

The Forward-Looking Studies on Green Human Resources Management: A Content Analysis

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ABSTRACT

The present study offers a comprehensive content analysis of the Forward-Looking on Green Human Resources Management (GHRM) research, providing insights into significant findings, determinants, challenges, and future trends of GHRM. The role of GHRM in developing green behaviour and improving environmental performance is becoming increasingly important, with evidence of positive effects on competitive advantage, company sustainability, and employee engagement. In addition, the study underscores the relevance of GHRM for organisational sustainability, focusing on different HRM practices such as recruitment, the Rewards System, and employee involvement. Furthermore, it identifies vital determinants of GHRM, such as integration of technology, effective green HRM policies, employee environmental awareness, top management support, and the promotion of a sustainable organisational culture. In parallel, challenges such as lack of awareness, need for practice change, insufficient training, absence of standard metrics, and cultural boundaries, are recognised. The study delineates promising trends for the future of GHRM, such as technological integration, a stronger focus on training and development, strategic integration of GHRM, broader application across different sectors, increased regulatory compliance, and an emphasis on green employee behaviour. Importantly, the study concludes by acknowledging the critical role of GHRM in promoting environmental sustainability within organisations while advancing employee engagement and performance, underlining the need for further research to solidify the business case for GHRM and contribute to a more sustainable future.

KEYWORDS: *green human resource management, sustainability, literature review, content analysis, future research.*

JEL CLASSIFICATION: *M12, J2, Q56*

1. INTRODUCTION

The call for sustainable practices is pressing and unavoidable in an era of escalating global environmental concerns. This tide of environmental consciousness has swept across diverse sectors, demanding transformative changes and prompting new paradigms in how we view organisational responsibility. A striking manifestation of this shift is evident in Human Resources Management (HRM), where the emergence of Green Human Resources Management (GHRM) reflects a commitment to integrating environmental considerations within HRM functions. GHRM is pivotal in fostering sustainable practices and enhancing an organisation's overall environmental performance by implementing environmentally-friendly

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policies and procedures. This interdisciplinary field has seen substantial development through recent contributions from various scholars.

On the one hand, researchers such as (Khan & Muktar, 2021; S. Ren et al., 2018; Sroufe et al., 2015; Zoogah, 2011) have, respectively, advanced our understanding of GHRM by creating measures for green practices, investigating the psychological motivations behind green behaviours, and exploring how sustainability aligns with broader HR practices. On the other hand, seminal work by (Jabbour & de Sousa Jabbour, 2016; Masri & Jaaron, 2017; Renwick et al., 2013; Teixeira et al., 2012) have provided comprehensive literature reviews exploring the relationship between green management and environmental training, examined the connection between GHRM and Green Supply Chain Management (GSCM), and assessed GHRM practices empirically. Despite these significant advances, GHRM is still an evolving field. It warrants comprehensive analysis to elucidate its current state, outline its challenges, and highlight its potential benefits. This paper seeks to contribute to this ongoing discourse by employing a content analysis approach to future studies in GHRM. Recognised as a reliable and objective method to analyse textual data, content analysis will enable us to distill key insights, identify emerging trends, and uncover overlooked areas of the existing body of research. By offering a comprehensive overview of the current landscape of GHRM research and outlining a roadmap for future studies, this paper aims to understand this field further. Ultimately, the goal is to assist organisations in crafting effective GHRM strategies, thereby facilitating a move towards more sustainable practices and a greener future.

Thus, our paper, "Forward Studies on Green Human Resources Management: A content analysis," seeks to analyse the existing literature on GHRM through content analysis to identify trends, gaps, and potential avenues for future research in this vital aspect of sustainable organisational management.

2. OBJECTIVES OF THE STUDY

This study primarily aims to conduct an extensive content analysis of the existing literature on The Forward-Looking research on Green Human Resources Management (GHRM) to gain critical insights and identify emerging trends. We aim to highlight overlooked areas of GHRM research, thus broadening the discourse. We aspire to offer a comprehensive summary of the current GHRM research landscape, focusing on its developments, challenges, and potential. Finally, we plan to propose a structured roadmap for future GHRM studies designed to deepen our understanding of the subject and guide the formulation of effective GHRM strategies.

3. STUDY'S IMPORTANCE

Green Human Resources Management (GHRM) bridges the gap between environmental concerns and organisational activities. By integrating ecological aspects within Human Resources Management (HRM), GHRM cultivates sustainable practices and augments an organisation's overall environmental performance. This symbiotic relationship underlines the indispensable nature of GHRM in fostering a sustainable corporate ecosystem.

Recent years have witnessed an appreciable paradigm shift towards GHRM. This shift is a testament to an escalating environmental consciousness and a heightened demand for sustainability across various sectors. The turn of the tide towards GHRM is a promising sign, indicating a collective endeavour toward a more sustainable global work environment.

A profound understanding of GHRM is instrumental in facilitating effective strategy formulation within organisations. Such an understanding can assist entities in crafting and implementing strategies that contribute towards more sustainable practices, paving the way

for a greener future. The knowledge of GHRM is a vital asset for organisations aiming for strategic and sustainable growth.

Nevertheless, despite notable advancements in GHRM research, the field continues to evolve. It calls for a comprehensive examination to shed light on its current state, identify the prevailing challenges, and underscore its prospective benefits. The constantly evolving nature of GHRM research underscores its dynamicity and reinforces the need for continuous exploration. This in-depth analysis could offer invaluable insights into GHRM, fostering its adoption and application more effectively and meaningfully.

4. RESEARCH METHOD

The objective of the Research: To understand the prospects, perspectives, forecasts, and outlook of Green Human Resources Management (GHRM) through a systematic content analysis of the relevant academic literature.

4.1 Research design

The research will be conducted using a content analysis approach. A systematic content analysis will be performed on academic papers. This is an objective, systematic, and quantitative description of the manifest content of papers. By the way, the design is appropriate as it aims to gather all empirical evidence that fits pre-specified eligibility criteria to answer a specific research question.

4.2 Sampling

The study incorporated the purposive sampling method, a non-probability sampling technique wherein units are intentionally selected for their specific characteristics required for the study sample. Essentially, the selection in purposive sampling is driven by a specific purpose. Also referred to as judgemental sampling, this approach depends on the researcher's discernment in identifying and selecting individuals, cases, or events that can offer the most insightful information to fulfil the study's goals.

4.3 Data collection

The primary data source for this research is the Scopus database, one of the most significant abstract and citation databases in the peer-reviewed literature. It includes academic journals, books, and conference papers across various disciplines. For this study, a search was conducted in the Scopus database using purposive sampling, which covered the following queries:

"Green Human Resources Management" AND "Future*"

"Green Human Resources Management" AND "Perspective*"

"Green Human Resources Management" AND "Prospect*"

"Green Human Resources Management" AND "Forecast*"

"Green Human Resources Management" AND "Forward*."

"Green Human Resources Management" AND "Outlook*"

4.5 Search queries

The mentioned queries are the primary tools used to search for relevant papers in the Scopus database. These queries combine specific keywords related to Green Human Resources Management and forward-looking perspectives to retrieve relevant publications.

Selection Criteria: To narrow down the search results, we may have applied specific criteria for paper selection. This could include considering the publication year, language, relevance to the research topic, and the credibility of the sources.

The search returned 500 papers on the general topic of Green Human Resources Management (GHRM). However, after applying the specified filters, 23 papers were identified as directly relevant to the study's focus on the future aspects of GHRM. These 23 papers constitute the sample size for the content analysis.

4.6 Data extraction

Once we obtained the papers matching the search queries, we likely performed content analysis to extract relevant information from each article. This could involve identifying key themes, concepts, methodologies, findings, and insights related to future studies on Green Human Resources Management. We used coding and prompts; these tools help reduce bias, enhance reproducibility, and efficiently handle large textual data.

Table 1. Titles of Purposive Sample

N	Title	Authors
Title 1	Driving forward green human resource management in India: A framework for sustainable organizational development	(Driving Forward Green Human Resource Management in India: A Framework for Sustainable Organisational Development, 2018) –
Title 2	How Do Green Human Resource Management Practices Encourage Employees to Engage in Green Behavior? Perceptions of University Students as Prospective Employees	(Ercantan & Eyupoglu, 2022)
Title 3	Perceived green human resource management practices and corporate sustainability: Multigroup analysis and major industries perspectives	(Jamal et al., 2021)
Title 4	A mediated–moderated model for green human resource management: An employee perspective.	(Z. Ren & Hussain, 2022)
Title 5	Green human resource management and environmental cooperation: An ability-motivation-opportunity and contingency perspective	(Pham et al., 2020)
Title 6	Green human resource management – A personnel economics perspective	(Sinclair-Desgagné, 2021)
Title 7	How does the perceived green human resource management impact employee's green innovative behavior? —From the perspective of theory of planned behavior.	(Song et al., 2023)
Title 8	Examining the influence of employee engagement in supporting the implementation of green supply chain management practices: A green human resource management perspective	(Graham et al., 2023)
Title 9	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	(Islam et al., 2022)
Title 10	How Environmental Knowledge and Green Values Affect the Relationship between Green Human Resource Management and Employees' Green Behavior: From the Perspective of Emission Reduction	(Zhu et al., 2022)
Title 11	A Conceptual Framework of Power Outage, Global Economic Recession, and Green Human Resources Management: A Palestinian Health Sector Perspective	(Ayyash, 2021)
Title 12	How green human resource management can promote green employee behavior in China: A technology	(Zhang et al., 2019)

N	Title	Authors
	acceptance model perspective	
Title 13	Impact of green human resource management practices on employee engagement from the perspective of banking employees	(Wang et al., 2023)
Title 14	Green Human Resource Management and Sustainable Performance With the Mediating Role of Green Innovation: A Perspective of New Technological Era	(Awwad Al-Shammari et al., 2022)
Title 15	Green Human Resource Management: Mapping the Research Trends for Sustainable and Agile Human Resources in SMEs	(Papademetriou et al., 2023)
Title 16	Recent trends of green human resource management: Text mining and network analysis	(Sharma et al., 2022)
Title 17	What is next for green human resource management: Insights and trends for sustainable development	(Khan & Muktar, 2021)
Title 18	Green human resource management- the latest trend or strategic necessity?	(Bombiak, 2019)
Title 19	Green human resource management in service industries: the construct, antecedents, consequences, and outlook	(Tanova & Bayighomog, 2022)
Title 20	Green human resource management: a comprehensive review and future research agenda	(Pham et al., 2020)
Title 21	Green human resource management: A review and future directions	(Afedzie et al., 2020)
Title 22	Green human resource management research in emergence: A review and future directions	(S. Ren et al., 2018)
Title 23	State-of-the-Art and Future Directions for Green Human Resource Management	(Jackson et al., 2011)

Source: own elaboration

5. RESULTS

5.1 Keyword Content Analysis

Based on the frequency of the keywords in Table 2, several themes relevant to the paper "Forward Studies on Green Human Resources Management" can be discerned. These words swing between topics that have a conceptual trend that tries to answer the questions (What, Who, and Why), or that have a methodological direction that answers the question (How), We also supported the table with the rate of frequencies because it is the most indicative of the weight of each keyword.

Table 2. Keywords Content Analysis

Keyword	Frequency	Rate
Green human resource management (GHRM)	23	31,94%
Sustainability	15	20,83%
Systematic review	6	8,33%
Environmental management	6	8,33%
Scopus	3	4,17%
Text mining	2	2,78%
Network analysis	2	2,78%
KNIME	2	2,78%

Keyword	Frequency	Rate
VOSviewer	2	2,78%
Latent semantic analysis (LSA)	2	2,78%
Future research agenda	2	2,78%
TF-IDF	1	1,39%
Environmental corporate social responsibility	1	1,39%
Environmental sustainability	1	1,39%
Antecedents	1	1,39%
Consequences	1	1,39%
Contingencies	1	1,39%
Measurement	1	1,39%

Source: own elaboration

Green Human Resource Management (GHRM): As it appeared 23 times, it is clear that GHRM is the central theme of the study. This shows that all the abstracts we selected revolve around this concept, and it is the main focus of the research.

Sustainability: Mentioned 15 times, it is the second most frequent keyword. It highlights the important link between GHRM practices and sustainability. This shows that GHRM is viewed mainly through the lens of sustainability and is the second dominant theme in the research.

Systematic Review & Environmental Management: Both appearing 6 times, these keywords indicate that a substantial proportion of the research on GHRM involves systematic reviews of existing literature and is intertwined with environmental management. This suggests that many scholars focus on synthesising previous findings and applying GHRM practices to manage environmental concerns.

Research Tools and Methods: Keywords like Scopus, text mining, network analysis, KNIME, VOSviewer, and latent semantic analysis (LSA) highlight the methodological approaches that researchers employ. These tools are often used for literature reviews, analysis of textual data, visualising relationships among keywords or concepts, and data mining, which signals the diverse methods used in GHRM research.

Future Research Agenda: Mentioned twice, this keyword suggests the forward-looking nature of GHRM research. It signifies that the field is focused on finding new ways to advance and apply GHRM concepts in the future.

Other Keywords: TF-IDF, environmental corporate social responsibility, environmental sustainability, antecedents, consequences, contingencies, and measurement appeared once. These suggest a wide range of themes and concepts being explored in the field, from CSR and sustainability to causal relationships and measurement methods in GHRM research.

5.2 Titles Content analysis

To conduct a primary content analysis of the 23 titles, we provide a selective criterion including Focus of Research, Geographical Focus, Sectoral/Industry, Focus, Organisational Size, Targeted Population /Employee group, Theoretical Model/Approach, Research Objectives, Role of Green HRM, and Future Trends and Directions.

Table 3. Titles Content Analysis

Paper	Focus of Research	Geogr Focus	Sectoral/Industry Focus	Organisational Size	Targeted Population /Employee group	Theoretical Model/Approach	Research Objectives	Role of Green HRM	Future Trends and Directions
1.	Empirical Research	India	-	-	-	-	-	Sustainable Organisational Development	-
2.	Empirical Research	-	University	-	Prospective Employees, University Students	-	Promoting Green Behaviour	-	-
3.	Empirical Research	-	-	-	-	-	Corporate Sustainability	-	-
4.	Empirical Research	-	-	-	-	-	-	-	-
5.	Empirical Research	-	-	-	-	Ability-Motivation-Opportunity and	-	-	-
6.	Empirical Research	-	-	-	-	Personnel Economics Perspective	-	-	-
7.	Empirical Research	-	-	-	-	Theory of Planned Behaviour	Promoting Green Behaviour	-	-
8.	Empirical Research	-	-	-	-	-	Employee Engagement	-	-
9.	Empirical Research	China	SMEs	SMEs	Millennial Employees	-	Retention	-	-
10.	Empirical Research	-	-	-	-	-	Promoting Green Behaviour, Emission	-	-
11.	Conceptual Frameworks	Palestine	Health Sector	-	-	-	-	-	-
12.	Empirical Research	China	-	-	-	Technology Acceptance Model	Promoting Green Behaviour	-	-
13.	Empirical Research	-	Banking	-	Banking Employees	-	Employee Engagement	-	-

Paper	Focus of Research	Geogr Focus	Sectoral/Industry Focus	Organisational Size	Targeted Population /Employee group	Theoretical Model/Approach	Research Objectives	Role of Green HRM	Future Trends and Directions
14.	Empirical Research	-	-	-	-	-	Sustainable Performance, Green Innovation	-	-
15.	Empirical Research	-	-	SMEs	-	-	-	-	-
16.	Trend Analysis	-	-	-	-	-	-	-	Recent Trends
17.	Trend Analysis	-	-	-	-	-	-	-	Future Trends
18.	Conceptual Frameworks	-	-	-	-	-	-	Strategic Necessity	-
19.	Empirical Research	-	Industry	-	-	-	-	-	-
20.	Research Reviews	-	-	-	-	-	-	-	Future Research Agenda
21.	Research Reviews	-	-	-	-	-	-	-	Future Directions
22.	Research Reviews	-	-	-	-	-	-	-	Future Directions
23.	Research Reviews	-	-	-	-	-	-	-	Future Directions

Source: own elaboration

Focus of Research: Most papers focus on empirical research, suggesting a solid push toward generating new data and insights within the Green Human Resource Management field.

Geographical Focus: Only a few papers specify a geographical location, which suggests that many of these topics are being explored in a more global context or are not region-specific.

Sectoral/Industry Focus: Few papers focus on specific industries, indicating that Green HRM is being researched across various sectors, not confined to any specific one.

Organisational Size: A few papers focus on SMEs, which could mean a broader exploration of Green HRM in companies of all sizes, or perhaps the organisation's size is not being heavily factored into most research.

Targeted Population/Employee Group: Few papers focus on specific groups like "University Students" or "Millennial Employees." This suggests that most research does not limit its scope to a particular group and aims to be more universally applicable.

Theoretical Model/Approach: Some papers mention specific models or theories. The diversity of theories or models being applied reflects the wide range of methods being used to study this field.

Research Objectives: Several research papers aim to understand how Green HRM can promote green behaviour or improve employee engagement. These objectives seem to reflect an interest in practical, actionable insights.

Role of Green HRM: Only a few papers directly discuss the broader role of Green HRM, such as its impact on sustainable organisational development or its strategic necessity.

Future Trends and Directions: Many papers (especially the last ones) are focused on future trends and directions, indicating that Green HRM is a growing field with ongoing exploration and evolving research agendas.

The table indicates that Green HRM is an actively researched topic with many focus areas. The majority of papers seem to concentrate on empirical research with practical applications. There is also a solid future-oriented trend within the research.

5.3 Abstracts Content analysis

The presented table below categorises Forward-Looking Studies on (GHRM) research abstracts into four broad thematic areas, providing a clear and concise view of the leading research strands in this field.

Table 4. Classification of forward-looking studies on (GHRM) research abstracts based on thematic focus

Thematic Focus	Abstract
Effects of GHRM on Employee Behaviour and Performance	Abstract2 Influence of GHRM on prospective employees' green behaviour; Abstract3 Impact of GHRM practices on corporate sustainability; Abstract4: Effects of GHRM on environmental performance in Chinese manufacturing firms; Abstract7 Impact of perceived GHRM on employees' green innovative behaviour; Abstract10 Impact mechanism of GHRM on employees' green behaviour; Abstract12 Influence of GHRM practices on employee green behaviour in China; Abstract13 Impact of GHRM practices on employee engagement in the banking sector; Abstract14 Relationship between GHRM practices, green innovation, and sustainable performance
Role of GHRM in Organisations	Abstract1 Green HRM practices in Indian manufacturers; Abstract5 Role of GHRM in supporting environmental cooperation with customers and suppliers Abstract6 Role of HRM practices in directing managerial attention for sustainability; Abstract8: Role of employee engagement in supporting GSCM practices; Abstract9: Effectiveness of GHRM practices on millennial employees' retention in SMEs; Abstract15: Role of GHRM in reducing environmental footprint and achieving sustainable goals in SMEs; Abstract18 Relevance and practices of Green HRM in contemporary companies

Thematic Focus	Abstract
Reviews and Future Research on GHRM	Abstract16 Trends in GHRM research using text mining and network analysis; Abstract17 Insights and trends in GHRM for sustainable development; Abstract20: Comprehensive review and future research agenda of Green HRM; Abstract20: Systematic literature review on GHRM; Abstract22: Review of GHRM research and future directions; Abstract23: State-of-the-art and future directions for Green HRM
GHRM in Different Geographical and Sectorial Contexts	Abstract11: Effect of the power outage and global economic recession on GHRM in the health sector; Abstract19: Green HRM in service industries: construct, antecedents, consequences, and outlook; Abstract21: HR's role in environmental sustainability in sub-Saharan Africa

Source: own elaboration

The first group, "Effects of GHRM on Employee Behaviour and Performance," focuses on studies investigating the impacts of GHRM on employee actions and how these practices can promote sustainability and green behaviour within organisations.

In the second category, "Role of GHRM in Organisations," the emphasis lies on the importance and effectiveness of GHRM in driving sustainability, organisational cooperation, employee retention, and other relevant areas.

The third section, "Reviews and Future Research on GHRM," collates literature reviews and future-oriented research, offering an overview of past research trends and potential future directions.

Finally, the "GHRM in Different Geographical and Sectorial Contexts" group encapsulates research exploring how GHRM manifests and is affected by various geographical locations and industry sectors. Studies have examined green human resource management practices, including environmental conditions, economic climates, and industry contexts. Organising the research this way provides an all-encompassing perspective on green human resource management.

5.4 Classification of Forward-Looking Studies on (GHRM) Research Abstracts Based on the Methodology Used

Table 4. groups the abstracts according to the methodologies used in the studies.

The "Survey/Questionnaire" category covers research that gathered primary data using surveys or questionnaires, sometimes combined with structural equation modelling. The "Regression/Correlation/Modelling" group includes studies utilizing sophisticated statistical techniques like regression, confirmatory factor analysis, and structural equation modelling to analyse relationship relationships.

Table 5. Classification by the Methodology used on Forward-Looking Studies (GHRM)

Group	Abstract
Survey/Questionnaire Based	Abstract4: Questionnaire survey, partial least squares structural equation modelling; Abstract7: Questionnaire survey, hierarchical regression Abstract8: Survey data analysis Abstract9: Quantitative analysis based on surveys; Abstract11: Questionnaire-based survey, structural equation modelling; Abstract12: Cross-sectional survey, technology acceptance model; Abstract13: Questionnaire survey, SEM modelling; Abstract18: Literature overview, questionnaire survey

Group	Abstract
Regression/Correlation/Modeling	Abstract2: Confirmatory factor analysis, regression, and correlation analyses; Abstract3: Partial least squares structural equation modeling, multigroup analysis; Abstract5: Moderated regression analysis; Abstract10: Regulated intermediary model; Abstract14: Quantitative approach, structure equation modelling.
Review Based	Abstract17: Systematic review, Scopus database; Abstract19: Systematic literature review; Abstract20: Comprehensive review Abstract21: Literature review, coding, and classification of articles Abstract22: Narrative review Abstract23: Overview of special issue articles, discussion of research questions
Analytical/Statistical Models	Abstract6: Static multi-task principal-agent model, monotone comparative statics; Abstract15: Bibliometric analysis; Abstract16: Text mining, latent semantic analysis, network analysis

Source: own elaboration

The "Literature Review" category comprises studies that primarily conducted reviews of existing literature using databases such as Scopus and methods such as narrative synthesis to provide comprehensive insights. Finally, the "Analytical/Statistical Models" group contains research employing advanced analytical and statistical models such as multi-task principal-agent models, bibliometric analysis, text mining, and network analysis. The table demonstrates the wide range of methodological approaches researchers have used to investigate Green HRM practices.

5.5 Classification of forward-looking studies on (GHRM) research abstracts based on Key Predictions from Findings

Table 5 summarises significant findings from prospective Green Human Resource Management (GHRM) studies. This classification is the core of the content analysis approach because it allows to the ones interested to monitor and discover potential research gaps. It categorises the studies into four thematic categories.

Table 5. Key Predictions from Forward-Thinking Research on Green Human Resource Management

Group	Abstract
GHRM's Impact on Green Behaviour and Environmental Performance	Abstract 1: Concentrates on developing green HRM practices and their impact on competitive advantage; Abstract 2: GHRM directly influences green behaviour through psychological green climate perception; Abstract 3: GHRM practices like recruitment, rewards, and employee involvement have a positive impact on corporate sustainability; Abstract 4: GHRM has a positive effect on employee and firm environmental performance; Abstract 7: Perceived GHRM positively influences green innovative behaviour through mediating variables; Abstract 10: GHRM has a positive predictive effect on employees' green behaviour through the relational psychological contract; Abstract 12: Various GHRM practices have positive effects on in-role and extra-role green behaviour; Abstract 14: GHRM practices positively impact sustainable performance, with green innovation mediating the relationship.
GHRM and Employee Engagement/Retention	Abstract 8: Employee engagement significantly supports most GSCM practices; Abstract 9: Positive relationship between green training and development, green reward, and retention; Abstract 13: GHRM practices positively influence employee engagement.

Group	Abstract
GHRM Reviews and Future Research Directions	Abstract 16: Identifies five recent research trends in GHRM using clustering; Abstract 17: Reflects on the dimensions, execution, factors, and effects of GHRM; Abstract 20: Provides a comprehensive overview of Green HRM and identifies future research directions; Abstract 20: Identifies research gaps, provides detailed recommendations, and proposes a research framework; Abstract 22: Identifies conceptual and measurement challenges in GHRM, proposes an integrated model, and discusses research opportunities; Abstract 23: Discusses functional HRM practices in the context of environmental sustainability and suggests research opportunities at the intersection of strategic HRM and environmental management.
GHRM's Role in Organizational Sustainability	Abstract 5: GHRM positively relates to environmental cooperation and is moderated by internal green supply chain management; Abstract 6: Provides predictions on adjusting HRM practices as firm's stakes in sustainability increase; Abstract 11: Power outage and global economic recession have a significant positive impact on GHRM; Abstract 15: Proposes a theoretical framework for a business model incorporating GHRM practices in SMEs; Abstract 18: Presents the relevance of Green HRM and practices for constructing sustainable companies; Abstract 21: Emphasises the importance of integrating environmental sustainability into HR practices.

Source: own elaboration

- **GHRM's Impact on Green Behaviour and Environmental Performance:** These studies emphasize that GHRM practices influence employees' and organizations' green behaviour and environmental performance. They emphasize the importance of GHRM in creating a psychologically green climate, encouraging innovative green behaviour, and improving overall company sustainability.
- **GHRM and Employee Engagement/Retention:** This research focuses on the function of GHRM in boosting employee engagement and retention. It implies that green training, reward, and the more significant psychological contract increase engagement and retention.
- **GHRM Reviews and Future Research Directions:** This study group provides reviews of current GHRM practices, identifies trends, and explores future research areas. These publications emphasize the necessity of conceptualizing GHRM and provide extensive recommendations for further research.
- **GHRM's Role in Organizational Sustainability:** The study in this category highlights the critical function of GHRM in supporting organizational sustainability. It comprises research suggesting theoretical models for integrating GHRM into business models, investigating the effects of global economic issues on GHRM, and emphasizing the need to incorporate environmental sustainability into HR practices.
- In conclusion, this section emphasizes GHRM's diverse and significant role in influencing green behaviours, encouraging employee engagement, and achieving organizational sustainability.

5.6 Exploring the Landscape: Determinants, Challenges, and Future Trends

Based on the 23 abstracts and for systematic content analysis, we also explored the determinants, challenges, and trends for the future of Forward-Looking Studies on (GHRM):

1. Determinants of Future GHRM:

- **Integration of technology:** The implementation and successful functioning of GHRM can be significantly enhanced by using technology (like Industry 4.0).
- **Effective policies and practices:** Future GHRM will heavily rely on developing and implementing green policies and practices in HRM.
- **Employees' environmental awareness and behaviour:** The success of future GHRM will be determined by how environmentally aware the employees are and how green their behaviours are.
- **Top management support:** The support and commitment from the top management to environmental sustainability and GHRM practices.
- **Training and development programs:** Employee education and training programs on environmental awareness and sustainable practices.
- **Organisational culture:** Promoting a culture that prioritises sustainability and green practices.
- **Regulations and societal pressure:** External factors include legal requirements, societal expectations, and customer demand for sustainable practices.

2. Challenges of GHRM:

- **Lack of awareness and commitment:** Lack of understanding and commitment to environmental sustainability among employees and management.
- **Need for a shift in mindset and practices:** Adopting GHRM practices require a fundamental shift in traditional HR practices, which can be a significant challenge.
- **Insufficient training:** There can be a lack of practical training and development programs to educate employees about environmental sustainability.
- **Absence of standardised measurement:** GHRM outcomes are difficult to measure, and the absence of standardized metrics can be challenging.
- **Cultural barriers:** Different cultures may have varied levels of acceptance and adaptability toward GHRM practices.
- **Lack of research:** GHRM is still emerging, and comprehensive and wide-ranging research in this area is lacking. This lack of research can impede the development and implementation of effective GHRM strategies.
- **Regulatory pressures:** Navigating and complying with various environmental regulations can be complex and challenging for organisations.

3. Trends for the future of GHRM

From the 23 abstracts provided, extract the Trends for the future of GHRM

- Based on the 23 abstracts, the following are some of the future trends of Forward-Looking Studies on (GHRM):
- **Integration of Technology in GHRM:** As highlighted in a few studies, the integration of technology will be crucial for the future of GHRM. For instance, using data analytics tools for monitoring and improving green practices in HRM could be a key trend.

- **Increased Focus on Training and Development:** Several abstracts emphasise the role of training and development in creating environmentally aware employees. Future GHRM will likely see an increased emphasis on educational programs focusing on sustainability and green practices.
- **Strategic Integration of GHRM:** The strategic role of GHRM has been highlighted in several studies. GHRM might become integral to the organisational strategy, contributing to a competitive advantage.
- **GHRM in Service Industries:** One of the abstracts explicitly mentions the role of GHRM in the service industry, suggesting that the application of GHRM will expand beyond manufacturing to other sectors.
- **Increased Regulatory Compliance:** As environmental regulations become stricter. There would be a greater need for GHRM to ensure compliance, suggesting a trend toward integrating legal and regulatory knowledge in GHRM practices.
- **Green Employee Behaviour:** The future of GHRM could see more emphasis on promoting and rewarding green behaviours among employees, influencing the overall organizational culture towards sustainability.
- **Role of GHRM in Circular Economy:** A few abstracts mention the potential role of GHRM in promoting a circular economy, suggesting that future GHRM practices could be geared towards waste reduction and resource efficiency.
- **Measurement of GHRM Outcomes:** Future research and practice in GHRM may focus on developing standardized metrics and evaluation methods to measure the effectiveness of GHRM practices and their impact on environmental performance.
- **Linking GHRM to Organisational Performance:** There is an increasing trend to link GHRM practices to environmental and financial performance, suggesting that future GHRM practices will likely be tied to organisational performance metrics.

6. CONCLUSIONS

This systematic review and content analysis of 23 abstracts on forward-looking studies in Green Human Resource Management (GHRM) provides valuable insights into current and future research directions in this emerging field. The analysis reveals several dominant focus areas, including the effects of GHRM on employee green behaviour and performance, the strategic role of GHRM in organisations, comprehensive literature reviews, and geographical/sectoral contexts. The studies employ various methodologies, predominantly surveys, statistical modelling, literature reviews, and analytical techniques.

The key findings emphasize GHRM's positive influence on green employee behaviour, environmental performance, employee engagement, and organizational sustainability. The research also highlights the need to integrate GHRM strategically, develop standardised metrics, and expand its applications across sectors. As the field continues to evolve, there is immense potential for technology integration, increased training, legal compliance, cultural change, and linking GHRM to business performance. However, awareness, mindset shifts, measurement, and research limitations remain.

This review synthesises the current knowledge status regarding GHRM and charts a course for future investigations in this critical area at the intersection of human resources and environmental sustainability. It provides researchers and practitioners an overview of the state of the field and directions for advancing theory, practice, and impact.

6.1 Potential Implications:

The strategic value and competitive advantage GHRM offers underscore the imperative for organisations across sectors to integrate sustainability principles within human capital management. By driving cultural transformation, aligning sustainability with broader strategy, and designing contextual interventions, GHRM can significantly enhance green behaviours and mindsets organization-wide. Effective GHRM practices based on empirical evidence provide HR professionals with tangible methods to spearhead sustainability initiatives, engaging the workforce as a catalyst for change.

However, realizing GHRM's full potential necessitates addressing critical research gaps around metrics, applicability, and integration while forging greater collaboration between HR and sustainability functions. Developing robust GHRM strategies requires a deep understanding of contextual dynamics across cultures, industries, and geographies based on rigorous scholarship. Continued research and practice refinement is vital to equip HR with the knowledge and tools to maximise human capital for organisational and societal sustainability. The review reveals GHRM's immense yet underexploited capacity to lead environmental change, granting HR professionals an unprecedented opportunity to manifest sustainability at scale.

6.2 Recommendations for Further Research:

To advance the scholarship and practice of GHRM, future research must focus on strengthening the generalizability, measurement, applicability, and contextualization of findings in various settings. More studies are needed across diverse geographical contexts, sectors, organisation types, and cultures to improve transferability and build robust theoretical frameworks. Developing standardized metrics and benchmarks is crucial to assess GHRM's impact and enable comparisons to be accurate. Exploring the integration of emerging technologies can reveal new ways to optimise and scale GHRM initiatives. Extensive training programs and change management strategies must be researched to drive adoption at individual and organisational levels. Longitudinal evaluations, surveys, and case documentation can provide insights into long-term effects, challenges, and best practices. Investigating synergies with related HR domains and collaborating with academics and practitioners can nurture valuable interdisciplinary perspectives.

Additionally, specific high-potential areas warrant greater research attention as part of the GHRM agenda. These include analysing the role of leadership and culture; studying the effectiveness of employee training for building green competencies; investigating potential applications of technologies like AI and IoT; evaluating the sustained impacts of GHRM over time; examining integration with ethical sourcing, CSR, health and safety; developing contextualized theoretical models; and testing practical recommendations through collaborative studies. Dedicated focus on these priority research streams can enormously enrich the rigour, relevance, and reach of GHRM in driving organisational and societal sustainability globally.

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