement (EI), Dependent Variable: Sustainable Performance (SP)

The above table 5 presents a summary of the results obtained from a regression analysis model aimed at understanding the relationship between different predictor variables and a dependent variable, likely associated with the sustainable performance of organizations. The primary indicators of the model are as follows:

The correlation coefficient (R) in Model R indicates a strong positive linear relationship between the predictor variables, specifically Constant, green hiring (GH), green training and development (T), performance management (PMS), and employee involvement (EI), and the dependent variable, sustainable performance (SP). The R value of 0.751 signifies a robust positive correlation between these variables.

The coefficient of determination, R squared, suggests that approximately 56.4% of the variation in SP can be explained by the predictor variables employed in the model. The adjusted R-squared value considers the intricacy of the model and indicates that approximately 56.3% of the variation in SP can be explained, providing a more accurate estimate compared to the unadjusted R-squared value.

The Standard Error of Estimate, represented by the value 0.270, measures the average difference between the observed and predicted values of SP. It functions as a dependable measure of the precision of forecasts.

The predictor variables, including Constant, GH, T, PMS, and EI, cover various dimensions such as green recruiting practices, training effectiveness, quality of performance management, and employee involvement. The variable of interest, SP, serves as a comprehensive measure of an organization's sustainability. In summary, the regression analysis model effectively explains the variability observed in SP, demonstrating that the predictor variables collectively contribute to the organization's sustainability. However, it is essential to examine these findings considering possible limitations and uncontrolled variables that could influence the outcomes of the model.

Table 6. Model Summary Results of one-way ANOVA

Variable	Sum of Squares	F-value	Sig. (p-value)	Significance
Green Hiring (GH)	217.830	2.013	0.000	Significant
Green Training (T)	189.602	3.018	0.000	Significant
Performance Management Systems (PMS)	124.205	1.547	0.000	Significant
Employee Involvement (EI)	147.912	1.109	0.214	Not Significant

Note: The significance levels were measured at  $p < 0.05$ .

Table 6 gives information about one-way ANOVA analysis, and it showed that GH, T, and PMS are significantly different; hence, these three practices are the most relevant practices to be considered by

any organization. The ANOVA of GH was 217.830, and the F-value was 2.013 with  $p = 0.000$ , showing its significant contribution to organizational outcomes. The group differences are also significant in T, with a sum of squares value of 189.602, an F value of 3.018, and a  $p=0.000$ . This refers to the organizational effectiveness of training. The PMS also identifies that formal performance appraisals are valued with a sum of squares of 124.205 with a corresponding F-value of 1.547 and  $p = 0.000$ .

With a sum of squares of 147.912 and an F-value of 1.109,  $p = 0.214$ , EI did not differ across groups; therefore, the factors that influence employee engagement need further investigation. The findings have implications for decision-makers, as while GH, T, and PMS are the most effective areas in developing organizational SP, the drivers of EI are needed better understood to support overall organizational sustainability.

### **Hypothesis Results**

*Testing Hypothesis 1: Green hiring (GH) positively impacts the sustainable performance (SP) of sports service sector organizations.*

The study used a one-way ANOVA to assess the impact of GH on SP. The data analysis revealed an F-value of 2.013 and a p-value of 0.000 ( $p < 0.05$ ), demonstrating statistical significance. This highlights a significant difference in the green hiring strategies employed by the various groups. Therefore, this Study rejects the null hypothesis, which suggests no difference, supporting the alternative hypothesis. Thus, implementing GH practices has a visible influence on SP.

*Testing Hypothesis 2: The sports service sector has benefited over the decades because of its green training and development programs (T).*

Additionally, a one-way ANOVA was performed to investigate the influence T on SP. The analysis yielded an F-value of 3.018 and a p-value of 0.000 ( $p < 0.05$ ), indicating that the results are statistically significant. This highlights a notable disparity in the training programs among the groups. Therefore, we refute the null hypothesis and confirm that effective training has a positive impact on SP.

*Testing Hypothesis 3: Effective performance management systems (PMS) enhance the long-term performance of sports service sector organizations.*

The ANOVA analysis of the performance management systems (PMS) resulted in an F-value of 1.547, with a p-value of 0.000 ( $p < 0.05$ ), indicating a statistically significant finding. This validates a notable significance in performance management systems among the groups, bolstering the hypothesis that effective performance management contributes enhances SP in long run.

*Testing Hypothesis 4: Increased employee involvement (EI) in environmental initiatives has a positive impact on the sustainable performance (SP) of sports service sector organizations.*

The ANOVA analysis revealed that the F-value for EI was 1.109, with a corresponding p-value of 0.214 ( $p > 0.05$ ). These results indicate that there is no statistically significant relationship between EP and SP. Consequently, we do not reject the null hypothesis, indicating that there is no significant disparity in Employee Involvement among the groups. Thus, based on this analysis, we cannot definitively infer that increased EI has a positive impact on sustainable performance.

The results obtained from the one-way ANOVA analyses offer vital insights into the connections between different organizational practices and sustainable performance in sports service sector organizations. The findings strongly validate Hypothesis 1, demonstrating that GH practices have a significant influence on SP. The F-value ( $F = 2.013, p < 0.05$ ) demonstrates the statistical significance of the differences in green hiring practices among the groups, thereby reinforcing their positive impact on SP.

Furthermore, the analysis strongly supports Hypothesis 2, as it reveals significant differences in T among the groups ( $F = 3.018, p < 0.05$ ). This highlights the beneficial influence of well-designed training and development programs on long-lasting performance in sports service sector organizations. Furthermore, the results offer convincing proof in support of Hypothesis 3, highlighting the significance of effective PMS in enhancing SP. The F-value ( $F = 1.547, p < 0.05$ ) indicates that there is a statistically significant relationship between effective Performance Management practices and sustainable performance.



Nevertheless, Hypothesis 4, indicate that more employee participation in environmental initiatives may not have a substantial impact on sustainable performance in sports service sector employees. The absence of statistical significance in the F-value ( $F = 1.109$ ,  $p > 0.05$ ) suggests that there is no significant variation in EI between the groups which can be seen in ANOVA table as well. Therefore, based on this analysis, it can be concluded that such EI may not have a significant effect on SP at least in the Indian sports service sector. These findings highlight the significance of implementing green hiring practices, effective training programs, and efficient performance management systems to improve sustainable performance in sports service sector organizations. Additional investigation is required to examine the correlation between employee participation in environmental initiatives and sustainable performance. These observations can provide valuable information for developing organizational strategies that focus on enhancing sustainability practices and overall performance in the service sectors specially in developing countries like India.

## Discussion

As can be seen from the results green hiring, green training and development, performance management, and employee involvement among them, green hiring practices improve sport service sector organizations' sustainability in a long run, based on the first hypothesis results and extensive literature on environmental conservation and organizational sustainability, this hypothesis suggests that recruiting environmentally conscious people can foster a culture of sustainability in organizations, which can later improving long-term performance.

Green hiring play a crucial role in aligning organizational goals with environmental sustainability by prioritizing candidates committed to ecological values, thus fostering a culture of environmental responsibility (Mousa & Othman, 2020; Shahrulnizam et al., 2024; Rahayu et al., 2024). This hypothesis is supported by the discussion of aligning HR processes with sustainability goals and incorporating green initiatives into recruitment and now becoming popular in the last decade.

For the second hypothesis, training and development programs can foster the skills needed in employees and make them more aware of environmental causes. That awareness is later transformed in their behavior, which also can be seen in other fields as well as sports service sector employees. Organizations must implement green training and development programs to develop environmental responsibility across their workforce and with sustainability goals through these practices which lead to workforce development in environmental consciousness (Bhardwaj et al., 2024; Jiménez-Jiménez et al., 2025).

The third hypothesis examines how performance management systems affect sustainability, this hypothesis suggests that efficient performance management aligns internal processes with external stakeholder expectations, improving organizational sustainability. Organizations that utilize performance management systems achieve strategic impacts on sustainable development since PMS directly connect strategic HRM practices to organizational outcomes. A properly structured PMS supports employee engagement through specific objective frameworks and active feedback processes which leads to performance improvement (Harefa et al., 2024). Companies adopting PMS strategically achieve both long-term productivity growth and successful market competition in fluctuating market conditions (Yasa, 2024).

The fourth hypothesis examines employee environmental initiative involvement and sustainable performance. This hypothesis uses the "ladder of participation" framework and empirical evidence on employee engagement's positive impact on organizational success to argue that greater environmental involvement improves sustainability. The analysis did not support this hypothesis, but the discussion suggests more research on the complex relationship between employee involvement and sustainable performance. Research indicates organizations often do not achieve full integration or successful evaluation of GHRM practices such as employee environmental involvement and sustainable performance (Zibarras, 2015). The existing evidence consists of mixed results and researchers lack clarity on direct connections between employee environmental involvement and sustainable performance. The study results showing no significant relationship could be due to special industry and contextual aspects which exist uniquely within the Indian sports service sector. Employee involvement



leads to positive sustainability results within both manufacturing and hospitality sectors according to Sibhatu et al. (2025) and Wang et al. (2025) as their research suggested. The observed difference in findings relates to organizational culture which Indian sports organizations frequently use hierarchical decision patterns to limit their sustainable practice initiatives. The absence of measurable external requirements for employee-driven sustainability practices in this sector could diminish workers' sustainability engagement and their ability to take meaningful environmental action.

The discussion explains each hypothesis's theoretical foundations and places them in the GHRM and organizational sustainability literature. The paper prepares for empirical analysis of the effects of GHRM practices on sustainable performance in sports service sector organizations by providing a comprehensive overview of the research hypotheses and theories. Examining our findings through the ability-motivation-opportunity (AMO) framework generates more detailed theoretical understandings. The selection process of green hiring improves worker abilities by choosing candidates whose natural environmental expertise matches, green training and development programs boost employee commitment through focused environmental knowledge delivery and performance management helps individuals achieve sustainability goals through well-structured feedback. The set of practices in the AMO model acts together to boost organizational sustainability.

## Conclusions

Integrating sustainable performance through GHRM practices is crucial for attaining organizational sustainability in India. Adopting efficient green hiring and green training and development strategies aids in developing a workforce that is both proficient and environmentally aware. These endeavors are in accordance with the ability-motivation-opportunities theory, which underscores the significance of equipping employees with the requisite resources, drive, and chances to excel. However, the study also finds areas for improvement, such as employee engagement in environmental activities, where group differences are less significant. Further, organizations can achieve sustainable growth, reduce environmental impact, and long-term success by promoting employee involvement with facilitation of participatory decision-making mechanisms strengthening their engagement in organizational sustainability goals as it can be seen from the findings in the content of Indian sports service sector. Overall, the adoption and acceptance of GHRM practices, which include promoting environmental awareness, implementing green hiring strategies, investing in green training and development, aligning performance management systems with sustainability goals, facilitating employee participation, are very essential managerial actions for needed for promoting sustainability within organizations at its core value.

## Managerial Implications

GHRM improves organizational performance and sustainability, which helps organizations improve their reputation, attract and retain top talent, and boost their skills by incorporating environmental principles into HR policies and strategies in this resent ever competitive market. GHRM practices like green hiring, green training and development, and performance management systems promote an environmentally conscious organization. GHRM practices optimize resource efficiency, waste reduction, and eco-innovation, saving money, improving operational efficiency, and increasing competitiveness as stated by (Alegbesogie et al.,2023). Finally, establishing supportive work environments that prioritize employee contributions and encourage transparent communication is crucial for addressing barriers to employee engagement in environmental initiatives, such as resistance to change and limited awareness is something that is not new.

## Limitations

Future research can explore mixed-method approaches can explain the relationship between GHRM and sustainability using quantitative and qualitative stakeholder data. Study does not fully examine GHRM

practices' sustainability effects. Cause and mediating and moderating factors like employee attitudes, organizational culture, and stakeholder participation can be determined by longitudinal or experimental designs. India's sports service sectors' implementation of GHRM practices may be hindered due to law, market dynamics, and social norms. National wide differences in GHRM practices adoption and outcomes can be revealed by more comparative research.

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## References

- Abedelrahim, S., Qassim, A. A., & Alatawi, F. M. H. (2024). Green Practices in Action: Examining HRM's Role in Fostering Environmental Performance in Egypt's Hospitality Sector. *Sustainability*, 16(8), 3314. <https://doi.org/10.3390/su16083314>
- Ali, M., Shujahat, M., Fatima, N., De Sousa Jabbour, A. B. L., Vo-Thanh, T., Salam, M. A., & Latan, H. (2024). Green HRM practices and corporate sustainability performance. *Management Decision*, 62(11), 3681–3703. <https://doi.org/10.1108/md-05-2023-0787>
- Aljuwaied, M., Litos, L., & Salonitis, K. (2023). From manufacturing to public service organisations: Lean as an effective approach to achieve sustainable environmental performance. In *Advances in transdisciplinary engineering* (pp. 16–21). <https://doi.org/10.3233/atde230893>
- Alkhalaf, T., & Al-Tabbaa, O. (2023). The effect of ability, motivation and opportunity (AMO) on SMEs' innovation performance. *Creativity and Innovation Management*, 33(1), 21–38. <https://doi.org/10.1111/caim.12578>
- Amenaghawon, I., Igbiniyesu, K., & Alegbesogie, S. (2023). The impact of green human resource management practices on organisational performance. *Vilnius University Proceedings*, 37, 6–11. <https://doi.org/10.15388/vgisc.2023.1>
- Anup, Kaith., & Geeta, Sachdeva. (2024). Green HRM for Sustainable Business. *Advances in human resources management and organizational development book series*, 141-162.
- Agwa, R., Umogbai, M. E., Kwahar, N., & Hanmaikyur, T. J. (2024). Green human resource management practices: evidence from primary data analysis. *Journal of Advance Research in Business, Management and Accounting*, 10(3), 15–30. <https://doi.org/10.61841/ysd1mp31>
- Amjad, F., Abbas, W., Zia-Ur-Rehman, M., Baig, S. A., Hashim, M., Khan, A., & Rehman, H. U. (2021). Effect of green human resource management practices on organizational sustainability: the mediating role of environmental and employee performance. *Environmental Science and Pollution Research*, 28, 28191-28206.
- Broccardo, L., Alfiero, S., & Culasso, F. (2024). Enhancing Performance Management systems in a challenging environment. *Management Control*, 1, 5–14. <https://doi.org/10.3280/maco2024-001001>
- Benevene, P., & Buonomo, I. (2020). Green human resource management: An evidence-based systematic literature review. *Sustainability*, 12(15), 5974. <https://doi.org/10.3390/su12155974>
- Bhardwaj, A., Kar, A., Bohidar, S., & Ramkumar, G. (2024). Green HRM Awareness and Training in Higher Education Institutions. *Advances in Higher Education and Professional Development Book Series*, 15–48. <https://doi.org/10.4018/979-8-3693-2956-6.ch002>
- Chatterjee, S., Chaudhuri, R., & Vrontis, D. (2023c). Creating organizational value and sustainability through green HR practices: An innovative approach with the moderating role of top management support. *Business Ethics the Environment & Responsibility*, 34(1), 17-31.



<https://doi.org/10.1111/beer.12569>

- Dalla Valle, C., Alves Pacheco de Campos, S., Klein, L. L., Rizzetti, D. M., & da Silva Sotero, N. (2024). The contributions of green people management to the development of organizational competencies for sustainability. *Social Responsibility Journal*, 20(9), 1724-1746.
- Faisal, S. (2023). Green Human Resource Management—A Synthesis. *Sustainability*, 15(3), 2259. <https://doi.org/10.3390/su15032259>
- Growney, C., & Hess, T. M. (2019). Longitudinal relationships between resources, motivation, and engagement in cognitively demanding activities. *Innovation in Aging*, 3(Supplement\_1), S309.
- Harleen, K., & Ragini, G. (2024). Analyzing green interpersonal citizenship behavior as a mediator between green HRM and green outcomes: A study of manufacturing units. *Corporate Social Responsibility and Environmental Management*. <https://doi.org/10.1002/csr.2856>
- Harefa, T., Santoso, R. S., & Fuadah, L. L. (2024). Literature Review of Performance Management Systems and Their Impact on Employee Performance. *International Journal of Economics, Accounting, and Management*, 1(4), 251-259.
- International Labour Organization (ILO). (2024). India Employment Report 2024: Youth employment, education and skills (pp. 190-191). Geneva: International Labour Office. <https://www.ilo.org/publns>
- J, S., & Florence, S. (2024). A Conceptual Study on Training and Development Programme and Its Benefits to Employee and Organisation. *International Journal for Multidisciplinary Research*, 6(3). <https://doi.org/10.36948/ijfmr.2024.v06i03.20751>
- Jameel, A., Hakro, J. A. K., & Mahoto, K. M. (2024). Impact of training and development on employees' performance: A case of educational sector in Larkana, Sindh, Pakistan. *Asia Pacific (Jamshoro)*.
- Jiao, Y., & Wang, Y. (2024). The formation of tourists' pro-environmental behavior in natural history museum scene: A configuration analysis based on motivation-opportunity-ability theory. *Journal of Vacation Marketing*. <https://doi.org/10.1177/13567667241247073>
- Juhari, N. F., M.-Y., Y., Ramayah, T., Chiappetta Jabbour, C. J., & Kot, S. (2024). Green human resource management and employee ecological behavior: Testing green culture and green satisfaction as parallel mediators in Malaysian higher education. *Corporate Social Responsibility and Environmental Management*. <https://doi.org/10.1002/csr.2800>
- Khan, R. a. G., Khan, F. A., & Khan, M. A. (2011). Impact of Training and Development on Organizational Performance. *Global Journal of Management and Business Research*, 11(7).
- Kinisa, G. R. O. (2019). Impact of Employees' Training and Development on Organizational Performance: A Case of the National Bank of Commerce (NBC) Mwanza City. *International Journal of Scientific and Research Publications*, 9(8), p9262. <https://doi.org/10.29322/ijsrp.9.08.2019.p9262>
- Koster, F. (2011). Able, willing, and knowing: the effects of HR practices on commitment and effort in 26 European countries. *The International Journal of Human Resource Management*, 22(14), 2835-2851. <https://doi.org/10.1080/09585192.2011.599946>
- Krishan, M., Kumar, P., & Pandey, S. (2024). The study on the impact of Performance Management system on employee performance. *Indian Scientific Journal of Research in Engineering and Management*. <https://doi.org/10.55041/ijrsrem32628>
- Krishnan, N., Rajagopal, L., Anitha, P., Nagpal, P., & Jitendra, G. (2024). Green HR techniques: A sustainable strategy to boost employee engagement. <https://doi.org/10.4324/9781032708294-19>
- Lepistö, L., & Lepistö, S. (2023). Performance Management systems in a shared service centre: An exploration of organisational injustice. *Journal of Organizational Effectiveness*. <https://doi.org/10.1108/joep-08-2022-0231>
- Li, L. (2024). A review of research on factors influencing employee green behavior. *International Journal of Global Economics and Management*, 3(2), 329-333. <https://doi.org/10.62051/ijgem.v3n2.37>
- Marini, M., Handoyo, S., & Sukadiono, S. (2023). Green work engagement: A literature review. *Research Synergy Foundation Conference Proceeding Series*. <https://doi.org/10.31098/bmss.v3i3.662>
- Morgan, Y.-C., Fok, L. Y., & Zee, S. M. L. (2023). Examining the impact of environmental and organizational priorities on sustainability performance in service industries. *International Journal of Productivity and Performance Management*. <https://doi.org/10.1108/ijppm-02-2023-0053>
- Mousa, S. K., & Othman, M. (2020b). The impact of green human resource management practices on sustainable performance in healthcare organisations: A conceptual framework. *Journal of Cleaner Production*, 243, 118595. <https://doi.org/10.1016/j.jclepro.2019.118595>

- Naila, N., & Nuță, A. C. (2024). Envisioning the Invisible: Unleashing the Interplay Between Green Supply Chain Management and Green Human Resource Management: An Ability-Motivation-Opportunity Theory Perspective Towards Environmental Sustainability. Deleted Journal. <https://doi.org/10.47852/bonviewjcbar42022030>
- Obeidat, S. M., Abdalla, S., & Bakri, A. a. K. A. (2022). Integrating green human resource management and circular economy to enhance sustainable performance: an empirical study from the Qatari service sector. *Employee Relations*, 45(2), 535–563. <https://doi.org/10.1108/er-01-2022-0041>
- Pilko, A. (2023). Performance management: A case study of the emergency medical and response services in Limpopo province. <https://doi.org/10.51415/10321/4842>
- Plugge, A., & Nikou, S. (2024). Quantitative Research. In *Digitalisation of Global Business Services: Orchestrating the Enterprise Ecosystem* (pp. 45-67). Springer.
- Papademetriou, C., Anastasiadou, S., Belias, D., & Ragazou, K. (2025). Integrating Sustainability into Human Resource Management: Building a Greener Workforce for the Future. *Sustainability*, 17(3), 1113.
- Shahrulnizam, N. A. A., Hassan, M. A., Azizie, N. A. M., Rahim, N. S. A., & Saidi, M. I. (2024). Green recruitment and selection: Enhancing environmental performance through sustainable hiring practices. *International Journal of Academic Research in Business and Social Sciences*, 14(10), 449-456.
- Sathapanickaboot, T., & Ueasangkomsate, P. (2023, November). How does green human resource management influence employee engagement through the sustainable organization of air courier services providers?. In *2023 IEEE International Conference on Technology Management, Operations and Decisions (ICTMOD)* (pp. 1-6). IEEE.
- Shah, A. K., & Shukla, A. (2024). Mapping the decade of green human resource management research: bibliometric analysis. *Interdisciplinary Environmental Review*, 23(3), 181-198.
- Shukla, K., & Bankar, S. (2022). Adoption of Green HRM Practices for building sustainable models in the Indian Markets. *SDMIMD Journal of Management*, 1-12.
- Saqlain, M., Soomro, F. A., Mangi, A. R., & Ibrahim, I. (2024). From Green Practices to Green Profits: Exploring the Link between Green HRM and Environmental Performance. *Journal of Social & Organizational Matters*, 3(4), 566–586. <https://doi.org/10.56976/jsom.v3i4.156>
- Sibhatu, H. B., Debela, K. L., & Kero, C. A. (2025). Effects of Green Human Resource Management Practices on Organizational Sustainability Mediated by Employee Engagement: Evidence from Ethiopian Manufacturing Industries. *International Journal of Organizational Leadership*, 0(0), 23–43. <https://doi.org/10.33844/ijol.2025.60446>
- Silveira Pérez, Y., Sanabria Navarro, J. R., Guillén Pereira, L., Mediavilla Ruiz, H. R., Mediavilla Ruiz, C. P., & Armas Castañeda, N. P. (2022). Circular economy: a challenge for latin american sports institutions. *Retos*, 44, 309–318. <https://doi.org/10.47197/retos.v44i0.90901>
- Jamal, T., Zahid, M., Martins, J. M., Mata, M. N., Rahman, H. U., & Mata, P. N. (2021). Perceived green human resource management practices and corporate sustainability: Multigroup analysis and major industries perspectives. *Sustainability*, 13(6), 3045.n
- Jiménez-Jiménez, J., Rodríguez Torres, Ángel F., & Aramendi Jáuregui, P. (2025). Health education at university: an opportunity to learn to live in a sustainable way. *Retos*, 62, 215–224. <https://doi.org/10.47197/retos.v62.104204>
- Rahayu, T., Kyungro Chang, K. C., Castyana, B., Taufik, M. S., Anggita, G. M., Yudhistira, D., Prasetyasari, D. W., Setyawati, H., & Purwoto, S. P. (2024). The effect of sports event on revisit intention to build sports tourists' sustainability. *Retos*, 57, 780–789. <https://doi.org/10.47197/retos.v57.103879>
- Roy, A. (2023). The impact of foreign direct investment, renewable and non-renewable energy consumption, and natural resources on ecological footprint: an Indian perspective. *International Journal of Energy Sector Management*, 18(1), 141-161.
- Wang, Y., Ummar, R., Qureshi, T. M., Haq, J. U., & Bonn, M. A. (2025). Employee Sustainability: How Green Practices Drive Employee Well-Being and Citizenship Behavior. *Sustainability*, 17(3), 936. <https://doi.org/10.3390/su17030936>
- Yasa, I. P. B. (2024). Implementation of Performance Management to Increase Employee Productivity. *JIHAD : Jurnal Ilmu Hukum Dan Administrasi*, 6(3). <https://doi.org/10.58258/jihad.v6i3.7407>
- Zibarras, L. D., & Coan, P. (2015). HRM practices used to promote pro-environmental behavior: a UK survey. *The International Journal of Human Resource Management*, 26(16), 2121-2142.



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