

Building sustainable workplaces: A systematic review of green human resource management (GHRM) practices and their impact on organisational sustainability

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ABSTRACT

This is a systematic review of a total of eighteen empirical studies, which explore the role of green human resource management (GHRM) practices in organisational sustainability in different sectors and national settings. Using PRISMA 2020 and a protocol registered in PROSPERO (CRD420251229461), the review finds a consistent positive impact of green recruitment, green training, green performance management, and green reward systems on environmental performance, green innovation, and pro-environmental behaviour by employees. The results suggest that a significant number of these relationships are mediated by behavioural mechanisms, specifically green organisational culture, environmental felt responsibility, and green work engagement, while being moderated by leadership style, HR competencies, and contextual factors related to the implementation outcomes. Although the strategic role of GHRM has been strongly supported by empirical evidence, the review notes that the methodology has methodological weaknesses, including cross-sectional designs and the geographic focus of the study in Asia and the Middle East. On the whole, the review shows that GHRM is an important organisational lever to be used in embedding sustainability in workforce systems and offers clear theoretical, practical, and methodological guidelines on how to develop the field. Therefore, it is recommended that Green Human Resource Management (GHRM) practices should be adopted in organisations to improve their performance in increasing sustainability. Policymakers and practitioners should restructure these practices to suit their contextual situations, thereby making the transformation effective in the workplace.

Keywords: Environmental Performance, Green Innovation, Green Human Resource Management (GHRM), Pro-Environmental Behaviour, Sustainability, Sustainable HRM, Organisational Behaviour

1. INTRODUCTION

Green Human Resource Management (GHRM) has become a key strategic tool by which organisations have systematically incorporated the issue of environmental sustainability in their human resource systems. The progressive implementation of green human resource management (GHRM) practices, including environmentally oriented recruitment, training, and performance appraisal, as a means to promote pro-environmental competencies and behavior in employees, is supported by empirical studies (Masri & Jaaron, 2017; Ren et al., 2018). Complementary research has shown that the practices increase the ecological awareness and motivation of employees, which supports the organisational conservation of resources and environmental governance (Saeed et al., 2019). Additional evidence assumes that GHRM is associated with the more sustainable operation culture development based on the integration of ecological goals into the daily operations of individuals and groups (Zaid et al., 2018; Lu et al., 2022). In cases where organisations introduce such efforts, carbon footprints, waste streams, and the development of innovative processes that are environmentally responsible are often lowered (Malik et al., 2020; Kuo et al., 2022). According to scholars, the intersection of HRM and environmental management is an indicator of a paradigm shift, as the traditional functions of HR transform into strategic ones, with the emphasis on sustainability (Ren et al., 2018). The rationale behind it is critical, in that it offers a conceptual framework through which the organisation may have its HR systems as the main tools through which it may improve the performance of the organisation, as well as initiate long-term changes in the workplace.

Although there has been significant growth in the field, there is still a considerable empirical research gap in the field of GHRM, which is theoretically fragmented and methodological, across geographical and industrial settings. The papers have a great diversity in terms of the focus; some of them focus on the employee-level outcomes, including pro-environmental behaviour, engagement, and environmental responsibility (Saeed et al., 2019; Tran, 2023), whereas others consider the organisational-level measures, such as green innovation, sustainability performance, or green intellectual capital (Aftab et al., 2023; Malik et al., 2020). The heterogeneity of the methods also makes the synthesis more difficult, as the majority of the studies are based on cross-sectional designs, self-reported measurements, or non-random selection processes that limit the ability to make causal inferences and generalise the results (Ahakwa, 2021; Khaskhely, 2022). The contextual bias of research is created by the geographical focus in Asia and the Middle East, and the evidence of Africa is still insufficient, with only a few studies being conducted in Ghana and Kenya (Ahakwa, 2021; Odhiambo, 2024). The theoretical frameworks used in various research differ significantly, as they include the Ability Motivation Opportunity (AMO) model, social exchange theory, and institutional theory, which are frequently not coherently integrated (Ren et al., 2018). These inconsistencies have produced conflicting findings on what GHRM practices have the greatest impact on sustainability outcomes and in what circumstances the impact can be found. The identification of such fragmentation is important because it highlights the need to have a systematic review that can synthesise scattered evidence, establish patterns, and describe the processes through which GHRM practices can be associated with sustainable organisational performance.

Therefore, a systematic review is essential to generate an integrative synthesis of the available empirical evidence and determine the effectiveness of GHRM practices to promote organisational sustainability. Empirical studies show that GHRM has the potential to improve environmental performance through mediating the relationship between the constructs of green innovation, environmental responsibility perception, and collaborative organisational cultures (Aftab et al., 2023; Lu et al., 2022). Additional research proves that contextual moderators such as leadership behaviour, environmental orientation, and organisational values define how much GHRM practices can produce environmental and behavioural results (Tanveer et al., 2024; Veerasamy et al., 2024). As the evidence of emerging economies indicates, the introduction of GHRM depends on the institutional requirements, managerial ideology, and resource limitations, particularly in organisations that belong to the public sector and healthcare (Aljohani et al., 2024; Odhiambo, 2024). The studies carried out in the service and manufacturing industries show that the correlation between GHRM and sustainability is not always linear, but in many cases, it is based on the compatibility of HR practices with the overall sustainability policies of an organisation (Khan et al., 2025; Kuo et al., 2022). Such results indicate that a thorough synthesis is required that will be able to assess the consistency and the strength of such relations in a variety of settings. The reasoning behind such a review is twofold. It helps to find strong evidence, sheds light on theoretical and methodological gaps, and provides a platform to further academic knowledge. It also offers practical recommendations to HR managers who want to adopt effective green strategies.

1.1 Research Objectives

- (i) To examine how Green Human Resource Management (GHRM) practices are implemented across different organisational contexts.
- (ii) To assess the influence of GHRM practices on organisational sustainability outcomes, including environmental performance and employee pro-environmental behaviour.
- (iii) To identify the key enablers and barriers that shape the effective adoption of GHRM practices in diverse industries and regions

II. THEORETICAL REVIEW

The AMO framework offers a pragmatic organising logic of research on Green Human Resource Management (GHRM). Appelbaum et al. (2000) define AMO as a combination of ability of employees, motivation and opportunity that leads to performance. As Ren, Tang, and Jackson (2018) demonstrate, green training is often linked to ability, green rewards to motivation, and participatory practices to opportunity in the GHRM studies. These combined effects are often assessed in empirical studies in GHRM, instead of individual practices (Ren et al., 2018). The AMO approach allows scholars to determine the HR leverages that need to be reinforced to produce environmental results. The importance of this focus lies in the fact that it transforms a wide sustainability agenda into testable HR interventions that can be assessed and compared in various settings.

The Social Exchange Theory explains the reason why employees give back on the organisational investments on sustainability. Blau (2017) maintains that the perceived organisational support generates obligations which are later returned by employees in positive behaviour. In the GHRM research, Saeed et al. (2019) use this conceptual model and discover that employees have a greater pro-environmental behaviour when the organisations train and reward

them through green training and recognition. According to Lu et al. (2022), responsible leadership makes employees feel more responsible, and hence, their green behaviors in return. Therefore, SET bridges the HR inputs and signals of leadership with voluntary green behaviours. This connection is consequential since a lot of the sustainability results rely on discretionary employee effort which cannot be guaranteed by formal policies.

The Resource-Based View considers GHRM as a strategic source of advantage in regards to unique human and intellectual capital. Barney (1991) argues that competitive advantage can be maintained by resources which are valuable, rare, inimitable and non-substitutable. Malik et al. (2020) relate GHRM to green intellectual capital and prove that this capital mediates the correlation between the HR practices and the sustainability outcomes. As demonstrated by Tanveer et al. (2024), HR competencies and perceived environmental orientation are moderating factors in the extent to which organisations transform HR investments into green capabilities. Collectively, the RBV and contingency perspectives can be used to explain the ability of GHRM to produce lasting advantage and the contingency in the nature of its impacts. This combined perspective highlights that companies need to come up with unique green resource and match them to contextual facilitators to achieve sustainable performance.

III. METHODOLOGY

3.1 Search Strategy and Data Sources

The review used an extensive and methodical search strategy to find empirical studies that investigated the Green Human Resource Management (GHRM) and organisational sustainability. The protocol was prospectively registered in PROSPERO (CRD420251229461). As per the PRISMA 2020 requirements, databases containing major bibliographic tools, such as Scopus, PsycINFO, Web of Science, Business Source Complete, Emerald Insight, and ScienceDirect, were searched as suggested by the requirements of multidisciplinary management research (Page et al., 2021). In order to reduce the impact of publication bias, which is a well-known technique in systematic review methodology, further grey literature was obtained using Google Scholar, dissertation archives, and conference proceedings (Higgins et al., 2024). The search combinations used in searching for articles in different databases are as shown in the table below.

Table 1

Combined Boolean Search Strings Used in the Systematic Review

Search Focus	Boolean Search String
A. Broad GHRM and Sustainability	("green human resource management" OR GHRM OR "sustainable HRM" OR "environmental HRM") AND ("organizational sustainability" OR "environmental performance" OR "sustainable performance")
B. GHRM Practices and Employee Outcomes	("green training" OR "green recruitment" OR "green performance appraisal" OR "green compensation") AND ("employee green behavior" OR "pro-environmental behavior" OR "green engagement")
C. GHRM and Innovation / Strategic Integration	("green HRM" OR "sustainable HRM") AND ("green innovation" OR "environmental innovation" OR "organizational learning")
D. GHRM with Mediators and Moderators	("green HR practices" OR GHRM) AND ("environmental responsibility" OR "green organizational culture" OR "green leadership" OR "HR competencies")
E. GHRM in Industry or Organizational Contexts	("green human resource management" OR "sustainable HR practices") AND ("manufacturing" OR "healthcare" OR "education" OR "hospitality" OR "public sector")

Only English-language articles published since 2015 were searched, which means that the author pinpointed the recent advancements in the field of GHRM research and captured the trends that have been mentioned in the most recent reviews (Ren et al., 2018). Forward and backward citation tracking were carried out to make sure that all was complete, which is in line with the best practices in retrieving systematic evidence (Booth et al., 2021). All search terms were a combination of the terms that were associated with GHRM practices, sustainability, environmental performance, and green behaviour of employees. Such a methodological approach is essential because a strict and clear search strategy will increase the credibility and reproducibility of the review.

3.2 Selection Process and Eligibility Criteria

Selection of the studies was done by adhering to a multi-stage screening procedure that considered the predetermined inclusion and exclusion criteria in accordance with the objectives of the review. Two reviewers screened titles, abstracts, and full texts, and disagreements were settled by discussion or using a third reviewer, which is compliant with the systematic review standards (Higgins et al., 2024). The included studies analysed the GHRM practices in organisational contexts and presented empirical results on sustainability-related consequences, thus showing population-intervention-outcome congruence suggested in management and organisational research

(Tranfield et al., 2003). The research articles were filtered out when they were conceptual articles, editorials, non-organizational, or could not explicitly integrate HRM-based elements of the environment; furthermore, conceptual clarity and methodological applicability were checked. Qualitative and quantitative designs were both acceptable, as the research on GHRM can use different implementation approaches (Ren et al., 2018). The PRISMA flow diagram resulted in 18 studies that were left after the removal of duplicates and the implementation of all inclusion criteria.

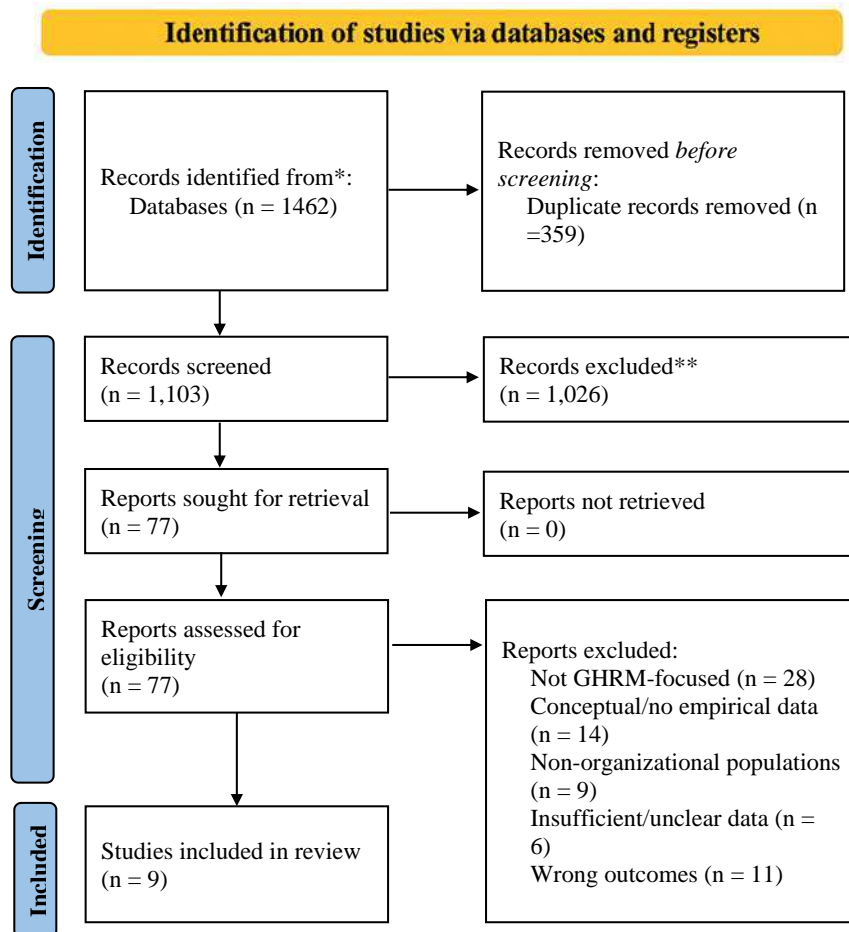


Figure 1
PRISMA Flow Diagram (Team 1)

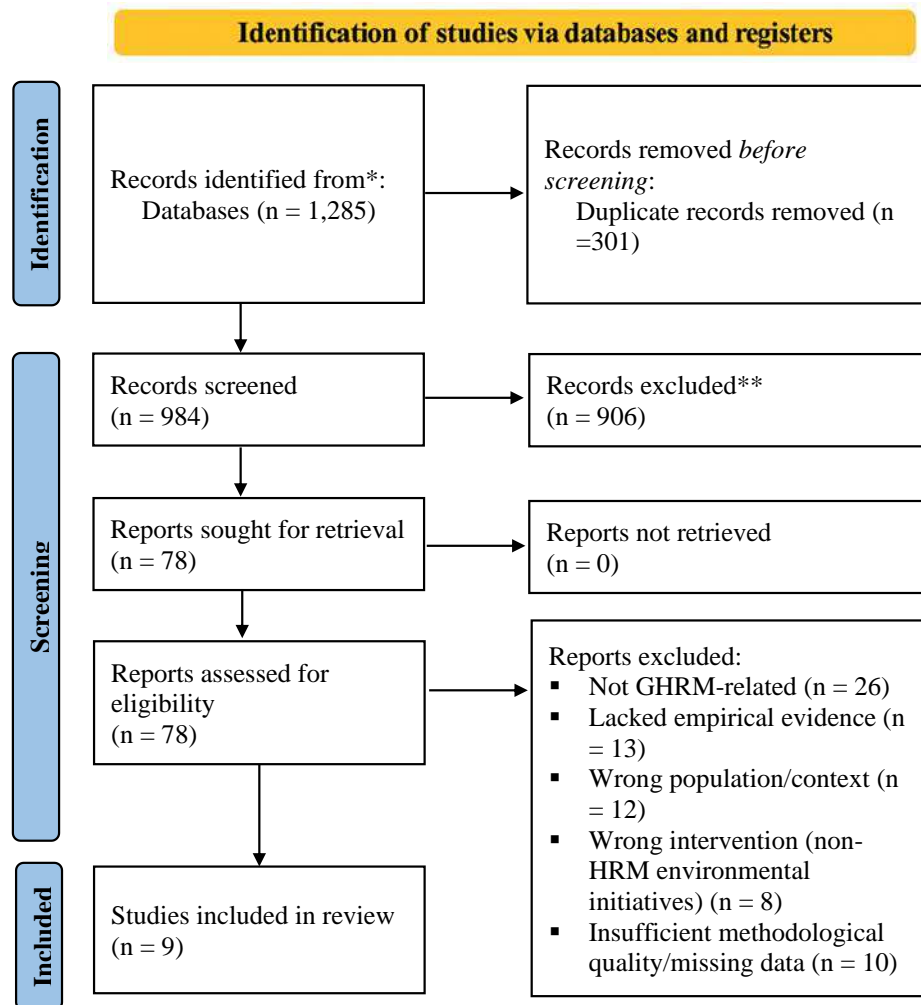


Figure 2
PRISMA Flow Diagram (Team 2)

The reason behind such a strict selection process is the need to make sure that only studies that have methodologically sound and conceptually aligned content are included in the synthesis.

3.3 Quality Assessment

The quality of the methodology and the risk of bias of the included studies were identified with the help of appraisal tools that were valid for their designs. Quantitative studies were evaluated using the Joanna Briggs Institute (JBI) Critical Appraisal Checklists to determine the adequacy of sampling, validity of measurement, and transparency of statistical reporting (Aromataris & Munn, 2020). In the case of qualitative research, the Critical Appraisal Skills Programme (CASP) checklist was used, which considered credibility, trustworthiness, and consistency of results (CASP, 2018). The contribution of mixed methods took the aspects of both JBI and CASP to provide a holistic evaluation. The evidence of each outcome was graded by the GRADE approach to quantitative results and GRADE-CERQual to qualitative syntheses, both of which are generally recommended to increase interpretive confidence in systematic reviews (Guyatt et al., 2011; Lewin et al., 2018). All the assessments were conducted by two reviewers who conducted consensus checks to ensure objectivity. This high standard of quality appraisal is the basis of the methodological soundness of the review and explains the strength of evidence that underlines the conclusions.

3.4 Data Extraction and Synthesis

The extraction and synthesis of data were performed on a systematic structure that included attributes of the studies, sample, GHRM practices, quantifiable results, methods of analysis, and significant results. The extraction was conducted by each reviewer to reduce the number of errors and maintain consistency in accordance with the best practice recommendations on improving the reliability of a systematic review (Higgins et al., 2024). The synthesis was based on the narrative design because research designs, outcome measures, and contextual variables are heterogeneous, which is a characteristic of the organizational and HRM scholarship (Booth et al., 2021). Quantitative findings were presented in the form of drawings of the tendencies in the correlations between GHRM practices and

sustainability outcomes, and qualitative findings were synthesized in the form of themes to determine the recurring concepts and mechanisms. In cases where the studies have indicated mediating or moderating effects, these were coded to improve conceptual knowledge on how and why GHRM affect environmental and organisational outcomes. The lack of similar effect sizes or homogenous measurement tools predetermined the impossibility of conducting a meta-analysis. The method of synthesis is significant since it allows one to achieve a rigorous and conceptually consistent synthesis of a variety of empirical data.

IV. FINDINGS & DISCUSSION

4.1 Characteristics of Included Studies

The last sample included 18 empirical studies, published in 2017-2025, which represented a heterogeneous mix of organisational settings in manufacturing, hospitality, higher education, healthcare, and small and medium-sized enterprises (SMEs). The majority of the studies were located in the Asian countries, namely China, Pakistan, Malaysia, Saudi Arabia, and Vietnam, and, therefore, reflected the geographic focus that was found earlier in the GHRM scholarship (Ren et al., 2018). There were only two studies that emerged out of the African context, such as Ghana (Ahakwa, 2021) and Kenya (Odhiambo, 2024), which demonstrate the lack of evidence in Sub-Saharan Africa. The most common types of methodological designs used in most of the studies were cross-sectional surveys, but some of them utilised longitudinal, qualitative, or even mixed-method designs. The sizes of samples were quite small, under 100 respondents in qualitative healthcare (Aljohani et al., 2024) and over 600 respondents in the manufacturing and hospitality industries (Khan et al., 2025). Table 1 provides an overview of all studies that were included in terms of their main features. This description is necessary since the recognition of methodological and contextual diversity contributes to the interpretative strength of discovered results and defines the extent of generalizability.

Table 2

Characteristics of Included Studies

Study	Country / Region	Sector	Research Design	Sample Size	Primary GHRM Outcomes Examined
Masri & Jaaron (2017)	Palestine	Manufacturing	Quantitative (Survey)	110	Green HRM practices; environmental performance; operational eco-efficiency
Zaid et al. (2018).	Palestine	Manufacturing	Quantitative (Survey)	220	GHRM and green supply chain practices: environmental, economic, and social sustainability performance
Ren et al. (2018).	Multiple (Review)	Cross-sector	Systematic/Conceptual Review	N/A	Theoretical development of GHRM; research trends; conceptual pathways
Good et al. (2023)	United States	Corporate / Mixed industries	Quantitative (Survey)	250	GHRM impacts on creativity, innovation, and organisational performance
Lu et al. (2022).	China	Corporate	Quantitative (Survey)	403	Responsible leadership; GHRM; environmental felt-responsibility; green employee behaviour
Saeed et al. (2019).	Pakistan	Corporate	Quantitative (Survey)	342	GHRM practices and employee pro-environmental behaviour
Malik et al. (2020).	Pakistan	Corporate	Quantitative (Survey)	300	GHRM; green intellectual capital; organisational sustainability
Tanveer et al. (2024).	Malaysia	Corporate	Quantitative (Survey)	372	Strategic and operational HR competencies; perceived environmental orientation; adoption of GHRM
Mousa & Othman (2020).	Egypt	Healthcare	Conceptual	N/A	Conceptual model linking GHRM to sustainable healthcare performance
Kuo et al. (2022).	Taiwan	Corporate	Quantitative (Survey)	289	GHRM; green innovation; environmental performance outcomes
Khaskhely (2022)	Pakistan	Corporate	Quantitative (Survey)	311	Effects of GHRM on corporate sustainable performance (environmental, economic, social)
Aftab et al. (2023).	Pakistan	Corporate	Quantitative (Survey)	278	GHRM practices; green innovation; green behaviour; environmental performance

Khan et al. (2025).	China & Pakistan	Hospitality	Quantitative (Survey)	650	GHRM impacts on green innovative work behaviour
Aljohani et al. (2024).	Saudi Arabia	Healthcare	Qualitative (Interviews)	40	Manager perceptions of GHRM: alignment with organisational work values
Veerasamy et al. (2024).	India	Corporate	Quantitative (Survey)	410	GHRM practices and employee green behaviour
Tran (2023)	Vietnam	Corporate	Quantitative (Survey)	357	GHRM; green leadership; green work engagement
Ahakwa (2021)	Ghana	SMEs	Quantitative (Survey)	162	GHRM practices; environmental performance of SMEs
Odhiambo (2024)	Kenya	Higher Education	Quantitative (Survey)	235	GHRM practices: employee pro-environmental behaviour in universities

4.2 Synthesis of Findings

4.2.1 GHRM Practices Implemented

Green Recruitment and Selection: Green recruitment and selection proved to be one of the most widely used GHRM practices, and organisations were beginning to incorporate environmental factors in the hiring process. A number of research works have stated that companies promoted hiring messages with a focus on environmental values, sustainability commitment, and anticipation of eco-friendly behaviour (Masri & Jaaron, 2017; Tanveer et al., 2024). It has been empirically shown that environmentally framed recruitment makes applicants more attracted to the organisation because of their interest in organisational sustainability and more likely to demonstrate green behaviours after recruitment (Veerasamy et al., 2024). Some organisations included environmental competencies assessment during interviews and selection tests (Zaid et al., 2018). These results are consistent with the results of the hospitality industry and manufacturing industry, where the ecological responsibility is promoted as a workforce need (Khan et al., 2025). Green recruitment, therefore, has a background role in the development of an environmentally oriented workforce. This emphasis is consequential as the recruitment of the appropriate talent forms the foundation capacity that is needed to sustain organisational change.

Green Training and Development: Green training and development were always cited as fundamental aspects of GHRM, which focuses on providing employees with the knowledge and sensitisation they require to engage in pro-environmental behaviours. Research has reported systematic training programmes with waste minimization, energy saving, environmental regulations, and sustainability innovation (Saeed et al., 2019; Lu et al., 2022). It has been proven that this type of training improves the level of environmental knowledge among its employees and intensifies their desire to make a contribution to the sustainability of the workplace (Aftab et al., 2023). Other organisations have implemented continuous environmental learning programmes, such as workshops, coaching, and team problem-solving activities (Good et al., 2023). Education was especially important in the context of manufacturing and the state, where performance standards are of high importance (Ahakwa, 2021; Odhiambo, 2024). Green training is thus considered an indispensable behavioural facilitator that enhances the connection between the organisational sustainability agenda and employee behaviour. This practice is relevant in the sense that it helps in making sure that the employees are competent enough to enact green strategies in an effective manner.

Green Performance Appraisal: Green performance appraisal models were extensively reported as a system of strengthening environmental objectives by having systematic appraisal systems. A great number of organisations included environmental requirements in performance appraisals, including adherence to green policies, involvement in sustainability programmes, and contributions to environmental innovation (Masri & Jaaron, 2017; Malik et al., 2020). Studies have shown that employees react well in cases where performance expectations clearly indicate sustainability values and, thus, enhance better alignment of individual roles and organisational ecological goals (Khaskhely, 2022). Managers in a number of studies considered both behavioural and outcome-based measures, such as compliance with recycling procedures, waste minimisation of resources, and environmental improvement proposals (Kuo et al., 2022). Some companies also associated the results of appraisal with promotion or extension of contract, which indicated the strategic role of environmental goals (Aftab et al., 2023). Green performance appraisal is therefore a decisive governance mechanism of institutionalising environmental accountability. It is significant because it influences the expectation of behaviour and strengthens the execution of policy.

Green Compensation and Rewards: Companies have come up with green rewards and compensation systems to encourage employees to be actively involved in sustainability programs. Some companies have introduced financial rewards, reward systems, or promotion opportunities directly connected to the green performance indicators (Zaid et al., 2018; Malik et al., 2020). Empirical data show that monetary and non-monetary green rewards positively affect the motivation of employees, especially in an environment where significant environmental compliance is

needed (Ahakwa, 2021). Moreover, there are those organizations that promote shared accountability to sustainability performance through the use of team-based reward systems (Saeed et al., 2019). The results of the hospitality and healthcare industries show that symbolic rewards, such as the recognition of eco-friendly behavior in the community, are particularly useful in supporting pro-environmental values (Khan et al., 2025; Aljohani et al., 2024). Green rewards can therefore be used as motivational levers to make sustainability practices adoptable. This mechanism is important as it is able to instill an environmentally responsible culture in organizations.

Employee Green Involvement: Employee involvement practices are used to directly involve workers in sustainability initiatives, decision-making and continuous environmental enhancement initiatives. Green suggestion schemes, environmental committees, and participatory problem-solving sessions are some of the mechanisms that have been reported in various studies (Masri & Jaaron, 2017; Veerasamy et al., 2024). It is proven that engagement increases the level of ownership among employees and leads to environmental citizenship behaviour and collaborative innovation (Saeed et al., 2019; Tran, 2023). Other organisations promoted co-designing green initiatives by the employees, which enhanced the results of implementation by conforming them to the realities of the workplace (Lu et al., 2022). High involvement in a variety of settings, especially the sphere of education and hospitality, was linked to a greater consistency of behaviour and long-term adherence to the green objectives (Odhiambo, 2024; Khan et al., 2025). The participation of employees is therefore observed to be one of the relational sustainability performance drivers. It is significant as it makes the environmental policies shared organisational practices.

4.2.2 Impacts on Organisational Sustainability

Environmental Performance Improvements: Empirical evidence shows that GHRM practices can improve environmental performance greatly through the increased efficiency of resources, a decreased amount of pollution, and the improvement of adherence to environmental regulations. Research in the manufacturing and corporate setting has shown that waste, energy, and carbon emissions have been reduced through the proper implementation of a GHRM system (Masri & Jaaron, 2017; Zaid et al., 2018). Green innovation is one of the key processes in which employees can provide new processes and solutions that are eco-friendly (Kuo et al., 2022). The studies of SMEs note that there are more companies reporting on environmental operations and taking environmental certification (Ahakwa, 2021). Findings in the hospitality and education industries support the existence of similar gains in the reduction of ecological footprint (Khan et al., 2025; Odhiambo, 2024). The results highlight the fact that environmental performance is one of the key measures of sustainable development and the operational impact of GHRM.

Employee Engagement and Green Behaviour: GHRM practices have strong positive outcomes on employee engagement, environmental commitment, and pro-environmental behaviour. Green training, environmental engagement prospects, and supportive leadership can improve the willingness of employees to develop eco-friendly behaviours both within and beyond the work environment (Saeed et al., 2019; Tran, 2023). Empirical research also notes that when employees feel a good GHRM system, they have a greater level of green work engagement, a feeling of responsibility, and voluntary environmental citizenship (Lu et al., 2022; Veerasamy et al., 2024). Employees in hospitality and service sectors are more likely to become motivated to participate in green activities when rewarded or recognised for their effort (Khan et al., 2025). Similar trends are found in public and healthcare institutions, which suggests cross-sectoral uniformity of behavioural results (Aljohani et al., 2024; Odhiambo, 2024). Therefore, employee engagement gives a behavioural premise that is required to sustain organisations.

Organisational Sustainable Performance: The practices of human resource management are directly linked to a better performance of organisations in terms of environmental, social, and economic sustainability. Empirical research shows that companies that have properly developed GHRM systems can attain greater degrees of sustainable competitiveness and sustainably high performance in the long term (Malik et al., 2020). GHRM practices also contribute to organisational reputation and stakeholder trust, which is one of the most important aspects in sustainable branding of firms (Zaid et al., 2018). The experience of multinational and service-oriented organisations has shown that sustainability-oriented HR practices can help organisations to be resilient in terms of their operations and strategic alignment to global sustainability goals (Good et al., 2023). In the case of public sector and tertiary institutions, the same improvement of institutional sustainability outcomes is reported (Odhiambo, 2024). On that note, sustainable performance is a manifestation of the combined effect of environmental, social, and organisational systems.

Innovation and Organisational Learning: Some of the studies reveal that GHRM practices promote green innovation and enhancement of the organisational learning capacity. It has been evidenced that green training and employee engagement make employees creative and innovative in their approach to environmental issues (Good et al., 2023; Kuo et al., 2022). Companies that integrate GHRM and effective leadership endorse greater rates of innovation, work behaviour, and cross-functional cooperation (Khan et al., 2025). Other companies consider environmental learning as a part of continuous professional development programmes and, thus, develop long-term innovation capabilities (Tanveer et al., 2024). The innovation pathways brought about by GHRM are especially useful to

manufacturing and technology-driven organisations (Aftab et al., 2023). This means that innovation is a key facilitator of sustainability change.

Corporate Reputation and Employer Branding: The GHRM practices have a positive impact on corporate reputation as they indicate seriousness to the environment and ethical leadership. Researchers discover that green recruitment messages and sustainability branding help organisations to attract applicants and customers who are green (Veerasamy et al., 2024; Tanveer et al., 2024). It is also demonstrated that well-developed GHRM systems help in terms of external legitimacy and enhanced corporate image, particularly in the competitive service sector (Good et al., 2023). It is advantageous to healthcare and other institutions of the public as it leads to increased trust in stakeholders and accountability (Aljohani et al., 2024; Odhiambo, 2024). Companies that have strong GHRM practices also record higher attractiveness and retention rates by employers, especially the younger workforce, who are more focused on sustainability. Thus, sustainability efforts increase the strategic value of reputation and branding.

4.3 Mediators and Moderators

Environmental Responsibility: Environmental responsibility comes out as a mediator that explains the influence of GHRM on employee behaviour and the sustainability of the organisation. The research proves that green training, green leadership, and environmentally oriented performance systems make employees feel more accountable to the ecological performance of the organisation (Lu et al., 2022; Tran, 2023). Responsible employees will also tend to pursue voluntary green behaviours and innovation (Saeed et al., 2019). It has been shown that responsibility acts as a mental connection between organisational demands and action by the employee (Veerasamy et al., 2024). The impact is especially high in the environments where the leadership continuously demonstrates environmental stewardship (Lu et al., 2022). Thus, responsibility explains the motivation processes of behaviour change.

Green Innovation: Another mediator that has been reported often between GHRM and sustainability outcomes is green innovation. Researchers determine that the GHRM practices and especially the green training and participation are associated with the increased capacity of employees to develop new environmental solutions (Kuo et al., 2022; Aftab et al., 2023). New recycling systems, digital monitoring tools, waste-reduction processes, and energy-saving initiatives are innovations. It is proven that innovative behaviours are beneficial to environmental performance and contribute to sustainable organisational competitiveness (Good et al., 2023). Strengthened effects of innovation are recorded in organisations that promote experimentation and cross-functional team functions (Khan et al., 2025). As a result, innovation is the working mechanism through which GHRM is translated into a form of sustainability enhancement.

Green Work Engagement: Another mediator that comes up in various studies is the green work engagement. GHRM practices are demonstrated to elevate the enthusiasm, attention, and psychological engagement of the employees in environmental activities (Tran, 2023). Involved employees show increased degrees of commitment to the environmental initiatives and long-term engagement in green programmes (Veerasamy et al., 2024). It is also indicated that leadership behaviours that model environmental values are also associated with the enhancement of engagement (Lu et al., 2022). Engaged employees in a hospitality and services setting will have increased chances to develop green routines and will have chances to influence others to do the same (Khan et al., 2025). In this way, the involvement enhances behavioural consistency and the involvement of sustainability in the long term.

Leadership and Organisational Values: The leadership style and organisational values have been widely reported as moderating factors that affect the scale of GHRM results. The empirical research shows that the effect of GHRM on green behaviour becomes more pronounced through responsible leadership as it contributes to the development of positive and ethically-based workplaces (Lu et al., 2022). Sustainability-focused organisational values also help to increase the rate of acceptance of green practices by employees and strengthen behavioural expectations (Veerasamy et al., 2024). The studies conducted in the healthcare and the general population have proven the invaluable nature of value alignment that allows employees to internalise the environmental goals (Aljohani et al., 2024; Odhiambo, 2024). Moreover, employee engagement has been found to be driven by the leadership's interest in green initiatives and innovation (Aftab et al., 2023). These findings highlight the significance of organisational characteristics in the attainment of GHRM results in firms with heterogeneous rates of performance.

Environmental Orientation and Industry Context: The nexus between GHRM and sustainability outcomes is also influenced by the environmental orientation and industry context. The analysis demonstrates the presence of proportionally greater effects in those industries where regulatory oversight is increased, such as manufacturing, healthcare, and hospitality (Masri & Jaaron, 2017; Khan et al., 2025). Companies with a high strategic environmental orientation are more effective in the operationalisation of GHRM practices in their daily operations (Tanveer et al., 2024). In addition, strong innovativeness reactions to GHRM interventions can be observed in organisations that are located in environmentally sensitive places (Kuo et al., 2022). On the other hand, organisations that have a lower environmental orientation have attenuated behavioural responses to GHRM programmes (Ahakwa, 2021). Contextual moderators are, therefore, a determining factor in the effectiveness and scalability of GHRM practices.

4.4. Discussion

4.4.1 Overall Interpretation

The results of this review show that GHRM practices are always effective in improving the sustainability of organisations by increasing employee engagement, environmental responsibility, and green behavioural outcomes in various sectors and nationalities. Quantitative studies indicate that green recruitment, green training, and green performance appraisal have a significant positive effect on environmental performance indicators and sustainability indicators, as shown in manufacturing-related research carried out in Palestine and Pakistan (Masri & Jaaron, 2017; Zaid et al., 2018; Malik et al., 2020). Other studies also note that there are good correlations between GHRM and employee-level outcomes, especially pro-environmental behaviour, green innovation, and green work engagement, which supports the behavioural pathways of how HR practices facilitate more general sustainability agendas (Saeed et al., 2019; Tran, 2023; Khan et al., 2025). There is also qualitative evidence to indicate that the perception of the managers and the organisational values determine the intensity of the GHRM implementation, particularly in the context of the public sector and healthcare, where the cultural and institutional factors are high (Aljohani et al., 2024). Even though research differs in the methodological design and the scope of the sector coverage, the fact that 18 empirical sources draw similar conclusions allows us to interpret the fact that GHRM is a powerful organisational lever to sustainability-oriented change. The significance of this interpretation is that it shows that HR systems are strategic and not peripheral in supporting the sustainability agendas in modern organisations.

4.4.2 Theoretical Implications

The findings of this review offer a number of theoretical contributions to the growing body of GHRM research, especially through reinforcing the theoretical foundations of the behavioural and strategic HRM theories on sustainability outcomes. Several studies implicitly use the social exchange theory by demonstrating that workers are returning green organisational practices by increasing the extent of environmental commitment, innovativeness, and behavioural involvement (Saeed et al., 2019; Veerasamy et al., 2024). This trend indicates that the GHRM practices are the indicators of organisational support, and the employees respond to it by engaging in pro-environmental behaviours. Ability motivation opportunity (AMO) theory is used by other studies to find out how green training, incentives, and participatory mechanisms develop the competencies and motivation required to make environmental performance improvements (Good et al., 2023; Aftab et al., 2023). The uniformity of these results supports the theoretical assumption that HR practices constitute a behavioural infrastructure with the help of which the organisational sustainability goals are achieved. Such theoretical implications are important as they narrow down the current behavioural models as well as give evidence-based directions on the routes of linking HR interventions to sustainability results.

Another theoretical implication of the existing GHRM frameworks highlighted in the review is the significance of leadership and organisational context, particularly responsible leadership and environmental responsibility. Research indicates that leadership behaviours are key upstream facilitators of GHRM effectiveness through the influence they have on employee perceptions of environmental priorities and organisational legitimacy (Lu et al., 2022; Tran, 2023). Moreover, cross-country data have indicated that institutional settings, cultural values, and the specifics of sectors have an impact on the consideration and perceived performance of GHRM practices, which requires more context-specific theoretical advancement (Khaskhely et al., 2022; Odhiambo, 2024). These contextual differences indicate the utility of contingency theory in describing why GHRM can be more completely integrated in certain settings than in others. Also, conceptual work suggests the necessity of combining resource-based views and sustainability perspectives to comprehend how the green intellectual capital is a contributor to the long-term competitive advantage (Malik et al., 2020). The significance of these contributions to the research is that they expand the conceptual map of the GHRM studies and outline multi-level processes that should be further empirically investigated.

4.4.3 Practical Implications

The review has a number of practical consequences for HR practitioners and organisational leaders in need of entrenching sustainability in their workforce systems. First, organisations are encouraged to invest in organised green recruitment and training programmes since such practices were always linked with increased employee competence, environmental awareness, and readiness to embrace green behaviours (Masri & Jaaron, 2017; Ahakwa, 2021). Second, sustainability can be a fundamental part of organisational performance management, as the behavioural expectations can be reinforced by implementing environmental metrics into the performance appraisal systems (Zaid et al., 2018; Veerasamy et al., 2024). It is also indicated in evidence that reward systems that recognise environmental contributions are beneficial to the organisation, especially when the employees feel that the reward systems are fair and consistent with organisational values. These practical implications are important since they help organisations to convert sustainability intentions into quantified and integrated HR practices.

Leadership development and employee engagement also come out as key priorities for organisations that want to implement GHRM effectively. Research demonstrates that responsible leadership behaviours stimulate the internalisation of environmental objectives by the employees and their initiative in implementing green work practices (Lu et al., 2022; Tran, 2023). Moreover, the development of the green organisation culture in healthcare, educational, and hospitality organisations is a priority, and managerial perceptions and sectoral standards determine the extent to which the employees will view sustainability as part of their working responsibilities (Aljohani et al., 2024; Odhiambo, 2024). The practitioners are urged to incorporate GHRM values in wider corporate sustainability policies to ensure that HR systems are in sync with structural and operational environment policies. These lessons are significant since they offer a guide to organisations that intend to institutionalise sustainability using consolidated HR and leadership initiatives.

Despite the evidence on the importance of GHRM that is emerging as shown in this review, the research gaps are also enormous, which makes the field immature. One of the key gaps relates to the fact that all the studies were mostly cross-sectional surveys, which limits the ability to conclude causality and long-term effects of sustainability (Good et al., 2023; Kuo et al., 2022). The African contexts beyond Ghana and Kenya have little research, even though there is growing interest in sustainability in those geographic areas, resulting in a geographical imbalance in the publication of the evidence (Ahakwa, 2021; Odhiambo, 2024). Moreover, the relationship between GHRM and the organisational systems, including supply chain management, leadership pipelines, and digital transformation, is not well-investigated even though the interest in the integrated sustainability approach grows (Zaid et al., 2018; Malik et al., 2020). More effort is also required to demarcate conceptual lines between GHRM and corporate environmental policies and more general ESG frameworks. These gaps should be addressed as they will enhance the empirical and theoretical bases of the GHRM research.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This systematic review summarises the evidence of eighteen empirical studies and proves that green human resource management (GHRM) practices make a crucial contribution to the enhancement of organisational sustainability in terms of the impact on employee behaviour, enhancement of organisational capabilities, and the reinforcement of environmental values in various contexts. The results are always positive in the relations between GHRM activities and the results, including environmental performance, green innovation, and employee engagement, even though the contextual forces and leadership influence the extent of such impacts. Theoretical works prefigure the applicability of behavioural, contingency, and resource-based views in explaining the GHRM processes, and practical knowledge highlights the need to have HR-based interventions that institutionalise environmental behaviours. Despite these advantages, the discipline is still limited by methodological shortcomings and biased geographical representativeness, thus pointing to future multination, longitudinal, and mixed-method studies. Comprehensively, the review confirms that GHRM is a crucial strategic instrument for organisations that aim at establishing sustainable workplaces and react positively to global environmental factors.

5.2 Recommendations

Based on the results in this review, organisations are highly advised to formalise the practises of Green Human Resource Management (GHRM) in their human resource and sustainability core systems. This kind of integration is likely to boost the performance of the environment, support employee engagement, and encourage innovation. In particular, structured green recruitment procedures, special environmental training courses, performance appraisal systems that are adjusted to sustainability goals, and incentive systems that encourage pro-environmental behaviours are promoted. The leadership development programmes must be more focused on responsible and environmentally friendly leadership to reinforce the organisational culture and align employees with sustainability objectives. Moreover, policymakers and HR experts need to reflect on the context-specific changes in GHRM practices, as they must be aware that sectoral, cultural, and institutional differences affect their efficiency. These variables will make GHRM interventions more relevant and effective in various organisational environments. Further studies should be encouraged to make it possible to develop longitudinal and multi-country research that could yield causal data on the long-term effects of GHRM. This type of scholarship will guide both theory and practice, hence promoting the construction of sustainable workplaces.

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