

Green Human Resource Management Practices: Barriers and Benefits from Nursing Perspective

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Abstract

Background: Applying green human resources management practices is becoming critical for most of healthcare facilities faced with global pressure to adopt environmentally friendly practices. **Aim:** Evaluating green human resource management practices: barriers and benefits from nursing perspective **Design:** An exploratory descriptive research design was utilized for conducting the study. **Setting:** The research was carried out at Beni-Suef University Hospital. **Sample:** A convenient sample of 306 nurses was gathered for the research. **Data collection tools:** Data was collected using a self-administered questionnaire is Nurses' Perception of Green Human Resources Management Practices Questionnaire which was developed by the investigator, this questionnaire composed of four parts. **Results:** The overall mean score of studied nurses' perception regarding green human resource management practices was (42.59±5.67) indicating a moderate level of perception, As for the obstacles to implementing green human resource management practices, more than two-thirds of the nurses indicated that the lack of managerial support and ambiguity of the concept were the primary barriers to implementation. **Conclusion:** the study concluded different barriers and challenges hindering the application of green human resources management practices among nursing staff. **Recommendations:** Implementing training programs for increasing nursing awareness regarding the concept of green human resources management.

Keywords: Barriers, Benefits, Green management, Human resources & Nursing.

Introduction

Being "green" has become the standard these days, and the management sector is seeing an increase in the amount of study on green marketing, green accounting, green management, and green human resource management. Green human resource (HR), or the integration of environmental management with human resources, is also becoming more and more necessary. It is important to note, nonetheless, that green HRM is still in its infancy and that a large number of studies in this field are theoretical in nature (Abd-elmonem et al., 2022).

Greening is a comprehensive process aimed at smarter energy usage, low costs, and low waste using sustainable resources or recyclable materials for end results that are products, targets, etc (Ansari et al., 2023).

To build a green organization, human resources and the organization must increase organizational hierarchies' efficiencies, perform more virtualized work or eliminate unnecessary time spent in the office, and optimize the use of organizational. Additionally, organizations are supporting greener options such as telecommuting and flexible work schedules, and hiring people interested in environmental issues is necessary to establish and

maintain a green organization (Abdelrahman et al., 2023).

Green human resources management (GHRM) refers to the integration of environmental sustainability considerations into HRM procedures. This entails implementing eco-friendly procedures and guidelines in areas including hiring, performance management, training and development, and pay and benefits (Ardiza et al., 2021).

The significance of green hiring has been underlined by green organizations. It is an organizational activity that seeks to identify and inspire possible applicants for current and anticipated employment vacancies. Therefore, the goal of the hiring process is to affect the number and kind of applicants for a certain position (Hussain, 2018).

The complexities of incorporating environmental concerns into an organization's hiring process are not well understood. Generally speaking, when this activity incorporates the environmental dimension, the organization's environmental performance is used as a tool to attract talent (Jabbour, 2011).

In recent years, the concept of sustainability has received a lot of attention from several businesses, including the healthcare sector. Green Human Resources Practices (GHR) involves incorporating environmentally conscious approaches into HR

operations, such as: Sustainable recruitment: Digital recruitment processes, reducing paper waste. Eco-friendly training: Incorporating sustainability topics into training programs (**Topcu & Kiraz, 2025**).

Green workplace policies: Encouraging energy-efficient practices, recycling, and reduced waste. Employee engagement: Promoting environmental awareness and encouraging sustainable behaviors (**Nagib et al., 2023**).

The increasing global awareness of environmental challenges has led to a surge in sustainable practices across various industries, the concept of green human resources (GHR) has become widely accepted across various corporate sectors and has also emerged as a significant area of research (**Şen, 2025**).

GHR represents one of the most crucial agreements aimed at enhancing employee satisfaction, which in turn supports the sustainability of the organization and elevates skill levels and retention rates among employees, while also contributing to the overall sustainability of the organization. GHRM combines environmental awareness with social and environmental well-being, benefiting both organizations and employees (**Paramita & Supartha, 2022**).

Key aspects include integration with HR procedures, incorporating environmental objectives into training, performance reviews, and other HR functions. Environmental consciousness, promoting eco-friendly practices and sustainability within the organization. Employee well-being: Fostering a healthy and sustainable work environment. GHRM is considered to be the same as HRM Managing various workplace aspects effectively is crucial for organizational success (**Stephenson Bindeeba et al., 2025**).

Here's a concise overview:- Hiring: Identify top talent, ensure cultural fit, and use a comprehensive selection process. Placement match skills with job requirements, provide necessary support, and ensure a smooth transition. Training, develop structured programs, offer ongoing development opportunities, and enhance skills and knowledge (**Shoaib et al., 2021**).

Performance evaluation, set clear goals, conduct regular evaluations, and provide constructive feedback. Teamwork, foster collaboration, promote diversity and inclusion, and encourage open communication. Workplace, maintain a positive environment, ensure employee well-being, and support work-life balance (**Teixeira et al., 2016**).

Significance of Study

Egypt's National Climate Change Strategy 2050 is a comprehensive roadmap designed to address climate change challenges and promote sustainable development. Launched in May 2022, the strategy

aims to integrate climate change dimensions into all sectors, supporting economic and developmental goals while reducing emissions (**Irada et al., 2025**).

Key aspects of the strategy includes the first goal is improving quality of life for enhancing the well-being of Egyptian citizens through sustainable practices and climate resilience. The second goal is sustainable development for achieving economic growth while preserving natural resources and ecosystems. And the third goal is climate leadership for strengthening Egypt's climate leadership at the international level (**Amaleshwari & Masilamani, 2024**).

The strategy is aligned with Egypt's Sustainable Development Strategy (SDS) 2030, focusing on meeting climate change challenges. To implement this strategy, Egypt has taken significant steps, Issuing the first sovereign green bond in the region is a significant step towards promoting sustainability. This bond can fund various projects, including Clean Transportation: Supporting eco-friendly transportation systems. Sustainable Water Management: Promoting efficient water use and management practices (**Wyns, 2023**).

The private sector plays a crucial role in Egypt's transition to a climate-resilient economy, and its adaptation efforts are essential to achieving the strategy's objectives. Overall, Egypt's National Climate Change Strategy 2050 demonstrates the country's commitment to addressing climate change and promoting sustainable development. Egypt is organizing international action on climate adaptation, mitigation, and finance as the host of COP27 (**Hamzawy et al., 2023**).

Egypt's Vision 2030 focuses on: Sustainable development: Balancing economic growth with environmental protection. Climate change mitigation: Addressing climate-related challenges. Natural resource conservation: Preserving Egypt's ecosystems and natural resources. Inspiring sustainable practices: Encouraging others to adopt eco-friendly approaches (**Hamzawy et al., 2023; Wyns., 2023**).

Green Human Resources Management (GHRM) is gaining traction as organizations recognize its benefits, including Eco-friendly culture: Promoting sustainability and reducing environmental impact. Economic benefits: Cost savings, improved efficiency. Talent attraction: Enhanced reputation, attracting environmentally conscious workers. Competitive advantage: Differentiation through sustainable practices (**Allam & Mansour, 2024**).

Green Human Resources Management (GHRM) Goals as Environmental sustainability: Reduce environmental impact and promote eco-friendly practices. Sustainable resource use: Encourage efficient use of resources and minimize waste. Employee engagement: Boost employee dedication to

environmental protection and sustainability initiatives. As environmental concerns grow, healthcare businesses are prioritizing sustainability (Parnig et al., 2024).

Visualizing the hierarchical sustainable human resource management under qualitative information and complex interrelationships. Management of Environmental Quality: An International Journal, 32(6), 1422-1447 (Bawa et al., 2024).

The industry's role in promoting sustainability involves reducing Environmental Impact: Minimizing waste, conserving resources, and implementing eco-friendly practices. Promoting Sustainable Practices: Encouraging environmentally responsible behaviors among employees, patients, and suppliers. Investing in Green Technologies: Adopting innovative solutions that reduce energy consumption, emissions, and waste (Tsirigoti, 2025).

By embracing sustainability, the healthcare industry can Improve Public Health: By reducing pollution, promoting healthy environments, and mitigating climate change. Enhance Operational Efficiency: Through cost savings, reduced waste, and improved resource utilization. Support Long-Term Viability: By ensuring a sustainable future for healthcare services and the environment (Ab & Wahyuni, 2023; Abdulrahman et al., 2023).

Aim of the Study:

To evaluate green human resource management practices: barriers and benefits from nursing perspective

Objectives:

The aim of the current study was achieved through the following objectives:

1. Evaluating nursing perception regarding green human resource management practices.
2. Investigating nursing perception regarding the barriers of implementing green human resource management practices.
3. Measuring nursing perception of the benefits of implementing green human resources practices.

Research Questions:

- Q1:** What is the level of nursing perception regarding green human resource management practices?
- Q2:** What are the barriers of implementing green human resource management practices from nursing perspectives?
- Q3:** What are the benefits of implementing green human resource management practices from nursing perspectives?

Subjects and Method

Research Design:

A descriptive exploratory research design was employed to carry out the present study.

Research Setting:

The research was carried out at Beni-Suef University Hospital. This hospital has a bed capacity of 1420. It comprises seven primary departments that offer various services. The institution occupies a six-story structure. The hemodialysis unit, emergency room, kitchen, laundry room, and sterilizing unit are all located on the first floor. In addition to outpatient clinics, the orthopedic unit, radiology, and laboratory departments are located on the second floor. A cardiothoracic intensive care unit, a general intensive care unit, and an operating department with both general and specialty surgery units are located on the third level. Surgical departments and a physician's rest room are located on the fourth level. A pediatric department, a cardiac department, and medical departments are located on the fifth level. Lastly, the obstetric department, an endemic unit, and an ear, nose, and throat (E.N.T.) unit are located on the sixth level.

Subjects

A convenient sample of 306 nurses was recruited from a total of 1500 nurses in the previously mentioned setting, all of whom consented to participate in the study. This sample comprised both male and female staff nurses.

Sample size

Sample size was calculated using Steven and Thompson equation to calculate the sample size from the next formula

$$n = \frac{Np(1-p)}{(N-1)(d^2/z^2) + p(1-p)}$$

N= Population (1500)

Z= confidence level 95% (1.96)

P= probability (50%)

d= margin of error (0.05)

Data Collection Tools:

Data was collected using a self-administered questionnaire that is Nurses' Perception of Green Human Resources Management Practices Questionnaire which was developed by the investigators after reviewing the related literature (Farghaly et al., 2021). The questionnaire is composed of four parts: Part I personal characteristics: included questions related to subjects' gender, age, education, experience, etc. Part II nurses' perception regarding green human resources management Practices: include items asking subjects about their perception regarding hospital practices regarding green human resources management. This framework includes 24 items across six dimensions:

1. Green Recruitment and Selection (4 items)
2. Green Training and Development (4 items)
2. Green Performance Management and Appraisal (4 items)
3. Green Rewards and Compensations (4 items)
4. Green Empowerment (4 items)
5. Green Job Analysis and Design (4 items)

Part III Nurses' perception regarding barriers against applying green human resources management practices: It consists of seven items about nursing perception of the barriers of implementing green human resources management practices. Part IV Nurses' perception regarding benefits of applying green human resources management practices: It consists of seven items measuring nursing perception of the benefits of implementing green human resources management practices.

Scoring systems:

Items were scored using three points Likers scales; (1) agree, (2) neutral and (3) for disagree. The overall score was summed up and categorized into the following categories:

- High ($\geq 75\%$).
- Moderate ($50\% < 75\%$).
- Low ($< 50\%$).

Validity and Reliability:

Five nursing experts, comprising three assistant professors from the Faculty of Nursing at Beni-Suef University and three professors from the Faculty of Nursing at Cairo University, assessed the validity of the data gathering instrument. They assessed the tool for its content, clarity, applicability, and adequacy. Adjustments to the tool were made in accordance with the experts' recommendations. Subsequently, the tool's reliability was assessed using Cronbach's alpha coefficient, which yielded a score of 0.905, indicating a good level of reliability.

Field work:

Official approvals were obtained from the medical and nursing manager of Beni-Suef University hospital. All nursing staff were invited to participate in the study. The researchers explained the nature and goals of the study to streamline and govern the data collection process, after which each participant submitted a signed written informed consent. The researchers emphasized that participation was completely voluntary. The confidentiality of the information was guaranteed. While the researchers waited for the staff nurses to complete the data gathering instrument, they used it to assess nurses' opinions of green HRM. The nurses had plenty of time to finish the questionnaires because data collection was conducted during evening shifts when their workload was light. It took about twenty minutes to finish the questionnaires. Four months

were dedicated to the data collection phase. Finally, logical sound surveys with comprehensive answers were analyzed.

Pilot Study:

The pilot study engaged 30 nurses, representing 10% of the nursing personnel at the aforementioned sites, to assess the usability of the created tools and the clarity of the included instruments. Furthermore, the pilot aimed to ascertain the duration required for each participant to complete the survey. Modifications implemented based on the outcomes of the pilot testing led to the exclusion of the nurses chosen for the pilot study from the main study.

Ethical Considerations:

Approval was obtained from the scientific research ethical committee in Faculty of Medicine at Beni-Suef university. In addition, an approval was obtained from hospital manager of Beni-Suef university hospitals. Participants' rights to voluntary participation and informed consent were upheld. The data was used only for scholarly studies and was carefully protected.

Statistical Data Analysis:

Frequencies and percentages for categorical variables were among the descriptive statistics that were performed on the collected data using the Statistical Package for the Social Sciences (SPSS 22.0). Means and standard deviations were used for continuous variables.

Results

Table (1): Personal characteristics of the studied nurses (n=306)

Characteristics	N	%
Gender		
- Male	41	13.4
- Female	265	86.6
Age (Years)		
- < 20	6	2
- 20-<30	143	46.7
- 30-<40	89	29.1
- 40-<50	56	18.3
- ≥50	12	3.9
Mean±SD	29.76±5.34	
Marital Status		
- Married	243	79.4
- Unmarried	63	20.6
Educational Qualification		
- Diploma in nursing	102	33.3
- Bachelor degree	169	55.3
- Graduate Studies	35	11.4
Experience (Years)		
- <5	85	27.8
- 5-<10	159	52
- ≥10	62	20.2
Mean±SD	8.93±3.56	

Table (2): Overall mean score of studied nurses' perception regarding green human resource management practices (n=306)

Dimensions	Min - Max	Mean±SD	Mean %	Rank
- Green recruitment and selection	4 – 12	5.67±2.34	47.3	6
- Green training and development	4 – 12	7.49±2.76	62.6	3
- Green performance management and appraisal	4 – 12	6.98±2.49	58.5	4
- Green rewards and compensations	4 – 12	6.56±1.76	54.7	5
- Green empowerment	4 – 12	8.32±2.12	69.3	1
- Green job analysis and design	4 – 12	7.54±1.88	62.8	2
Overall Perception	24 – 72	42.59±5.67	59.2	

Table (3): Overall levels of studied nurses' perception regarding green human resource management practices (n=306)

Dimensions	High		Moderate		Low	
	No.	%	No.	%	No.	%
- Green recruitment and selection	36	11.8	120	39.2	150	49
- Green training and development	45	14.4	162	52.9	100	32.7
- Green performance management and appraisal	27	8.9	157	51.3	122	39.8
- Green rewards and compensations	49	16	188	61.4	69	22.6
- Green empowerment	80	26.1	132	43.1	94	30.8
- Green job analysis and design	37	12.1	155	50.7	114	37.2
Overall Perception	66	21.6	175	57.2	65	21.2

Table (4): Frequency distribution of studied nurses' perception regarding benefits and barriers of implementing green human resource management practices (n=306)

Items	Agree		Neutral		Disagree		Mean±SD	Mean %	Rank
	No.	%	No.	%	No.	%			
Benefits									
Retaining employees and attracting talents.	186	60.8	65	21.2	55	18	1.98±0.83	66	5
Sustainable use of resources	198	64.7	73	23.9	35	11.4	2.05±0.72	68.3	4
Increasing employees’ morale	169	55.2	83	27.1	68	17.7	1.64±0.53	54.7	7
Enhanced reputation	205	67	69	22.5	32	10.5	2.25±0.65	75	3
Costs Saving	178	58.2	57	18.6	71	23.2	1.77±0.49	59	6
Competitive advantage	208	68	55	18	43	14	2.67±0.67	89	2
Increasing productivity	212	69.3	60	19.6	34	11.1	2.87±0.57	95.7	1
Barriers and Challenges									
Lack of Knowledge ad awareness	180	58.8	71	23.2	55	18	1.71±0.79	57	6
Lack of training	195	63.7	49	16	62	20.3	2.33±0.38	77.7	3
Lack of managerial support	207	67.6	63	20.6	36	11.8	2.69±0.81	89.7	1
Implementation costs	193	63.1	71	23.2	42	13.7	2.19±0.49	73	4
Inadequate policies and regulation	159	52	91	29.7	56	18.3	1.64±0.59	54.7	7
Weak infrastructure	182	59.5	75	24.5	49	16	1.98±0.62	66	5
Concepts ambiguity	198	64.7	61	19.9	47	15.4	2.59±0.56	86.3	2

Table (1): Summarizes the distribution of studied nurses' personal characteristics. Regarding their gender, the majority of studied nurses (86.6%) were female. Nearly half of studied nurses (46.7%) were aged between 20 and 30 years with mean age (29.76±5.34). Concerning their marital status, more than three quarters of studied nurses (79.4%) were married. More than half of studied nurses (55.3%) hold bachelor degree in nursing. Regarding their years of experience, more than half of them had between 5 and 10 years of experience.

Table (2): Displays the overall mean score of studied nurses' perception regarding green human resource management practices. The overall mean score of studied nurses' perception regarding green human resource management practices was (42.59±5.67) with mean percent of (59.2%) indicating a moderate level of perception. In terms of the dimensions of green human resource management practices, the highest mean percentage was observed for green empowerment at 69.3%, whereas the lowest mean percentage was recorded for green recruitment and selection at 47.3%.

Table (3): Depicts the general levels of perception among the nurses studied concerning green human resource management practices. Over half of the nurses surveyed (57.2%) exhibited moderate levels of perception regarding these green human resource management practices.

Table (4): illustrates the distribution of the perceptions held by the studied nurses concerning the advantages and obstacles associated with the

implementation of green human resource management practices. In terms of the advantages of adopting green human resource management practices, over two-thirds of the nurses surveyed concurred that increased productivity, competitive advantage, and improved reputation are significant benefits of such practices (69.3%, 68%, and 67%, respectively). As for the obstacles to implementing green human resource management practices, more than two-thirds of the nurses indicated that the lack of managerial support and ambiguity of the concept were the primary barriers to implementation (67.6% and 64.7%).

Discussion

A developing idea in the world of human resource management, Green Human Resource Management (GHRM) focuses on incorporating environmental factors into every facet of an organization's staff management. Employee engagement, performance management, training, and hiring are all included in this. The foundation of GHRM is the belief that businesses have an obligation to make sure that their operations are environmentally conscious and sustainable, and that workers are essential to reaching this objective (Santos, 2024).

The current study demonstrated that nurses' perceptions of green HRM practices were moderate. This finding could be due to lack of awareness and training program regarding the concept of green management and how to apply in the health care setting. In the same Line, of Nagib et al. (2023), who

investigated how nurse managers perceived green HRM practices and how they related to work values. The study received support by indicating that the average score of the nurses involved reflected a moderate level of understanding regarding green HRM practices. This finding was also in the same vein with research done by **Gomaa (2024)**, about "Green Human Resources Management in Healthcare: Challenges and Barriers," and reported that nurses' perceptions of green HRM practices were generally moderate. In the same line, **Mohammed et al. (2023)**, It was discovered that the nurses participating in the study exhibited a moderate level of awareness regarding green HRM practices. **On contrast** with the findings, a study by **Poortaghi et al. (2021)** about Exploring nursing managers' perceptions of nursing workforce management, which found that more than half of studied nurses had low levels of perception regarding green HRM practices. Another study done by **Saad et al. (2024)**, about: Effect of Educational Program on Nurses' Perception Regarding Green Hospital and Attitude towards Patient Safety Guidelines and found that more than half of studied nurses had high levels of perception regarding green HRM practices.

According to the current study, green empowerment had the highest mean percentage among the dimensions of green HRM practices, whereas green recruitment and selection had the lowest mean percentage. **Tariq et al. (2016)** provided evidence for this conclusion. Green empowerment had the greatest mean percent, while green recruitment and selection was the lowest, according to a study on green employee empowerment: a systematic literature assessment on state-of-the-art in green human resource management. In the same line study conducted by: **Nagib et al. (2023)**. Green human resources management Practices as Perceived by Nurse Managers and its Relation to Work Values.

The results of this study, however, disagreed with those of a study by **Hutomo et al. (2020)** who conducted a study on green HRM, green customer environmental collaboration, and green employee empowerment enablers: improving environmental performance, the investigators reported that green empowerment had the lowest mean percent and green recruitment, and selection had the highest mean percent. **Luthufi et al. (2021)** also supported this finding in their study about Nurses' Perception about HRM System and Prosocial Organizational Behavior: Mediating Role of Job Efficacy.

Barriers against and Benefits of Green Human Resources Management Practices:

The present study found that more than two thirds of studied nurses agreed that increased productivity, competitive advantage and enhanced reputation are of

the benefits of implementing green human resource management practices. This result was supported by **Gunawan et al., (2019)** who conducted a study about competence-based human resource management in nursing and found that, more than two thirds of studied nurses agreed that increased productivity, competitive advantage and enhanced reputation are of the benefits of implementing green human resource management practices. This finding was not supported by a study by **Rondeau &Wagar (2016)** who investigated the relationship between HRM practices and nursing turnover and revealed that over two-thirds of the nurses in the study did not agree that adopting green HRM practices would lead to greater productivity, competitive advantage, and improved reputation.

According to the current study, over two-thirds of the nurses who participated thought that two of the biggest obstacles to implementing green HRM practices were a lack of managerial support and concept uncertainty. These findings were corroborated by **Hasanpoor et al. (2019)**, who investigated nursing managers' perceptions of the factors that help and hinder the adoption of evidence-based management. They discovered that over two-thirds of the nurses in the study concurred that unclear concepts and a lack of managerial support were the primary obstacles to adopting green HRM practices. In contrast, these findings were in disagreement with a study conducted by **Alatawi et al., (2020)**. Who conducted a study about barriers of implementing evidence-based practice in nursing profession and found that more than two thirds of studied nurses disagreed that lack of managerial support and concept ambiguity were of the main barriers of implementing green human resource management practices.

Conclusion

The current study concluded that nurses had moderate levels of perception regarding green human resource management practices and different barriers and challenges must be addressed to enhance application of these practices among nursing staff.

Recommendations

Based on the study's findings, the following suggestions were created:

For policy makers:

- Implementing training programs for increasing nursing awareness regarding the concept of green human resources management.
- Developing policies for supporting the application of green human resources management practice in workplace.

- Restructuring workplace climate and environment to be green friendly environment.
- Overcoming the barriers and challenges that hinder the application of green human resources management practices.

For further research:

- Conducting large scale quantitative studies on different setting and samples for investigating nurses' awareness of the concept of green human resources management.
- Innovating creative strategies and interventions to enhance the application of green human resources management practices in nursing field.

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