Impact Journal: Management Business and Finance
Vol. 2, No. , Year 2025, hlm. 261-281
ISSN: 3063-9794

THE ROLE OF GREEN HRM AND SUSTAINABILITY IN ENHANCING EMPLOYEE ENGAGEMENT: A LITERATURE REVIEW

Ahmad Yani
Institut Agama Islam Negeri Kerinci, Indonesia

Info Artikel

Article history:

Summit Dec, 2, 2025
Revision Dec, 15, 2025
accepted Dec, 30, 2025

Kata kunci:

Green HRM
Sustainability
Employee Engagement
Social Exchange Theory
Self-Determination Theory
Stakeholder Theory
Sustainable HRM Practices
Organizational Commitment
Pro-Environmental Behavior
Workforce Motivation

ABSTRACT

Purpose: This study examines the role of Green Human Resource Management (Green HRM) and sustainability in enhancing employee engagement. It synthesizes findings from recent research (2019–2024) to identify key practices and theoretical perspectives that contribute to workforce motivation, commitment, and pro-environmental behavior.
Design/methodology/approach: A systematic literature review was conducted, analyzing peer-reviewed studies on Green HRM, sustainability, and employee engagement. The review integrates Social Exchange Theory (SET), Self-Determination Theory (SDT), and Stakeholder Theory to provide a multi-theoretical understanding of how Green HRM fosters engagement.
Findings: The study finds that Green HRM practices—such as green recruitment, sustainability-driven training, performance management, and eco-friendly reward systems—positively influence employee engagement by enhancing intrinsic motivation, organizational commitment, and citizenship behavior. However, gaps remain in the literature, particularly regarding longitudinal studies, cross-cultural comparisons, and experimental research designs.
Practical implications: Organizations can enhance employee engagement by embedding Green HRM into recruitment, training, and reward systems. Transformational leadership and sustainability-driven work cultures strengthen Green HRM's impact, aligning corporate goals with employee values. Incentivizing green initiatives fosters motivation and retention, while digital HR solutions improve efficiency. Integrating sustainability into HRM policies ensures long-term business resilience, employee well-being, and corporate social responsibility (CSR) outcomes.
Social implications: Green HRM contributes to global sustainability by embedding environmental responsibility into workforce management. It supports Sustainable Development Goals (SDGs) by promoting ethical labor practices, reducing carbon footprints, and fostering green workplace behaviors. Organizations that prioritize Green HRM enhance employee well-being, corporate environmental accountability, and broader societal sustainability efforts, driving sustainable economic and environmental progress. Originality: This study provides a novel synthesis of the intersection between Green HRM and employee engagement, using a multi-theoretical lens. It highlights emerging trends, identifies research gaps, and offers practical recommendations for organizations seeking to integrate sustainability into HRM strategies.

Ini adalah artikel akses terbuka di bawah lisensi CC BY-SA.

Corresponding authors:

Ahmad Yani
Institut Agama Islam Negeri Kerinci, Indonesia
Email: ahmadyanidsniain@gmail.com

Introduction

Sustainability has become a core priority for organizations worldwide, with over 70% of Fortune 500 companiesintegrating sustainability into their operations (Global Sustainability Report, 2023). This shift is driven by climate change, stakeholder pressure, and government regulations, compelling businesses to adopt environmentally friendly practices (Shafaei et al., 2020). One emerging approach is Green Human Resource Management (Green HRM), which incorporates sustainability principles into HRM practices to minimize environmental impact while fostering a more engaged and committed workforce (Yong, Yusliza, Ramayah, et al., 2019).

The 2023 Gallup Report highlights that only 23% of employees worldwide are engaged at work, with low engagement costing the global economy approximately $8.9 trillion, or 9% of global GDP (Gallup, 2024). In the U.S., employee engagement peaked at 36% in 2020 but declined to 33% in 2023, while actively disengaged workers dropped from 18% to 16%. These trends underscore the growing challenges in sustaining employee engagement, particularly amid increasing expectations for corporate social responsibility and sustainability initiatives. Green HRM is viewed as a strategic tool to enhance engagement by creating a meaningful and motivating work environment.

Despite rising interest in Green HRM, research primarily focuses on environmental performance, often overlooking its psychological and behavioral impacts on employees. Studies confirm Green HRM's positive effect on environmental performance but provide limited insights into its direct role in employee engagement (Kuo et al., 2022). Similarly, leadership and organizational culture are recognized as key drivers of engagement (Canavesi and Minelli, 2022), yet their interaction with Green HRM remains underexplored. This gap highlights the need for a more comprehensive investigation into how Green HRM influences employee engagement.

Identified Research Gaps Limited holistic integration of Green HRM, sustainability, and employee engagement. Lack of clarity on mechanisms linking Green HRM to engagement. Need for studies identifying moderating or mediating factors in this relationship.

Research Objectives, to address these gaps, this study aims to: Examine the role of Green HRM in enhancing employee engagement. Identify key mechanisms and theoretical perspectives explaining this relationship. Analyze moderating and mediating factors shaping Green HRM's impact. Provide practical recommendations for organizations to integrate Green HRM effectively.

Through a systematic literature review (2019–2024), this study contributes to both theoretical and practical insights, demonstrating how Green HRM can drive sustainable engagement and organizational performance.

Literature Review

2.1 Concept of Green HRM

Green Human Resource Management (Green HRM) is a strategic approach that integrates environmental management into HR policies to foster sustainability within organizations. It aims to embed environmental responsibility in HR practices, enhancing both environmental performance and employee engagement in green initiatives (Zihan et al., 2024). Studies highlight Green HRM's role in improving environmental performance and fostering employee green behavior (Huang et al., 2024). By aligning HRM with sustainability, organizations reinforce their environmental commitments while enhancing operational efficiency.

The evolution of Green HRM is driven by increasing global pressure, regulatory changes, and corporate social responsibility (CSR) demands. Organizations implement CSR initiatives, including environmental operations, in response to stakeholders' expectations (Malik et al., 2021). Stakeholder theory underscores the need to consider these demands when adopting Green HRM (Zihan et al., 2024). Regulatory frameworks, such as the EU Directive 2014/95/EU, further

encourage sustainable business practices . These factors contribute to the widespread adoption of Green HRM.

Key components of Green HRM include:

Green recruitment and selection: Hiring candidates aligned with sustainability values (Jamil et al., 2023).

Green training and development: Enhancing employees' skills in eco-friendly workplace practices (Roscoe et al., 2019).

Green performance management: Integrating sustainability metrics in evaluation systems (Pham et al., 2020).

Green rewards and incentives: Recognizing employees for contributions to sustainability programs (Odhiambo et al., 2023)

Green HRM plays a strategic role in aligning HRM policies with corporate environmental strategies, ensuring organizations achieve sustainability goals effectively.

2.2 Sustainability in Human Resource Management

Sustainable Human Resource Management (HRM) integrates economic, social, and environmental sustainability into HR policies, ensuring long-term corporate success. It balances financial objectives, employee well-being, and environmental responsibility. Research indicates that sustainable HRM enhances employee resilience, boosting work engagement and performance (Lu et al., 2023).

The three key dimensions of sustainability in HRM are:

Economic sustainability: Ensuring long-term profitability while maintaining employee welfare through strategic workforce planning, fair compensation, and optimized human capital investment (Mohiuddin et al., 2022).

Social sustainability: Promoting inclusivity, fair labor practices, and employee well-being by ensuring equal opportunities, safe working conditions, and development programs (Bhoir and Sinha, 2024).

Environmental sustainability: Minimizing carbon footprint via HR policies such as remote work, energy efficiency initiatives, and green business practices, enhancing both sustainability goals and corporate reputation (Lashari et al., 2022).

HRM plays a strategic role in embedding sustainability into corporate culture. Green HRM practices foster a green organizational culture, positively impacting corporate sustainability performance (Ali et al., 2024). Additionally, these practices enhance employee green behaviors, reinforcing long-term business resilience and corporate social responsibility .

2.3 Employee Engagement

Employee engagement reflects employees' emotional and psychological attachment to their work and organization, driving commitment, motivation, and discretionary effort. Engaged employees contribute to higher productivity, job performance, and retention (Schaufeli, 2022). Work engagement, characterized by vigor, dedication, and absorption, is crucial for organizational success. However, (Gallup, 2024) reports that only 23% of employees globally are engaged, leading to substantial productivity losses.

Key factors influencing employee engagement include:

Supportive work environment: Encourages collaboration, open communication, and recognition (Kahn, 1990).

Inspirational leadership: Leaders with authenticity, vision, and empathy enhance employee morale (Qin, 2024).

Career development opportunities: Continuous learning and clear career progression boost engagement (Esaki et al., 2023).

Work-life balance: Flexible work arrangements and well-being initiatives enhance job satisfaction (Lee et al., 2024).

Research highlights the link between employee engagement and improved financial performance, customer satisfaction, and organizational resilience. Engaged employees show higher discretionary effort, creativity, and innovation, directly impacting business outcomes (Deepalakshmi et al., 2024). Moreover, integrating engagement strategies with sustainability initiatives strengthens long-term corporate resilience and corporate social responsibility (CSR) (Boccoli et al., 2023).

2.4 Theoretical Framework

Several theoretical perspectives explain the link between Green HRM, sustainability, and employee engagement, highlighting how sustainability-driven HRM practices shape employee behavior and organizational outcomes.

Social Exchange Theory (SET) suggests that employees reciprocate sustainability commitments with higher engagement and performance. Green HRM fosters trust and organizational identification, reinforcing employee motivation (Aboramadan, 2022).

Self-Determination Theory (SDT) states that autonomy, competence, and relatedness drive motivation (Ryan, 2000). Sustainability participation and green training enhance intrinsic motivation and job satisfaction, boosting engagement (Ababneh, 2021).

Stakeholder Theory highlights an organization's responsibility to employees, customers, and society. Sustainable HRM aligns corporate strategies with stakeholder expectations, fostering employee commitment and meaningful work environments (Ribeiro and Gavronski, 2021).

These theories provide a framework for sustainability-driven HR strategies, promoting employee well-being and corporate environmental responsibility.

2.5 Relationship Between Green HRM, Sustainability, and Employee Engagement

Green Human Resource Management (GHRM) enhances employee engagement by fostering a sustainability-driven organizational culture, increasing motivation, job satisfaction, and commitment. The primary mechanisms through which GHRM influences engagement include:

Enhancing employees' sense of purpose: Employees are more engaged when their work aligns with environmental goals. GHRM integrates sustainability into corporate values and daily tasks, reinforcing this connection (Baykal and Bayraktar, 2022).

Creating a healthier work environment: Eco-friendly workplaces, sustainable resource management, and green corporate behaviors improve employee well-being and reduce workplace stress, enhancing engagement (Gyensare et al., 2024).

Providing recognition and rewards: Incentives, awards, and career development opportunities for sustainability contributions strengthen employee commitment (Ababneh, 2021).

Several factors moderate or mediate the relationship between GHRM and employee engagement:

Organizational Culture: A sustainability-focused culture amplifies the impact of GHRM on engagement. Green organizational culture mediates the link between GHRM and environmental performance (Aggarwal and Agarwala, 2023).

Leadership Style: Leaders supporting sustainability initiatives positively influence employee engagement. Green leadership significantly enhances green work engagement, with organizational culture acting as a mediator (Tran, 2023).

Employee Environmental Awareness: Employees with strong environmental values are more engaged in sustainability-driven workplaces. Research suggests environmental consciousness moderates the relationship between GHRM and environmental performance (Adeel et al., 2022).

These findings highlight the need to align organizational culture, leadership, and employee values with sustainability objectives to maximize GHRM's impact on employee engagement.

2.6 Trends and Gaps in the Literature

Recent research trends (2019–2024) indicate a growing emphasis on the role of Green HRM in shaping sustainable organizational practices and enhancing employee engagement. Notable research directions include:

Integration of technology in Green HRM: The use of artificial intelligence (AI), big data, and digital platforms to improve the efficiency and effectiveness of sustainability-driven HR policies (Gong et al., 2025)

Impact of Green HRM on employee well-being: Studies highlight the relationship between Green HRM and employees' mental health, including stress reduction, work-life balance, and psychological well-being (Wang et al., 2025)

Cross-cultural variations in Green HRM implementation: Research suggests that the effectiveness of Green HRM policies varies across different regional and industry contexts, with distinct cultural, regulatory, and institutional influences (Huang et al., 2024)

Despite these advancements, several research gaps remain:
Limited longitudinal studies: Most existing research relies on cross-sectional data, failing to explore the long-term impact of Green HRM on employee engagement and performance (Kamboj and A, 2024)
Lack of research on leadership's role in Green HRM: There is minimal empirical evidence examining how different leadership styles influence the success of Green HRM in fostering employee engagement (Noor et al., 2023)
Need for comprehensive theoretical models: Current studies often fragment Green HRM, sustainability, and employee engagement. Developing integrated frameworks that explain interrelationships and causal mechanisms remains an ongoing challenge (Maheshwari et al., 2024)

Future research should address these gaps by adopting multidisciplinary approaches and utilizing diverse research methodologies, such as mixed-method designs, longitudinal studies, and experimental research, to provide a more holistic understanding of Green HRM and employee engagement.

Methodology

3.1 Research Design

This study employs a Systematic Literature Review (SLR) to analyze the relationship between Green Human Resource Management (GHRM), sustainability, and employee engagement. The SLR approach ensures a structured, transparent, and reproducible methodology for synthesizing prior research, reducing bias and enhancing validity (Sauer and Seuring, 2023).
The SLR method is selected based on:
Comprehensiveness: Identifies key trends, research gaps, and theoretical advancements (Paul and Criado, 2020).
Reproducibility: Ensures transparency and rigor for future replication (Moher et al., 2009).
Theoretical and Practical Contributions: Provides insights for academia and industry, aiding in evidence-based Green HRM strategies (Paul and Criado, 2020).
To maintain methodological rigor, this study follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 framework (PRISMA2020, n.d.), which consists of four key stages:
Identification – Searching Scopus and Web of Science for peer-reviewed journal articles.
Screening – Removing duplicates and assessing relevance.
Eligibility – Conducting full-text reviews to ensure alignment with research objectives.
Inclusion – Selecting the final set of articles for analysis.

This structured selection process ensures high-quality, peer-reviewed sources. Only Scopus and Web of Science-indexed journals are considered, while other sources, such as books and conference proceedings, serve as supplementary references.

By adhering to PRISMA guidelines, this study enhances the transparency and reproducibility of the literature selection process. The PRISMA flow diagram, illustrating study selection and exclusion criteria, is presented in Section 3.3 (PRISMA2020, n.d.).

3.2 Data Sources and Search Strategy

To ensure a comprehensive and high-quality literature review, this study relies on peer-reviewed journal articles indexed in Scopus and Web of Science (WoS) as the primary data sources. These databases were selected because they contain rigorously reviewed, high-impact research that aligns with the objectives of this study. Additionally, Google Scholar was used as a secondary tool to cross-check citations and identify any relevant but overlooked studies. However, only journal articles from Scopus and WoS were included in the systematic selection process using the PRISMA methodology.

Keyword Selection and Search Strategy. A structured search strategy was developed using Boolean operators to refine results and improve the accuracy of retrieved literature. The primary search terms included:

("Green HRM" OR "Sustainable HRM") AND ("Employee Engagement" OR "Workplace Sustainability")

("Human Resource Management" AND "Sustainability") AND ("Job Satisfaction" OR "Employee Motivation")

Search queries were adapted to each database to ensure consistency in the retrieval process. The filters applied included:

Peer-reviewed journal articles only (excluding conference papers, book chapters, and reports).

Publication years: 2019–2024 to ensure analysis of the most recent and relevant studies.

English-language publications to maintain uniformity in analysis.

Inclusion and Exclusion Criteria. A set of inclusion and exclusion criteria was established to refine the literature selection:

Inclusion Criteria:

Empirical or theoretical studies published in Scopus/WoS-indexed journals.

Studies focusing on Green HRM, sustainability, and employee engagement.

Research addressing organizational HR policies, employee motivation, and environmental sustainability.

Exclusion Criteria:

Conference proceedings, dissertations, and non-peer-reviewed sources.

Studies unrelated to HRM or sustainability.

Duplicates and articles without full-text access.

This structured approach ensures that the final dataset consists of high-quality, relevant, and rigorously reviewed research, providing a robust foundation for analysis in the subsequent sections.

3.3 Data Extraction and Analysis

This study employs the PRISMA framework to ensure a transparent and systematic literature selection process (PRISMA2020, n.d.).. The selection process consists of four key stages:

Identification: A search in Scopus and Web of Science (WoS) yielded 7,583 journal articles. Additional sources from Google Scholar, books, and industry reports were reviewed for supplementary insights but were not includedin the PRISMA selection to maintain methodological consistency.

Screening: 758 duplicates were removed, and 5,801 irrelevant publications were excluded after title and abstract review, leaving 1,024 articles for full-text assessment.

Eligibility: 613 articles were excluded due to irrelevance, lack of full text, or methodological limitations.

Inclusion: 411 journal articles were selected for the final review.

A structured coding framework categorized studies by author, year, research focus, methodology, and theoretical foundation. Key findings on Green HRM's impact on employee engagement and research gaps were extracted.

A thematic content analysis synthesized trends, patterns, and theoretical insights, ensuring methodological rigor and alignment with best practices in systematic literature reviews. The PRISMA flowchart, illustrating the literature selection process, is presented in Figure 1 (PRISMA2020, n.d.).

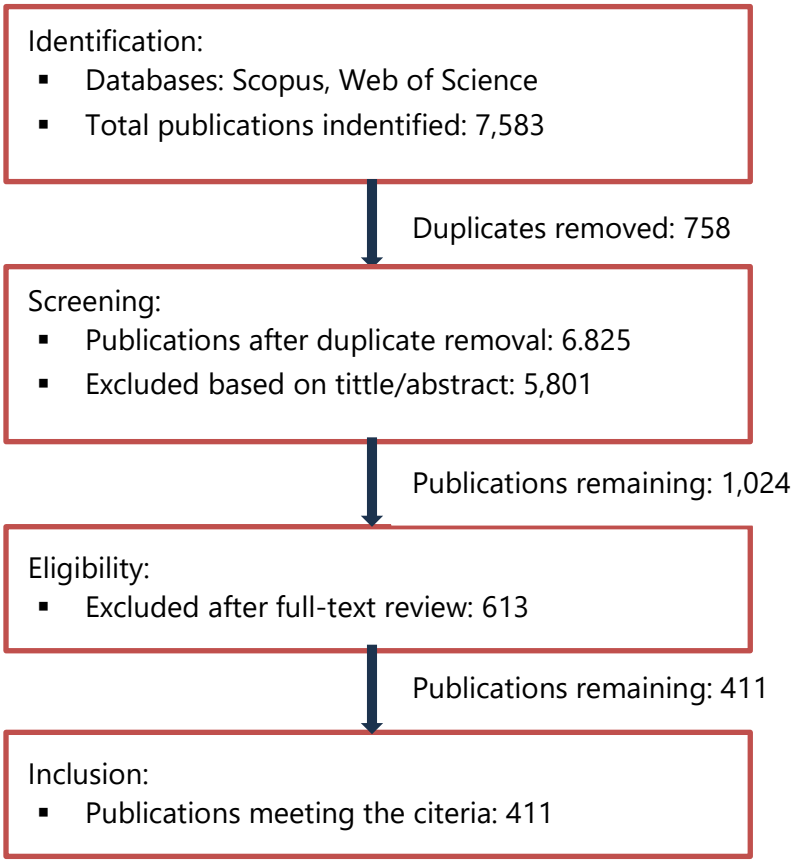


Figure 1 presents the PRISMA flowchart, detailing the literature selection process in this study.

3.4 Quality Assessment

To ensure credibility, reliability, and validity, this study employs a rigorous quality assessment process, integrating the PRISMA framework and the AMSTAR 2 tool.

PRISMA Framework: Ensures systematic selection of methodologically sound studies, minimizing selection bias and enhancing research validity. The PRISMA 2020 statement provides updated reporting guidance for identifying, selecting, appraising, and synthesizing studies (Page et al., 2021).

AMSTAR 2 Tool: Evaluates empirical study rigor by assessing study design, data collection methods, and bias minimization. It helps identify high-quality systematic reviews by considering literature comprehensiveness and risk of bias (Shea et al., 2017).

Dual-Review Process: Two independent reviewers cross-checked article selection, resolving discrepancies through consensus discussions to ensure an unbiased evaluation.

By integrating PRISMA and AMSTAR 2, this study guarantees the inclusion of high-quality, peer-reviewed journal articles, strengthening the reliability and reproducibility of findings. This rigorous assessment ensures that conclusions drawn from the review are academically robust and methodologically sound.

3.5 Limitations of the Methodology

Despite its rigorous approach, this study has several limitations:

Selection Bias: Limiting sources to Scopus and Web of Science ensures quality but excludes non-indexed studies, industry reports, and grey literature, which may offer additional insights.

Publication Bias: Studies with significant findings are more likely to be published, potentially overrepresentingstrong correlations while underreporting null or negative results.

Scope Constraints: The review is limited to English-language publications (2019–2024), restricting multilingual and historical perspectives.

Future research should broaden data inclusion to improve generalizability.

Results and Analysis

4.1 Overview of Selected Studies

This section summarizes the 411 selected journal articles, highlighting publication trends and geographic distributionto illustrate the growing academic focus on Green HRM, sustainability, and employee engagement.

Publication Trends. As shown in Figure 2, research on Green HRM has increased steadily from 44 studies in 2019 to 95 in 2024, reflecting a twofold growth within the study period. This surge aligns with corporate sustainability initiatives and regulatory frameworks, demonstrating the increasing integration of sustainability into HRM discourse.

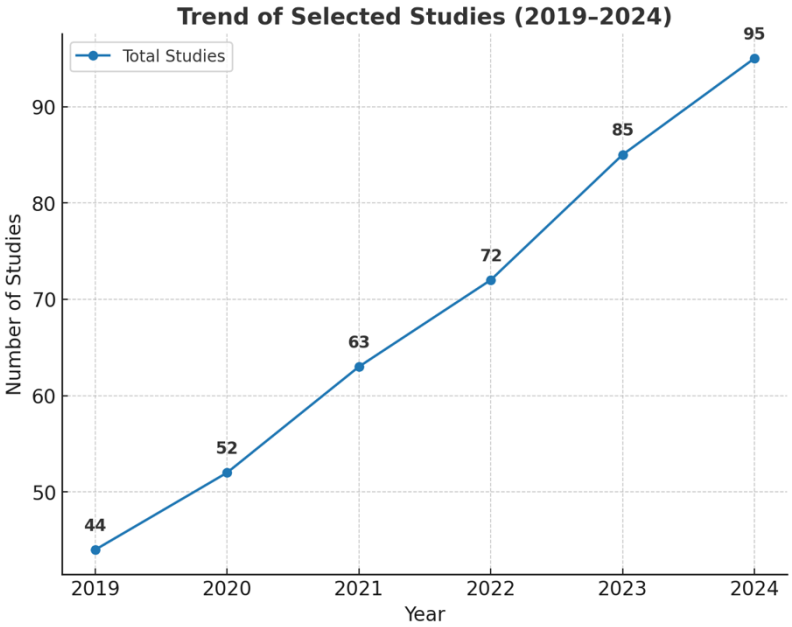


Figure 2. Trend of Selected Studies (2019–2024)
(Source: Compiled from Scopus and Web of Science data (2019–2024)).

Geographic Distribution. Green HRM research is heavily concentrated in leading economies, particularly the United States, United Kingdom, China, and Germany, which collectively account for 359 of the 411 selected studies. As depicted in Figure 3, the remaining 52 studies originate from various countries, indicating regional disparities in Green HRM research intensity. Expanding studies in emerging economies could provide deeper insights into sustainability-driven HRM adoption in diverse contexts.

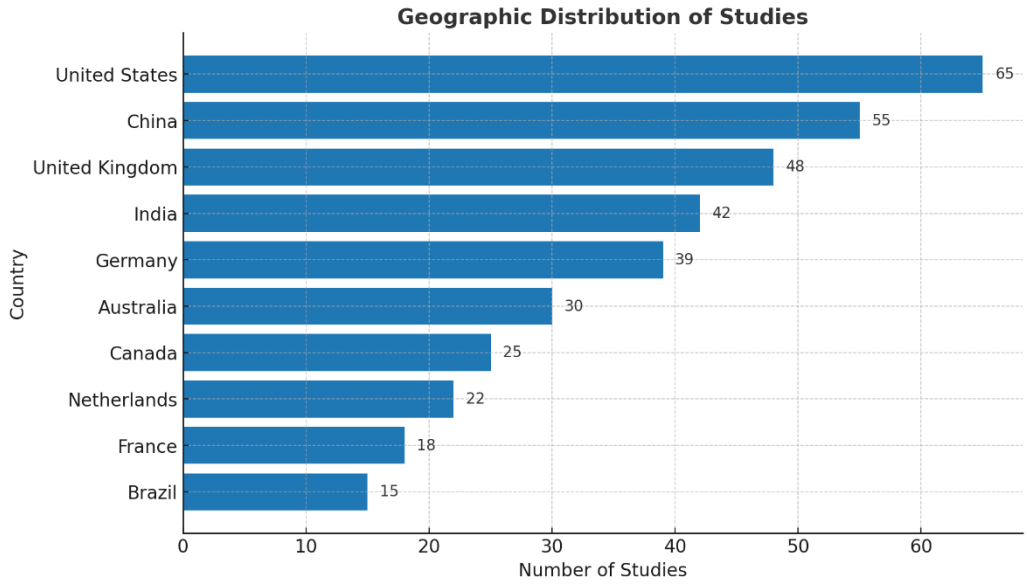


Figure 3. Geographic Distribution of Studies
(Source: Compiled from Scopus and Web of Science data (2019–2024)

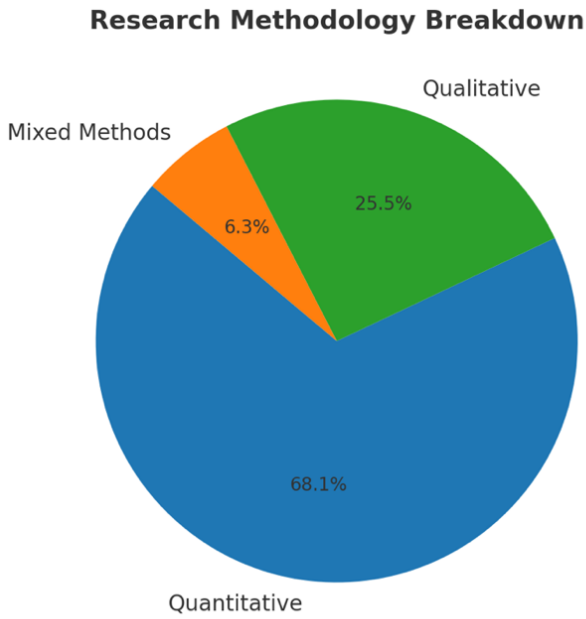
These findings establish a quantitative foundation for the thematic and theoretical analysis in the following section, reinforcing the global relevance and expansion of sustainability-driven HRM research.

4.2 Thematic Analysis of Green HRM and Employee Engagement

This section presents a thematic analysis of how Green HRM practices impact employee engagement, based on the 411 selected studies.

Methodological Breakdown. As illustrated in Figure 4, the majority of studies (280 of 411) employ quantitative methods, reflecting a strong reliance on statistical validation in Green HRM research. Qualitative studies account for 105 papers, while mixed-method approaches are relatively limited (26 studies), highlighting challenges in integrating qualitative and quantitative perspectives in HRM research.

Figure 4 Trend of Research Methodology Breakdown



(Source: Compiled from Scopus and Web of Science data (2019–2024)).

Key Green HRM Practices and Employee Engagement. Four primary Green HRM practices frequently discussed in the literature include:
Green Recruitment & Green Rewards → Strongly associated with job satisfaction and work commitment.
Green Training & Green Performance Management → Positively impact employee motivation and organizational citizenship behavior.

As shown in Figure 5, these relationships suggest that sustainability-driven HRM policies align organizational goals with employees' environmental and professional values, fostering higher engagement and commitment.

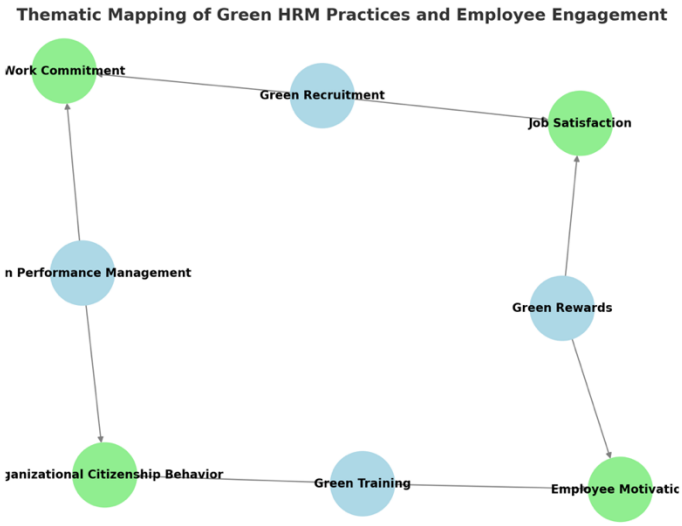


Figure 5 Thematic Mapping of Green HRM Practices and Employee Engagement
Source: Compiled from Scopus and Web of Science data (2019–2024).

Future Research Directions. While the findings highlight the positive role of Green HRM in enhancing employee engagement, future research should examine how industry-specific factors and organizational contexts influence these relationships.

4.3 Theoretical Insights from the Literature

This section examines the theoretical foundations explaining how Green HRM influences employee motivation, commitment, and engagement.

Application of Key Theories. Several theoretical frameworks provide insights into the mechanisms through which Green HRM fosters employee engagement:
Social Exchange Theory (SET): Employees reciprocate favorable treatment by engaging in positive workplace behaviors (Blau, 1964). Organizations that implement Green HRM signal commitment to sustainability, enhancing employee motivation and engagement.
Self-Determination Theory (SDT): Intrinsic motivation plays a key role in shaping employee behavior (Deci & Ryan, 1985). Sustainability-focused training and rewards enhance employees' sense of autonomy, competence, and relatedness, driving higher engagement.
Stakeholder Theory: Organizations must balance the interests of employees, customers, and society (Freeman, 1984). Sustainability-driven HRM initiatives reinforce corporate social responsibility (CSR), fostering stronger employee commitment.

Theoretical Explanations of Green HRM's Impact on Employee Engagement. The integration of these theories suggests that Green HRM enhances engagement through:
Psychological Contract & Reciprocity (SET) → Employees view Green HRM as organizational support, increasing discretionary effort.
Intrinsic Motivation & Workplace Meaningfulness (SDT) → Sustainability initiatives enhance personal meaning, driving greater participation.
Stakeholder Commitment & Organizational Identity (Stakeholder Theory) → Employees aligned with corporate sustainability develop stronger workplace attachment.

Gaps in Existing Theoretical Frameworks. Despite these insights, several gaps remain:
Lack of Integration Between Theories: Most studies apply SET, SDT, and Stakeholder Theory separately, without exploring their combined effects.
Limited Empirical Validation: Few studies empirically validate the long-term impact of these theories on employee engagement and performance.
Context-Specific Applications: The effectiveness of Green HRM varies by industry and culture, yet theoretical models often overlook these differences.

Future research should adopt a multi-theoretical approach, integrating SET, SDT, and Stakeholder Theory for a more comprehensive understanding of Green HRM's role in sustainable employee engagement. Longitudinal studies are also needed to assess long-term workforce motivation and retention effects.

4.4 Moderating and Mediating Factors

The effectiveness of Green HRM practices in driving employee engagement is influenced by moderating and mediating factors that shape their impact on motivation, commitment, and well-being.

Moderating Factors. Moderators influence the strength and direction of the Green HRM–employee engagement relationship:
Organizational Culture → A sustainability-driven culture enhances Green HRM's impact by aligning employee values with corporate green initiatives.
Leadership Style → Transformational and ethical leadership reinforce Green HRM policies, ensuring employees perceive sustainability as authentic and strategically aligned.
Mediating Factors. Mediators explain how Green HRM influences engagement by acting as intermediaries:
Employee Well-being → Sustainability-driven HRM fosters healthier work environments, reducing stress and strengthening emotional commitment.
Sustainability Commitment → Employees who believe in their company's sustainability vision develop a stronger sense of purpose and discretionary effort.

As shown in Figure 6, these moderating and mediating factors interact with Green HRM practices, shaping their overall impact on employee engagement.

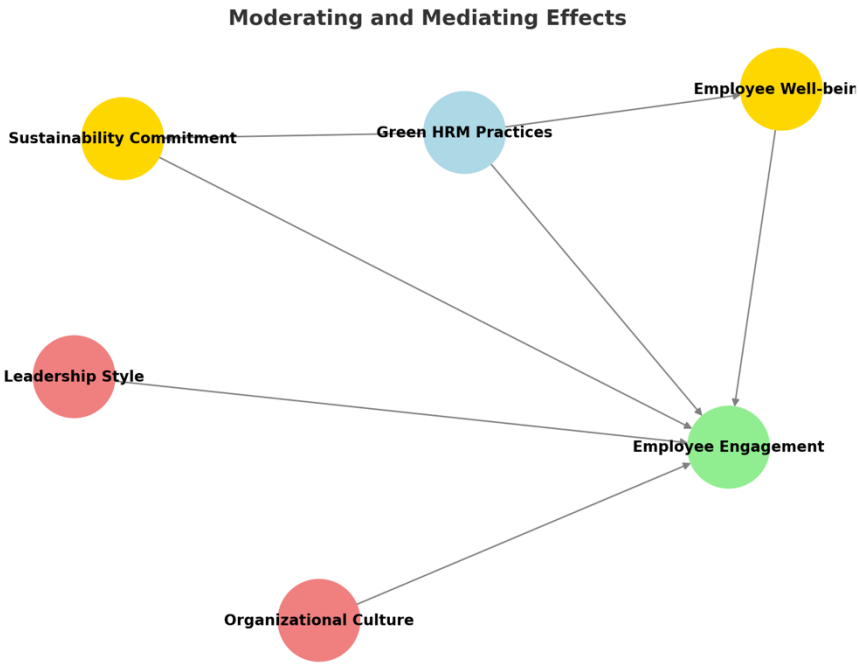


Figure 6 Moderating and Mediating Effects
Source: Compiled from Scopus and Web of Science data (2019–2024).

A deeper understanding of these mechanisms is crucial for maximizing the effectiveness of Green HRM initiatives. Future research should examine how industry-specific and cultural variations influence these relationships.

4.5 Emerging Research Gaps and Future Directions

Despite increasing research on Green HRM and employee engagement, several key gaps remain. Addressing these gaps is essential for advancing theoretical development and practical implementation of sustainability-driven HRM strategies.

Identified Research Gaps. A systematic review highlights four major gaps:

Lack of Longitudinal Studies → Most studies are cross-sectional, limiting insights into Green HRM's long-term effects on employee engagement and sustainability.

Limited Cross-Cultural Comparisons → The role of national culture in Green HRM adoption and effectiveness remains underexplored.

Insufficient Empirical Validation → While theoretical links between Green HRM, sustainability, and employee engagement exist, empirical evidence remains scarce, especially in industry-specific contexts.

Limited Integration of Theoretical Frameworks → Research often applies SET, SDT, or Stakeholder Theory in isolation, rather than integrating multiple perspectives for a comprehensive framework.

Future Research Directions. To address these gaps, future studies should focus on:

Multi-Theoretical Approaches → Combining SET, SDT, and Stakeholder Theory to enhance understanding of Green HRM's impact.

Cross-Industry & Cultural Studies → Exploring Green HRM adaptability and effectiveness across industries and cultural settings.

Advanced Empirical Validation → Using mixed-methods and experimental designs to establish causal inferences.

Longitudinal Research → Tracking long-term effects of Green HRM on workforce engagement, motivation, and commitment.

As shown in Figure 7, these research gaps and future directions emphasize the need for a more integrated, empirical, and cross-contextual approach in studying Green HRM and employee engagement.

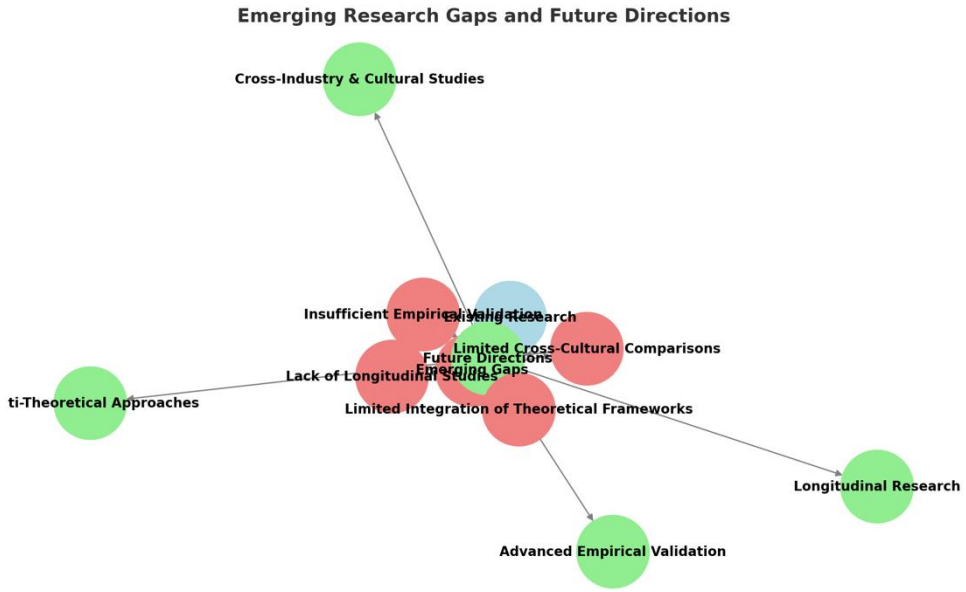


Figure 7 Emerging Research Gaps and Future Directions

Source: Compiled from Scopus and Web of Science data (2019–2024).

Addressing these gaps will advance theoretical development and practical applications, ensuring Green HRM strategies remain effective and adaptable across diverse organizational and cultural contexts.

Discussion

5.1 Interpretation of Key Findings

This section synthesizes the main results of the literature review, emphasizing how Green HRM contributes to employee engagement and comparing findings with previous research and theoretical perspectives.

The literature review confirms that Green HRM fosters employee engagement through mechanisms such as green recruitment, sustainability-driven training, performance management, and rewards. Organizations that embed sustainability into HRM create a sense of purpose and alignment with corporate environmental goals, enhancing employee motivation and commitment (Ababneh, 2021).

Recent studies expand on these findings by identifying key mediating and moderating factors:

Green Knowledge Sharing: GHRM encourages the exchange of environmental knowledge among employees, fostering green work engagement. Research indicates that green competency-building practices enhance engagement through knowledge-sharing mechanisms (Ababneh, 2021).

Green Employee Empowerment: Employees actively involved in environmental initiatives exhibit higher engagement and contribute to improved environmental performance (Adu Sarfo et al., 2024).

Transformational Leadership: Leaders who emphasize sustainability inspire employees to engage more actively in green initiatives, strengthening the GHRM-engagement relationship goals (Noor et al., 2023).

These findings suggest that fostering a knowledge-sharing culture, empowering employees in environmental decision-making, and promoting transformational leadership significantly enhances the impact of GHRM on engagement.

From a theoretical perspective, Green HRM supports Social Exchange Theory (SET), where employees reciprocate sustainability efforts with increased commitment (Paillé et al., 2023). Similarly, Self-Determination Theory (SDT)underscores the role of intrinsic motivation, where employees gain a stronger sense of competence and autonomy in sustainability-focused workplaces (Saini et al., 2024). Research further highlights that green knowledge sharing, intrinsic motivation, and job autonomy act as mediators between Green HRM and employee engagement .

Recent literature also emphasizes several emerging insights:

The moderating role of leadership and organizational culture in strengthening the GHRM-engagement link (Maheshwari et al., 2024).

The need for alignment between Green HRM practices and corporate sustainability goals for long-term engagement benefits (Hameed et al., 2022).

Sector-specific variations, where Green HRM effectiveness differs across industries and cultural contexts (Jamal et al., 2021).

These insights highlight the need for longitudinal studies and industry-specific research to further validate GHRM's role in enhancing employee engagement over time and in different organizational contexts.

5.2 Practical Implications for Organizations

The findings from this study provide actionable insights for organizations aiming to enhance employee engagementthrough Green HRM practices. By integrating sustainability into HRM strategies, businesses can foster a workforce that is engaged, committed, and environmentally responsible.

Integrating Green HRM to Enhance Employee Engagement. Organizations can strengthen employee engagement by embedding Green HRM into their core HR strategies. Green recruitment attracts talent with pro-environmental values, while sustainability-focused training equips employees with the knowledge and skills to contribute to corporate sustainability initiative. Additionally, green rewards and recognition programs reinforce sustainable behaviors, encouraging active participation in environmental initiatives (Usman et al., 2023). These practices not only support corporate sustainability goals but also enhance motivation and job satisfaction (Xie et al., 2023).

The Role of Leadership, Culture, and HRM Policies. Leadership and organizational culture are key determinants of how Green HRM influences engagement. Transformational leaders who advocate sustainability inspire employees to align personal values with corporate environmental objectives. Research highlights that transformational leadership, combined with a supportive organizational climate, enhances organizational citizenship behavior, reinforcing a sustainable workplace (Cho and Kao, 2022). Furthermore, transformational leaders encourage innovative behaviors, which are crucial for implementing effective sustainability practices (Karimi et al., 2023). These findings emphasize that leadership and culture play a critical role in ensuring the success of Green HRM initiatives.

Recommendations for HR Professionals. To implement effective Green HRM strategies, HR professionals should consider the following:

Embed Sustainability in HR Policies – Integrate environmental criteria into recruitment, training, and performance evaluation to ensure sustainability becomes an integral part of the organizational culture and operations (Adu Sarfo et al., 2024).

Foster a Sustainability-Driven Work Culture – Engage employees in environmental initiatives and promote corporate social responsibility (CSR) programs to strengthen commitment to sustainability (Hameed et al., 2022).

Provide Incentives and Recognition – Implement reward systems to acknowledge and motivate employees for engaging in eco-friendly workplace behaviors (Ababneh, 2021).

Leverage Technology and Digital HR Solutions – Use e-learning platforms for sustainability training and adopt paperless HR processes to improve efficiency and reduce the organization's carbon footprint (Al-Ghalabi et al., 2024).

Encourage Leadership Involvement – Ensure that leadership actively supports and aligns Green HRM practices with corporate sustainability strategies, fostering a culture that prioritizes environmental initiatives (Noor et al., 2023).

By implementing these recommendations, organizations can maximize the benefits of Green HRM, fostering a workforce that is environmentally conscious, highly engaged, and committed to long-term organizational success.

5.3 Theoretical Contributions

This study advances the theoretical understanding of Green HRM by expanding existing frameworks, integrating multiple theoretical perspectives, and offering new insights into sustainability-driven HRM.

Expansion of Existing Theories in Green HRM and Sustainability. The findings reinforce and extend Social Exchange Theory (SET), Self-Determination Theory (SDT), and Stakeholder Theory in explaining how Green HRM fosters employee engagement.

Social Exchange Theory (SET) → Employees reciprocate sustainability-driven HRM initiatives with higher engagement and discretionary effort, emphasizing the need to align HRM practices with environmental commitment (Cropanzano and Mitchell, 2005).

Self-Determination Theory (SDT) → Green HRM fulfills employees' psychological needs for competence, autonomy, and relatedness, enhancing intrinsic motivation and workplace satisfaction (CSDT, n.d.).

Stakeholder Theory → Organizations integrating employee participation in sustainability initiatives align internal HR practices with external environmental commitments, strengthening corporate reputation and employee identification with organizational values(Darden Virginia, n.d.).

This study extends these theories by demonstrating that Green HRM not only enhances engagement but also strengthens organizational commitment through environmental identity formation—a factor often overlooked in previous theoretical applications. Employees in sustainability-driven organizations develop a stronger psychological attachment, reducing turnover and fostering long-term engagement (Van Waeyenberg and Semeijn, 2025).

Multi-Theoretical Understanding of Sustainability-Driven HRM. Unlike previous studies that apply SET, SDT, or Stakeholder Theory in isolation, this research suggests that integrating these

frameworks provides a more holistic perspective on Green HRM's influence on employee engagement.

SET explains the reciprocity mechanism, where employees respond positively to sustainability efforts, fostering higher engagement (Chen et al., 2021).

SDT highlights the motivational pathways, demonstrating that employees are more engaged when sustainability efforts align with their intrinsic values (Zhang et al., 2021).

Stakeholder Theory extends the discussion by emphasizing corporate CSR commitments, which deepen employee engagement (Pimenta et al., 2024).

By integrating these perspectives, this study offers a multi-dimensional understanding of how Green HRM contributes to a sustainable, motivated workforce through both psychological drivers and organizational influences.

Novel Theoretical Insights from This Study. This study introduces several new theoretical insights that refine the understanding of sustainability-driven HRM:

Green HRM as a Mechanism for Identity-Based Engagement → Employees who view their organization as environmentally responsible align their self-identity with corporate sustainability values, leading to stronger engagement (Ababneh, 2021). .

The Role of Environmental Meaningfulness → Green HRM fosters a sense of purpose, reinforcing job satisfaction and organizational commitment (Hameed et al., 2022).

Dynamic Interaction Between Theories → The combined effect of SET, SDT, and Stakeholder Theory suggests that Green HRM operates through both intrinsic and extrinsic motivational mechanisms, which were previously studied in isolation (Chowdhury et al., 2023).

Sector-Specific Theoretical Adaptations → Green HRM effectiveness varies across industries, indicating the need for theoretical models to consider corporate culture, regulatory pressures, and industry-specific sustainability challenges (Jackson, 2022).

By addressing these gaps, this study strengthens the theoretical foundation of Green HRM, providing valuable directions for future research and HRM practices.

5.4 Limitations of the Study

While this study provides valuable insights into Green HRM and employee engagement, several limitations must be acknowledged. These primarily relate to literature selection bias, database constraints, and methodological gaps in existing research.

Potential Biases in Literature Selection and Analysis. The systematic review relies on predefined inclusion and exclusion criteria, which may introduce selection bias. Although peer-reviewed journal articles from Scopus and Web of Science ensure quality, this may exclude relevant studies from other databases, conference proceedings, or practitioner-oriented publications. Additionally, publication bias—favoring positive results over null or negative findings—may lead to an overestimation of Green HRM's impact on employee engagement (Bimo and Sulistyaningsih, 2024).

Interpretative bias in qualitative synthesis is another concern, as findings from diverse research contexts may differ due to theoretical variations and measurement differences, affecting the consistency of conclusions .

Constraints Related to Sample Diversity and Database Limitations. Relying on Scopus and Web of Science ensures rigorous study selection but limits perspectives, particularly from regional studies and industry-specific reports not indexed in these databases (Wilder and Walters, 2021). As a result, findings may reflect Western-centric research trends, with limited insights from emerging economies, where Green HRM adoption may differ due to cultural and regulatory factors (Roscoe et al., 2019).

Additionally, most reviewed studies focus on large multinational corporations (MNCs) with formal sustainability policies. This raises concerns about the generalizability of findings to small businesses, non-profits, and government institutions (Islam et al., 2022)

Lack of Experimental and Longitudinal Studies. A key limitation in Green HRM research is the lack of experimental and longitudinal studies. Most studies employ cross-sectional survey designs, which can establish correlations but not causality (Renwick et al., 2013). Without longitudinal data, it remains unclear whether Green HRM practices sustain engagement over time or if their effects diminish as employees adapt to sustainability initiatives (Aboramadan, 2022)

Furthermore, experimental studies are rare, making it difficult to isolate the direct effects of Green HRM from external factors such as leadership styles, organizational culture, or economic conditions (Ababneh, 2021). Future research should incorporate longitudinal and experimental approaches to validate causal mechanisms between Green HRM and employee engagement.

Addressing These Limitations in Future Research. To improve research robustness, future studies should:

Expand database coverage to include regional and industry-specific research.

Address publication bias by incorporating unpublished dissertations, government reports, and practitioner studies.

Conduct longitudinal and experimental studies to establish causal links between Green HRM and engagement outcomes.

Analyze contextual variations by examining Green HRM's impact across different cultural, economic, and organizational settings.

By addressing these limitations, future research can provide a more comprehensive and globally relevant understanding of Green HRM's role in shaping employee engagement.

5.5 Directions for Future Research

While this study highlights the role of Green HRM in enhancing employee engagement, further research is needed to address gaps in cross-industry applications, methodological advancements, and interdisciplinary perspectives to strengthen both theoretical and practical insights.

Cross-Industry and Cross-Cultural Comparisons. Most studies focus on large multinational corporations (MNCs) in heavily regulated sectors like manufacturing and energy (Borah & Korankye, 2021). However, Green HRM in service industries, SMEs, and public institutions remains underexplored. Future research should:

Examine sectoral differences in Green HRM effectiveness, particularly in low-regulation industries.

Conduct cross-cultural studies to understand how national policies and societal norms shape Green HRM's impact (Chen et al., 2021).

Investigate digital transformation's role in Green HRM, especially in remote work and virtual HRM settings (Galanti et al., 2023).

Methodological Advancements. Current research relies heavily on cross-sectional studies, limiting causal inferences. Future studies should:

Use longitudinal designs to assess whether Green HRM's impact on engagement is sustained over time (Pham et al., 2019).

Apply experimental and quasi-experimental methods to isolate Green HRM's effects from other HRM strategies (Ribeiro et al., 2022).

Utilize mixed-methods approaches, integrating quantitative surveys with qualitative insights from case studies (Hajj Hussein and Bou Zakhem, 2024).

Interdisciplinary Perspectives. Green HRM research primarily adopts an HRM and organizational behavior lens, but integrating insights from psychology, sustainability science, and behavioral economics could provide deeper insights. Future research should:

Apply psychological theories like Self-Determination Theory (SDT) and Conservation of Resources Theory to analyze sustainability-driven motivation and well-being (Gagné and Deci, 2005).

Investigate neuroscientific and behavioral aspects of how employees process and respond to sustainability cues in the workplace (Zhang et al., 2021).

Develop a holistic framework combining HRM, sustainability, and psychology to create a comprehensive modelof Green HRM's impact on engagement and performance (Freire and Pieta, 2022).

Conclusion

This study highlights Green HRM's role in enhancing employee engagement, showing how sustainability-focused HR practices influence motivation, commitment, and organizational citizenship behaviors. Organizations that align HR strategies with environmental sustainability create a meaningful work environment, strengthening employees' identification with corporate sustainability values. The integration of SET, SDT, and Stakeholder Theory provides a multi-

theoretical perspective on how Green HRM fosters engagement through reciprocity, intrinsic motivation, and stakeholder alignment.

Despite these insights, research gaps remain, including the lack of longitudinal and experimental studies, limited cross-industry and cross-cultural analyses, and the need for interdisciplinary approaches. Future research should expand methodological approaches, integrate multiple theories, and explore sectoral variations to strengthen Green HRM's theoretical and practical implications. Organizations should embed sustainability into HR policies, cultivate a green workplace culture, and engage employees in environmental initiatives to maximize long-term engagement.

REFERENCE

Ababneh, O.M.A. (2021), "How do green HRM practices affect employees' green behaviors? The role of employee engagement and personality attributes", Journal of Environmental Planning and Management, Vol. 64 No. 7, pp. 1204–1226, doi: 10.1080/09640568.2020.1814708.

Aboramadan, M. (2022), "The effect of green HRM on employee green behaviors in higher education: the mediating mechanism of green work engagement", International Journal of Organizational Analysis, Vol. 30 No. 1, pp. 7–23, doi: 10.1108/IJOA-05-2020-2190.

Adeel, M., Mahmood, S., Khan, K.I. and Saleem, S. (2022), "Green HR practices and environmental performance: The mediating mechanism of employee outcomes and moderating role of environmental values", Frontiers in Environmental Science, Vol. 10, doi: 10.3389/fenvs.2022.1001100.

Adu Sarfo, P., Zhang, J., Nyantakyi, G., Lassey, F.A., Bruce, E. and Amankwah, O. (2024), "Influence of Green Human Resource Management on firm's environmental performance: Green Employee Empowerment as a mediating factor", PLOS ONE, Vol. 19 No. 4, p. e0293957, doi: 10.1371/journal.pone.0293957.

Aggarwal, P. and Agarwala, T. (2023), "Relationship of green human resource management with environmental performance: mediating effect of green organizational culture", Benchmarking: An International Journal, Vol. 30 No. 7, pp. 2351–2376, doi: 10.1108/BIJ-08-2021-0474.

Al-Ghalabi, R.R., Alsheikh, G.A.A., Al-Shamaileh, L.R. and Altarawneh, A. (2024), "Impact of digital HR technology between green human resources and environmental performance in Jordanian banks", Heritage and Sustainable Development, Vol. 6 No. 1, pp. 267–286, doi: 10.37868/hsd.v6i1.512.

Ali, M., Shujahat, M., Fatima, N., Lopes de Sousa Jabbour, A.B., Vo-Thanh, T., Salam, M.A. and Latan, H. (2024), "Green HRM practices and corporate sustainability performance", Management Decision, Vol. 62 No. 11, pp. 3681–3703, doi: 10.1108/MD-05-2023-0787.

Baykal, E. and Bayraktar, O. (2022), "Green human resources management: A novel tool to boost work engagement", Frontiers in Psychology, Vol. 13, doi: 10.3389/fpsyg.2022.951963.

Bhoir, M. and Sinha, V. (2024), "Employee well-being human resource practices: a systematic literature review and directions for future research", Future Business Journal, Vol. 10 No. 1, p. 95, doi: 10.1186/s43093-024-00382-w.

Bimo, I.D. and Sulistyaningsih, E. (2024), "Greening the workforce: a systematic literature review of determinants in green HRM", Cogent Business & Management, Vol. 11 No. 1, doi: 10.1080/23311975.2024.2429793.

Boccoli, G., Gastaldi, L. and Corso, M. (2023), "The evolution of employee engagement: Towards a social and contextual construct for balancing individual performance and wellbeing dynamically", International Journal of Management Reviews, Vol. 25 No. 1, pp. 75–98, doi: 10.1111/ijmr.12304.

Canavesi, A. and Minelli, E. (2022), "Servant Leadership and Employee Engagement: A Qualitative Study", Employee Responsibilities and Rights Journal, Vol. 34 No. 4, pp. 413–435, doi: 10.1007/s10672-021-09389-9.

Chen, S., Jiang, W., Li, X. and Gao, H. (2021), "Effect of Employees' Perceived Green HRM on Their Workplace Green Behaviors in Oil and Mining Industries: Based on Cognitive-Affective System Theory", International Journal of Environmental Research and Public Health, Vol. 18 No. 8, p. 4056, doi: 10.3390/ijerph18084056.

Cho, C.-C. and Kao, R.-H. (2022), "Developing sustainable workplace through leadership: Perspectives of transformational leadership and of organizational citizenship behavior", Frontiers in Psychology, Vol. 13, doi: 10.3389/fpsyg.2022.924091.

Chowdhury, S.R., Mendy, J. and Rahman, M. (2023), "A Systematic Literature Review of GHRM: Organizational Sustainable Performance Reimagined Using a New Holistic Framework", Sustainability, Vol. 15 No. 9, p. 7513, doi: 10.3390/su15097513.

Cropanzano, R. and Mitchell, M.S. (2005), "Social Exchange Theory: An Interdisciplinary Review", Journal of Management, Vol. 31 No. 6, pp. 874–900, doi: 10.1177/0149206305279602.

CSDT. (n.d.). "SDT Theory", Https://Selfdeterminationtheory.Org/Theory/?Utm_source=chatgpt.Com.

Darden Virginia. (n.d.). "Stakeholder Theory", Https://Www.Darden.Virginia.Edu/Stakeholder-Theory?Utm_source=chatgpt.Com.

Deepalakshmi, Dr.N., Tiwari, Dr.D., Baruah, Dr.R., Seth, A. and Bisht, R. (2024), "Employee Engagement And Organizational Performance: A Human Resource Perspective", Educational Administration: Theory and Practice, pp. 5941–5948, doi: 10.53555/kuey.v30i4.2323.

Esaki, N., Liu, X. and Vito, R. (2023), "An Exploratory Study of Employee Engagement in Human Service Agencies", Journal of Human Services, Vol. 43 No. 1, doi: 10.52678/001c.89008.

Freire, C. and Pieta, P. (2022), "The Impact of Green Human Resource Management on Organizational Citizenship Behaviors: The Mediating Role of Organizational Identification and Job Satisfaction", Sustainability, Vol. 14 No. 13, p. 7557, doi: 10.3390/su14137557.

Gagné, M. and Deci, E.L. (2005), "Self-determination theory and work motivation", Journal of Organizational Behavior, Vol. 26 No. 4, pp. 331–362, doi: 10.1002/job.322.

Galanti, T., De Vincenzi, C., Buonomo, I. and Benevene, P. (2023), "Digital Transformation: Inevitable Change or Sizable Opportunity? The Strategic Role of HR Management in Industry 4.0", Administrative Sciences, Vol. 13 No. 2, p. 30, doi: 10.3390/admsci13020030.

Gallup. (2024), "From Suffering to Thriving", Https://Www.Gallup.Com/Workplace/349484/State-of-the-Global-Workplace.Aspx?Utm_source=chatgpt.Com.

Gong, Q., Fan, D. and Bartram, T. (2025), "Integrating artificial intelligence and human resource management: a review and future research agenda", The International Journal of Human Resource Management, Vol. 36 No. 1, pp. 103–141, doi: 10.1080/09585192.2024.2440065.

Gyensare, M.A., Adomako, S. and Amankwah-Amoah, J. (2024), "Green HRM practices, employee well-being, and sustainable work behavior: Examining the moderating role of resource commitment", Business Strategy and the Environment, Vol. 33 No. 4, pp. 3129–3141, doi: 10.1002/bse.3642.

Hajj Hussein, S. and Bou Zakhem, N. (2024), "The Impact of Green Human Resource Management Practices on Brand Citizenship Behavior and Employee Turnover Intention: A Mixed Methods Approach", Sustainability, Vol. 16 No. 15, p. 6528, doi: 10.3390/su16156528.

Hameed, R., Mahmood, A. and Shoaib, M. (2022), "The Role of Green Human Resource Practices in Fostering Green Corporate Social Responsibility", Frontiers in Psychology, Vol. 13, doi: 10.3389/fpsyg.2022.792343.

Huang, Y., Gong, T. and Shih, L. (2024), "Examining the impact of green human resource management on green innovative work behavior: A multilevel analysis", Corporate Social Responsibility and Environmental Management, Vol. 31 No. 6, pp. 6401–6418, doi: 10.1002/csr.2932.

Islam, M.A., Mendy, J., Haque, A.K.M.A. and Rahman, M. (2022), "Green human resource management practices and millennial employees' retention in small and medium enterprises: The moderating impact of creativity climate from a developing country perspective", Business Strategy & Development, Vol. 5 No. 4, pp. 335–349, doi: 10.1002/bsd2.202.

Jackson, S.E. (2022), "What's Next for Green Human Resource Management?", pp. 203–225, doi: 10.1007/978-3-031-06558-3_9.

Jamal, T., Zahid, M., Martins, J.M., Mata, M.N., Rahman, H.U. and Mata, P.N. (2021), "Perceived Green Human Resource Management Practices and Corporate Sustainability: Multigroup

Analysis and Major Industries Perspectives", Sustainability, Vol. 13 No. 6, p. 3045, doi: 10.3390/su13063045.

Jamil, S., Zaman, S.I., Kayikci, Y. and Khan, S.A. (2023), "The Role of Green Recruitment on Organizational Sustainability Performance: A Study within the Context of Green Human Resource Management", Sustainability, Vol. 15 No. 21, p. 15567, doi: 10.3390/su152115567.

Kahn, W.A. (1990), "Psychological Conditions of Personal Engagement and Disengagement at Work", Academy of Management Journal, Vol. 33 No. 4, pp. 692–724, doi: 10.5465/256287.

Kamboj, J. and A, E. (2024), "Mapping the green human resource management practices: A systematic scoping review and its implications for employees' well-being", Human Systems Management, Vol. 43 No. 6, pp. 932–970, doi: 10.3233/HSM-230183.

Kuo, Y.-K., Khan, T.I., Islam, S.U., Abdullah, F.Z., Pradana, M. and Kaewsaeng-on, R. (2022), "Impact of Green HRM Practices on Environmental Performance: The Mediating Role of Green Innovation", Frontiers in Psychology, Vol. 13, doi: 10.3389/fpsyg.2022.916723.

Lashari, I.A., Li, Q., Maitlo, Q., Bughio, F.A., Jhatial, A.A. and Rashidi Syed, O. (2022), "Environmental sustainability through green HRM: Measuring the perception of university managers", Frontiers in Psychology, Vol. 13, doi: 10.3389/fpsyg.2022.1007710.

Lee, S.H., Chong, C.W. and Ojo, A.O. (2024), "Influence of workplace flexibility on employee engagement among young generation", Cogent Business & Management, Vol. 11 No. 1, doi: 10.1080/23311975.2024.2309705.

Lu, Y., Zhang, M.M., Yang, M.M. and Wang, Y. (2023), "Sustainable human resource management practices, employee resilience, and employee outcomes: Toward common good values", Human Resource Management, Vol. 62 No. 3, pp. 331–353, doi: 10.1002/hrm.22153.

Maheshwari, S., Kaur, A. and Renwick, D.W.S. (2024), "Green Human Resource Management and Green Culture: An Integrative Sustainable Competing Values Framework and Future Research Directions", Organization & Environment, Vol. 37 No. 1, pp. 32–56, doi: 10.1177/10860266231217280.

Malik, S.Y., Hayat Mughal, Y., Azam, T., Cao, Y., WAN, Z., ZHU, H. and Thurasamy, R. (2021), "Corporate Social Responsibility, Green Human Resources Management, and Sustainable Performance: Is Organizational Citizenship Behavior towards Environment the Missing Link?", Sustainability, Vol. 13 No. 3, p. 1044, doi: 10.3390/su13031044.

Moher, D., Liberati, A., Tetzlaff, J. and Altman, D.G. (2009), "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement", PLoS Medicine, Vol. 6 No. 7, p. e1000097, doi: 10.1371/journal.pmed.1000097.

Mohiuddin, M., Hosseini, E., Faradonbeh, S.B. and Sabokro, M. (2022), "Achieving Human Resource Management Sustainability in Universities", International Journal of Environmental Research and Public Health, Vol. 19 No. 2, p. 928, doi: 10.3390/ijerph19020928.

Noor, J., Tunnufus, Z., Handrian, V.Y. and Yumhi, Y. (2023), "Green human resources management practices, leadership style and employee engagement: Green banking context", Heliyon, Vol. 9 No. 12, p. e22473, doi: 10.1016/j.heliyon.2023.e22473.

Odhiambo, G.M., Waiganjo, E. and Simiyu, A.N. (2023), "Incentivizing Employee Pro-Environmental Behaviour: Harnessing the Potential of Green Rewards", African Journal of Empirical Research, Vol. 4 No. 2, pp. 601–611, doi: 10.51867/ajernet.4.2.60.

Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Shamseer, L., et al. (2021), "The PRISMA 2020 statement: an updated guideline for reporting systematic reviews", BMJ, p. n71, doi: 10.1136/bmj.n71.

Paillé, P., Sanchez-Famoso, V., Valéau, P., Ren, S. and Mejia-Morelos, J.H. (2023), "Green HRM through social exchange revisited: when negotiated exchanges shape cooperation", The International Journal of Human Resource Management, Vol. 34 No. 17, pp. 3277–3307, doi: 10.1080/09585192.2022.2117992.

Paul, J. and Criado, A.R. (2020), "The art of writing literature review: What do we know and what do we need to know?", International Business Review, Vol. 29 No. 4, p. 101717, doi: 10.1016/j.ibusrev.2020.101717.

Pham, N.T., Tučková, Z. and Chiappetta Jabbour, C.J. (2019), "Greening the hospitality industry: How do green human resource management practices influence organizational citizenship

behavior in hotels? A mixed-methods study", Tourism Management, Vol. 72, pp. 386–399, doi: 10.1016/j.tourman.2018.12.008.

Pham, N.T., Vo Thanh, T., Tučková, Z. and Thuy, V.T.N. (2020), "The role of green human resource management in driving hotel's environmental performance: Interaction and mediation analysis", International Journal of Hospitality Management, Vol. 88, p. 102392, doi: 10.1016/j.ijhm.2019.102392.

Pimenta, S., Duarte, A.P. and Simões, E. (2024), "How socially responsible human resource management fosters work engagement: the role of perceived organizational support and affective organizational commitment", Social Responsibility Journal, Vol. 20 No. 2, pp. 326–343, doi: 10.1108/SRJ-10-2022-0442.

PRISMA2020. (n.d.). "PRISMA Flow Diagram", Https://Www.Prisma-Statement.Org/Prisma-2020-Flow-Diagram?Utm_source=chatgpt.Com.

Qin, Y.S. (2024), "Inspiring Employee Engagement in Remote Work: The Influence of Leadership Communication and Trust in Leadership", International Journal of Strategic Communication, pp. 1–18, doi: 10.1080/1553118X.2024.2417669.

Renwick, D.W.S., Redman, T. and Maguire, S. (2013), "Green Human Resource Management: A Review and Research Agenda*", International Journal of Management Reviews, Vol. 15 No. 1, pp. 1–14, doi: 10.1111/j.1468-2370.2011.00328.x.

Ribeiro, N., Gomes, D.R., Ortega, E., Gomes, G.P. and Semedo, A.S. (2022), "The Impact of Green HRM on Employees' Eco-Friendly Behavior: The Mediator Role of Organizational Identification", Sustainability, Vol. 14 No. 5, p. 2897, doi: 10.3390/su14052897.

Ribeiro, R.P. and Gavronski, I. (2021), "Sustainable Management of Human Resources and Stakeholder Theory: A Review", Revista de Gestão Social e Ambiental, Vol. 15, p. e02729, doi: 10.24857/rgsa.v15.2729.

Roscoe, S., Subramanian, N., Jabbour, C.J.C. and Chong, T. (2019), "Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development", Business Strategy and the Environment, Vol. 28 No. 5, pp. 737–749, doi: 10.1002/bse.2277.

Saini, G., Jena, L.K., Gupta, S. and Mahale, G. (2024), "Understanding green behaviours through the lens of self-determination theory", Measuring Business Excellence, doi: 10.1108/MBE-07-2024-0110.

Sauer, P.C. and Seuring, S. (2023), "How to conduct systematic literature reviews in management research: a guide in 6 steps and 14 decisions", Review of Managerial Science, Vol. 17 No. 5, pp. 1899–1933, doi: 10.1007/s11846-023-00668-3.

Schaufeli, W.B., & B.A.B. (2022), "Work engagement: A critical assessment of the concept and its measurement.", Handbook of Positive Psychology Assessment, pp. 273–295.

Shafaei, A., Nejati, M. and Mohd Yusoff, Y. (2020), "Green human resource management", International Journal of Manpower, Vol. 41 No. 7, pp. 1041–1060, doi: 10.1108/IJM-08-2019-0406.

Shea, B.J., Reeves, B.C., Wells, G., Thuku, M., Hamel, C., Moran, J., Moher, D., et al. (2017), "AMSTAR 2: a critical appraisal tool for systematic reviews that include randomised or non-randomised studies of healthcare interventions, or both", BMJ, p. j4008, doi: 10.1136/bmj.j4008.

Tran, N.K.H. (2023), "An empirical investigation on the impact of green human resources management and green leadership on green work engagement.", Heliyon, pp. 9–11.

Usman, M., Rofcanin, Y., Ali, M., Ogbonnaya, C. and Babalola, M.T. (2023), "Toward a more sustainable environment: Understanding why and when green training promotes employees' eco-friendly behaviors outside of work", Human Resource Management, Vol. 62 No. 3, pp. 355–371, doi: 10.1002/hrm.22148.

Van Waeyenberg, T. and Semeijn, J.H. (2025), "Different Shades of Green? The Role of Green HRM and Its Authenticity in Cultivating Employee Commitment to Environment and Organization", Business & Society, doi: 10.1177/00076503241312752.

Wang, Y., Ummar, R., Qureshi, T.M., Ul Haq, J. and Bonn, M.A. (2025), "Employee Sustainability: How Green Practices Drive Employee Well-Being and Citizenship Behavior", Sustainability, Vol. 17 No. 3, p. 936, doi: 10.3390/su17030936.

Wilder, E.I. and Walters, W.H. (2021), "Using Conventional Bibliographic Databases for Social Science Research: Web of Science and Scopus are not the Only Options", Scholarly Assessment Reports, Vol. 3 No. 1, p. 4, doi: 10.29024/sar.36.

Xie, J., Bhutta, Z.M., Li, D. and Andleeb, N. (2023), "Green HRM practices for encouraging pro-environmental behavior among employees: the mediating influence of job satisfaction", Environmental Science and Pollution Research, Vol. 30 No. 47, pp. 103620–103639, doi: 10.1007/s11356-023-29362-3.

Yong, J.Y., Yusliza, M.-Y., Ramayah, T. and Fawehinmi, O. (2019), "Nexus between green intellectual capital and green human resource management", Journal of Cleaner Production, Vol. 215, pp. 364–374, doi: 10.1016/j.jclepro.2018.12.306.

Zhang, B., Yang, L., Cheng, X. and Chen, F. (2021), "How Does Employee Green Behavior Impact Employee Well-Being? An Empirical Analysis", International Journal of Environmental Research and Public Health, Vol. 18 No. 4, p. 1669, doi: 10.3390/ijerph18041669.

Zihan, W., Makhbul, Z.K.M. and Alam, S.S. (2024), "Green Human Resource Management in Practice: Assessing the Impact of Readiness and Corporate Social Responsibility on Organizational Change", Sustainability, Vol. 16 No. 3, p. 1153, doi: 10.3390/su16031153.