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## Green talent workforce planning and employee performance in Kenyan public hospitals

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### Abstract

Green Talent Workforce Planning on employee job performance in Kenyan public hospitals using a mixed-methods cross-sectional survey of 345 healthcare professionals. Structural equation modeling revealed a strong positive relationship between GTWP and performance ( $\beta = 0.385, p < 0.001$ ), with the model explaining 84.5% of performance variance and leadership support emerging as a critical moderator ( $\beta = 0.364, p < 0.001$ ); qualitative themes converged with these quantitative findings, highlighting benefits in competency development, resource management, team dynamics, career satisfaction, and organizational transformation. The study, grounded in Green HRM, Transformational Leadership, and Human Capital theories, concluded systematic implementation of GTWP strategies with robust leadership support to maximize employee performance and sustainability outcomes, providing recommendations spanning policy, practice, and future research to advance green talent management in healthcare.

**Keywords:** Green talent workforce planning, employee job performance, public healthcare system, transformational leadership, human resource sustainability

### 1. Introduction

#### Background of the Study

Environmental sustainability has emerged as a critical strategic imperative for organizations worldwide, particularly in human resource management practices. The development of green human resource management (GHRM) signifies a fundamental transformation in how organizations approach talent development and workforce planning (Correia, 2024) [22]. This evolution is especially evident in healthcare institutions, which must balance delivering high-quality services with implementing environmentally sustainable practices. Employee performance represents a cornerstone of effective healthcare delivery, directly influencing patient outcomes, safety protocols, and overall care quality (Owolabi, 2024) [81]. Contemporary discourse has expanded to incorporate employees' contributions to environmental sustainability initiatives within their professional healthcare roles (Aggarwal & Agarwala, 2023) [2, 2]. In response to these developments, green talent management strategies (GTMS) have become essential for organizations seeking to align their human resource practices with environmental sustainability objectives (Shareef, 2022; Liu, 2022) [92, 57].

The global business community increasingly recognizes the strategic importance of green talent workforce planning as organizations pursue the dual objectives of enhancing performance metrics while minimizing environmental impact. Research has established positive relationships between green human resource management practices and various sustainable performance indicators (Correia *et al.*, 2024) [22]. Studies have demonstrated that green HRM practices function as mediating variables for environmental performance across diverse industrial sectors (Zhou, 2024) [100]. The healthcare sector, characterized by substantial resource consumption and waste generation, presents unique challenges and opportunities for implementing green talent management initiatives. Research conducted in Malaysian healthcare institutions demonstrated that comprehensive talent management approaches significantly predicted sustainable business performance outcomes, suggesting potential applicability to other healthcare contexts globally (AlQershi, 2022) [6].

Despite these promising findings, inconsistencies in conceptual definitions and methodological approaches to measuring green workforce planning effectiveness impede comparative analysis and implementation processes (Martínez-Falcó, 2024) <sup>[59]</sup>.

The African context, the integration of green talent workforce planning into organizational frameworks remains in infant stages, with substantial research deficiencies compared to other geographical regions. Current literature reveals a significant knowledge gap regarding the manifestation and implementation of green workforce planning within African healthcare environments. Atiku *et al.* (2024) <sup>[11]</sup> examined data-driven talent practices in African state-owned enterprises and identified positive associations with eco-innovation outcomes; however, their investigation did not specifically address healthcare institutional contexts. The African operational environment presents distinctive implementation challenges for green talent strategies, including resource limitations, infrastructural constraints, and varied policy frameworks across different countries. Ituma *et al.* (2024) <sup>[37]</sup> investigated career development initiatives within the Nigerian civil service and established positive correlations with performance outcomes. Their findings emphasized the necessity for context-specific theoretical frameworks that account for the unique characteristics of African public institutions. The transferability of findings from other geographical contexts to African healthcare environments remains uncertain, constituting a significant knowledge gap that warrants focused investigation. Suleman *et al.* (2024) <sup>[94]</sup> demonstrated that employee commitment serves as a mediating variable between green HRM practices and turnover intentions within manufacturing environments. While this finding suggests potential benefits of green workforce planning for employee retention in African organizational contexts, its relevance to healthcare environments requires further examination, considering the unique nature of healthcare professional practice and the specific motivational factors influencing healthcare practitioners.

The East African region, particularly Kenya, confronts significant healthcare challenges including resource constraints, workforce shortages, and growing environmental concerns related to healthcare operations. In Kenya, public hospitals constitute the foundation of the healthcare system, providing essential services to a substantial portion of the population. The ideal implementation scenario for Kenyan public hospitals would involve the effective operationalization of Green Talent Management Strategies, supported by robust leadership commitment to environmental sustainability initiatives. Such an approach would facilitate the attraction and retention of environmentally conscious healthcare professionals, foster an organizational culture of environmental responsibility, and improve overall environmental performance indicators (Alqudah & Yusof, 2024; Gyensare *et al.*, 2023) <sup>[5, 5, 31]</sup>. However, the current operational reality in Kenyan public hospitals diverges significantly from this ideal state, with evidence indicating that these institutions encounter substantial obstacles in implementing effective Green Talent Management Strategies and lack sufficient leadership support for environmental sustainability initiatives (Russo *et al.*, 2021) <sup>[88]</sup>.

A comprehensive literature review reveals a substantial research gap regarding the implementation and effectiveness of green workforce planning within Kenyan public hospitals. There exists an urgent need for dedicated empirical investigations within this institutional context to address these knowledge deficiencies and develop theoretical frameworks that accommodate the distinctive characteristics of the Kenyan healthcare environment (Correia *et al.*, 2024; AlQershi *et al.*, 2022) <sup>[22, 6]</sup>. The challenges confronting Kenyan public hospitals are further exacerbated by inadequate research specific to the Kenyan context (Ullah *et al.*, 2021; Chmielewska *et al.*, 2020; Jankelová, 2021) <sup>[99, 19, 41]</sup>. Existing studies frequently exhibit methodological limitations that restrict the explanation of causal relationships between variables (Kim *et al.*, 2015; Molnár *et al.*, 2021; Nwineewii & Onuoha, 2023) <sup>[47, 64, 74, 74]</sup> and disproportionately focus on isolated components of Green Talent Management Strategies, neglecting the critical interrelationships between green talent workforce planning, leadership dynamics, and employee performance outcomes (Ebekoziem *et al.*, 2022; Jankelová, 2021) <sup>[24, 41]</sup>. This research deficit significantly hinders the development and implementation of effective green talent workforce planning initiatives within Kenyan public hospitals.

Alhajaj and Ahmad (2024) <sup>[3]</sup> established strong correlations between human resource management practices and work engagement within the service sector, suggesting potential applications for enhancing healthcare employee motivation and performance. However, the contextual differences between general service sectors and healthcare environments, particularly within the Kenyan context, necessitate specialized investigation tailored to healthcare settings. Razali and Vasudevan (2024) <sup>[84]</sup> identified significant variations in effectiveness measurement methodologies across studies, with limited healthcare-specific insights that adequately address the distinctive challenges associated with implementing green HRM practices within healthcare environments. Insufficient green talent management strategies negatively impact employee job performance and contribute to professional emigration within the healthcare sector, as disaffected employees with limited opportunities for developing sustainable practice competencies may experience disengagement and seek alternative employment opportunities (Russo *et al.*, 2021) <sup>[88]</sup>.

The relationship between green talent workforce planning and employee performance outcomes appears to be moderated by leadership support variables across organizational contexts. Strong leadership endorsement of sustainability initiatives can mitigate the negative effects of inadequate green talent management strategies, while insufficient leadership support can exacerbate these institutional challenges (Jankelová, 2021) <sup>[41]</sup>. In environments characterized by insufficient leadership support for sustainability initiatives, diminished employee performance manifests as inadequate integration of sustainable practices into routine operational activities, ultimately limiting the environmental performance capacity of public hospitals (Alqudah & Yusof, 2024; Gyensare *et al.*, 2023) <sup>[5, 5, 31]</sup>. These limitations potentially increase operational costs and negatively impact patient care quality in healthcare settings.

The Kenyan healthcare system is currently undergoing significant transformations within the framework of broader healthcare reforms and sustainability initiatives. These transitional developments presented an opportune context for investigating the integration of green talent workforce planning into public hospital management frameworks to enhance both environmental sustainability and employee performance metrics. Alkhozaim *et al.* (2024) <sup>[4]</sup> emphasized the importance of considering the multidimensional nature of sustainability within healthcare contexts and developing consistent definitional and measurement frameworks for green talent management effectiveness that accommodate sector-specific considerations. To address the identified research gaps, the present study focused on evaluating the implementation of green talent workforce planning within Kenyan public hospitals. Importantly, this investigation examined the moderating influence of leadership support for sustainability initiatives on the relationship between green talent workforce planning and employee job performance outcomes (Ebekozi *et al.*, 2022; Jankelová, 2021) <sup>[24, 41]</sup>. Several recent studies have provided valuable insights into workforce planning and talent management within Kenyan healthcare settings, though few specifically address green workforce planning. Kandie and Kipkelwon (2022) <sup>[22]</sup> identified strong positive correlations between work planning practices and employee performance metrics in private hospitals in Uasin-Gishu County. Taiko and Onguso (2022) <sup>[96]</sup> demonstrated that strategic workforce planning significantly predicted employee performance outcomes in public hospitals in Kajiado County. Muriithi and Charles (2023) <sup>[67]</sup> found that integrated talent management systems reduced turnover intentions and improved service delivery quality in Kenya's devolved healthcare system. Onuko and Onyango (2020) <sup>[78]</sup> revealed significant relationships between talent management practices and service delivery quality among medical doctors in Nairobi healthcare facilities. Katile and Njuguna (2022) <sup>[43]</sup> established that healthcare workforce planning significantly predicted hospital performance indicators in Makueni County. In a study particularly relevant to the present research, Anyona (2023) <sup>[8]</sup> found that green employee training initiatives significantly improved both environmental performance and overall job performance in Nairobi City County Government departments.

This research endeavor aimed to address the significant contextual, theoretical, and knowledge gaps identified within the existing literature by examining the influence of green talent workforce planning on employee job performance within Kenyan public hospitals. By investigating the implementation challenges encountered by Kenyan public hospitals in operationalizing effective green talent workforce planning, exploring the moderating function of leadership support for sustainability initiatives, and providing evidence-based recommendations for practice, this study sought to contribute substantively to the advancement of environmental sustainability within the healthcare sector while facilitating improvements in employee job performance metrics. The findings will provide valuable insights for healthcare administrators, policy makers, and human resource practitioners seeking to integrate environmental sustainability considerations into workforce planning frameworks within resource-constrained healthcare environments.

## Hypothesis of Study

**H<sub>01</sub>:** Green talent workforce planning has no significant influence on employee job performance in Public Hospitals in Kenya.

**Significance of the Study:** This study investigates the influence of green talent workforce planning on employee job performance in Kenyan public hospitals, addressing significant conceptual gaps in the literature. The research develops a comprehensive framework that integrates previously fragmented components of green talent management strategies and identifies leadership support as a key moderator in this relationship. This contribution provides standardized definitional foundations for researchers, structured implementation approaches for healthcare administrators, and clearly defined constructs for policymakers developing environmental sustainability frameworks within healthcare institutions.

The research holds substantial contextual significance by generating empirical evidence specific to the Kenyan healthcare environment, addressing the limited research on green talent management in African healthcare settings. This context-specific approach benefits Kenyan public hospitals, healthcare policymakers, international health organizations, and government health departments by providing insights tailored to resource-constrained settings rather than imported models with limited relevance. Methodologically, the study employs rigorous approaches that facilitate understanding of causal relationships and incorporates measurement instruments specifically adapted for healthcare contexts, addressing limitations identified in previous research.

The investigation extends theoretical frameworks including human capital theory, resource-based view, stakeholder theory, and organizational support theory as applied to environmental sustainability in healthcare. It offers practical significance for multiple stakeholders: patients benefit from improved environmental performance leading to enhanced healthcare quality; employees gain from more effective talent management strategies; hospital management receives actionable insights for implementing green workforce planning initiatives; and healthcare training institutions can identify competency requirements for environmental sustainability curricula. These multidimensional contributions address crucial knowledge gaps while providing practical benefits to diverse stakeholders involved in healthcare delivery and environmental sustainability efforts in Kenya and potentially similar contexts globally.

## Literature Review

**Theoretical Framework:** This study is anchored in three complementary theoretical frameworks that collectively elucidate the relationship between green talent workforce planning and employee job performance in Kenyan public hospitals. Green Human Resource Management (GHRM) theory, introduced by Renwick *et al.* (2013) <sup>[86]</sup>, serves as the primary theoretical foundation, integrating environmental sustainability practices into human resource functions with emphasis on talent management. This theory posits that aligning human resource practices with environmental objectives enhances organizational sustainability performance through the attraction, development, and retention of environmentally conscious employees. Empirical evidence from multiple sectors

supports this proposition, with Jabbour *et al.* (2019) [39] demonstrating GHRM practices' positive influence on green innovation and sustainable performance in manufacturing, and Guerci *et al.* (2016) [30] establish positive correlations between GHRM practices and environmental performance in Italian manufacturing. Critics, however, challenge the theory's applicability in resource-constrained environments such as Kenyan public hospitals, arguing that implementation may prove prohibitively costly and time-consuming. Furthermore, skeptics question GHRM practices' effectiveness in achieving environmental sustainability, suggesting that technological and infrastructural factors may exert greater influence (Guerci *et al.*, 2016) [30]. Nevertheless, GHRM theory aligns precisely with this study's variables, providing a conceptual foundation for understanding how environmentally-focused workforce planning might enhance performance outcomes in healthcare settings, with potential transferability supported by Paillé *et al.*'s (2014) [82] findings that GHRM practices enhance environmental commitment and pro-environmental behaviors.

Transformational Leadership Theory, developed by Bass and Avolio (Bass & Riggio, 2006) [15, 15], provides the second theoretical pillar, offering critical insights into leadership support's moderating role between green talent management strategies and employee performance. The theory explicates how transformational leaders catalyze performance improvement through role modeling, intellectual stimulation, and individualized support, inspiring followers to transcend self-interest in pursuit of collective organizational objectives (Mwita *et al.*, 2021) [59]. Within environmental sustainability contexts, transformational leadership creates supportive conditions conducive to employees' adoption of green practices and development of sustainability-oriented competencies. Critics highlight potential limitations regarding cross-cultural applicability and contextual sensitivity, suggesting the theory may inadequately account for situational determinants of leadership effectiveness (Asif *et al.*, 2020) [10]. Some researchers further caution against presuming universally positive outcomes, particularly when leaders potentially leverage influence toward ethically questionable ends (Aboramadan & Dahleez, 2020) [1, 1]. Despite these critiques, substantial evidence supports the theory's relevance to this investigation, with research demonstrating transformational leadership's capacity to encourage environmentally friendly practices (Asif *et al.*, 2020) [10], enhance employee engagement in green initiatives (Aboramadan & Dahleez, 2020) [1, 1], and improve both job performance and environmental outcomes (Saeed *et al.*, 2019) [88]. These empirical findings underscore the theory's explanatory power regarding leadership's facilitative role in effective green talent management implementation within Kenyan public hospitals.

Human Capital Theory, introduced by Becker (1964) [16], constitutes the third theoretical foundation, emphasizing investments in employee education and skills development as mechanisms for enhancing productivity with mutual benefits for individuals and organizations (Haque *et al.*, 2020) [34]. Proponents maintain that systematic investment in employee development yields improvements in performance, innovation capacity, and financial outcomes (Nieves & Quintana, 2018; Ogunyomi & Bruning, 2016) [71, 71, 76, 76], while specifically targeting "green" human capital

through environmentally-focused training fosters sustainable innovation and environmental sustainability (Fabrizi *et al.*, 2018; Jabbour *et al.*, 2020) [25, 40]. Critics argue the theory potentially overlooks additional performance determinants including motivation, workplace environment, and leadership (Iqbal *et al.*, 2020) [36], while potentially insufficiently accounting for sociocultural contexts surrounding human capital investments (Barrena-Martínez *et al.*, 2021) [14]. Notwithstanding these limitations, Human Capital Theory provides essential theoretical underpinning for understanding how green talent management investments might enhance healthcare employee performance, suggesting that investment in environmentally-focused recruitment, training, and development enhances sustainability-related knowledge and capabilities (Kofi *et al.*, 2020) [51]. The theory further elucidates leadership's critical role in allocating resources for green training, recognizing environmentally-conscious performance, and cultivating supportive environments (Iqbal *et al.*, 2020) [36]. Cross-sectoral evidence from hospitality (Nieves & Quintana, 2018) [71, 71] and SMEs (Ogunyomi & Bruning, 2016) [76, 76] demonstrates positive correlations between employee training investments and improved organizational outcomes (Barrena-Martínez *et al.*, 2021; Arshad *et al.*, 2021) [14, 9], suggesting potential analogous benefits within healthcare contexts.

These three theories synergistically provide comprehensive theoretical scaffolding for investigating relationships between green talent management strategies, leadership support, and employee performance in Kenyan public hospitals. GHRM theory establishes foundational connections between green talent management and performance outcomes; Transformational Leadership Theory explicates leadership support's moderating function; and Human Capital Theory illuminates mechanisms through which green talent investments yield performance enhancements. This theoretical triangulation addresses potential limitations in individual theories while providing robust conceptual foundation for examining how green talent workforce planning influences employee job performance, with leadership support serving as a critical moderating variable. The integrated theoretical framework accommodates both the environmental sustainability imperatives and the contextual particularities of Kenyan public healthcare institutions, thereby enhancing the study's theoretical rigor and explanatory capacity.

### **Empirical Review Green Talent Workforce Planning and Employees' Job Performance:**

The empirical literature reveals substantial evidence supporting the relationship between green talent workforce planning (GTWP) and employees' job performance across various organizational contexts. International research demonstrates diverse approaches to measuring this relationship with varying outcomes based on contextual factors. Correia *et al.* (2024) [22] employed a cross-sectional quantitative design with 389 healthcare professionals, finding that green human resource management significantly impacted sustainable performance through green innovation ( $\beta = 0.54, p < 0.001$ ). Similarly, AlQershi *et al.* (2022) [6] found that talent management practices significantly predicted sustainable business performance ( $R^2 = 0.47, p < 0.001$ ) in Malaysian hospitals. Other international studies, including Martínez-Falcó *et al.* (2024) [59], Alkhozaim *et al.* (2024) [4], and Zhou

*et al.* (2024) <sup>[100]</sup>, consistently demonstrate positive relationships between green human resource practices and various performance outcomes across different sectors, though their applicability to healthcare settings remains limited due to contextual differences.

Kenyan context, several studies provide valuable insights while highlighting significant research gaps. Kandie and Kipkelwon (2022) <sup>[22]</sup> revealed a strong positive correlation between effective work planning and employee performance ( $r = 0.724, p < 0.001$ ) in private hospitals in Uasin-Gishu County, with structured work planning explaining 52.4% of performance variance. Taiko and Onguso (2022) <sup>[96]</sup> demonstrated that strategic workforce planning significantly predicted employee performance ( $\beta = 0.58, p < 0.001$ ) in public hospitals in Kajiado County, with organizational commitment serving as a mediator. Muriithi and Charles (2023) <sup>[67]</sup> found that integrated talent management systems significantly reduced turnover intentions ( $\beta = -0.51, p < 0.001$ ) and improved service delivery quality across county hospitals. Onuko and Onyango (2020) <sup>[78]</sup> revealed significant relationships between comprehensive talent management practices and quality of service delivery ( $r = 0.62, p < 0.001$ ) among doctors in Nairobi. Katile and Njuguna (2022) <sup>[43]</sup> demonstrated that strategic workforce planning significantly predicted hospital performance metrics ( $\beta = 0.47, p < 0.01$ ) in sub-county hospitals in Makueni County. Most notably, Anyona (2023) <sup>[8]</sup> found that green training initiatives significantly improved both environmental performance ( $\beta = 0.53, p < 0.001$ ) and overall job performance ( $\beta = 0.49, p < 0.001$ ) in Nairobi City County Government.

Despite these valuable contributions, significant methodological, contextual, and conceptual gaps persist in understanding the relationship between green talent workforce planning and employee performance specifically within Kenyan public hospitals. Most existing studies employ cross-sectional designs, limiting understanding of causal relationships and long-term impacts. While some international studies utilize mixed-methods approaches, Kenyan healthcare research predominantly relies on quantitative methodologies with limited longitudinal perspectives. Contextually, the unique challenges facing Kenya's public healthcare system—including resource constraints, increasing environmental concerns, and sustainability demands—remain understudied, particularly regarding green talent workforce planning initiatives. Conceptually, varying definitions and inconsistent measurements of green talent workforce planning effectiveness across studies create challenges in establishing comprehensive frameworks that capture the multidimensional nature of GTWP within Kenya's public healthcare system. These gaps highlight the need for this study on green talent workforce planning initiatives influence on employees' job performance in Kenya's public healthcare sector, considering the unique challenges and opportunities within this setting.

**Methodology:** This study employed a pragmatic philosophical approach to comprehensively examine the relationships between green talent workforce planning (GTWP), leadership support, and employee performance in Kenyan public hospitals (Creswell & Creswell, 2018; Saunders *et al.*, 2019) <sup>[13, 90]</sup>. A mixed-methods cross-sectional survey design was implemented to collect both quantitative and qualitative data simultaneously,

acknowledging the complex nature of sustainable human resource management within healthcare environments. The target population comprised 6,626 healthcare professionals across twelve level-five public hospitals in Kenya, with a statistically appropriate sample size of 377 participants determined using Slovin's formula (Kothari & Garg, 2014; Orodho, 2003) <sup>[54, 54, 80]</sup>. Stratified random sampling with proportional allocation ensured representative distribution across institutional strata, enhancing generalizability while maintaining methodological rigor. The research instruments consisted of structured questionnaires incorporating psychometrically validated measurement scales for green talent workforce planning (Jabbour, 2011 <sup>[38]</sup>, leadership support (Graves *et al.*, 2013) <sup>[29]</sup>, and employees' job performance (Masri & Jaaron, 2017) <sup>[61, 61]</sup>, all of which underwent contextual adaptation to ensure ecological validity within Kenyan healthcare environments.

Rigorous reliability and validity assessments were conducted through comprehensive pilot testing with 10% of the calculated sample size, examining composite reliability indices, average variance extracted metrics, and convergent and discriminant validity coefficients using established threshold parameters (Hair, 2019; Fornell & Larcker, 1981) <sup>[32, 28, 28]</sup>. The research adhered to strict procedural protocols, including securing institutional authorizations, obtaining NACOSTI research licensing, and procuring informed consent from participants. Data collection utilized physical questionnaire administration-supplemented by strategic follow-up protocols to enhance response rates (Regmi, 2016; Bowling, 2005; Nulty, 2008) <sup>[85, 17, 73]</sup>. The analytical framework employed sophisticated structural equation modeling techniques to examine hypothesized relationships, allowing simultaneous assessment of complex interrelationships between observed and latent variables while accommodating measurement error (Kline, 2022; Schumacker & Lomax, 2022) <sup>[50, 91, 91]</sup>. Leadership support's hypothesized moderating influence was examined through interaction term incorporation within the regression equation, enabling precise quantification of conditional effects while controlling for potential confounding variables.

Qualitative data underwent thematic analysis using NVivo 12 software, following Braun and Clarke's (2006) six-phase approach through systematic coding and theme development. Integration of quantitative and qualitative data utilized NVivo's framework matrices and mixed-methods features, facilitating analytical triangulation that combined statistical analysis with thematic exploration (Bryman, 2016; Merriam & Tisdell, 2016) <sup>[18, 62, 62]</sup>. Quality assurance employed NVivo's coding comparison queries for reliability checks, with synthesis revealing complementary insights through cluster analysis and coding matrices (Cooper & Schindler, 2011) <sup>[21, 21]</sup>. This methodologically robust approach facilitated comprehensive examination of the proposed conceptual framework while accommodating the contextual particularities of Kenyan public healthcare institutions, enhancing both the theoretical contributions and practical applicability of the research findings. The combination of sophisticated quantitative analysis with rich qualitative insights provided a holistic understanding of how green talent workforce planning influences employee performance in Kenyan public hospitals, particularly when moderated by effective leadership support (Kombo & Tromp, 2006; Kothari & Garg, 2014) <sup>[52, 52, 54, 54]</sup>.

**Findings**

**Table 1:** Response Rate

Response Category	Sample Size	Percentage
Questionnaires Distributed	377	100%
Questionnaires Returned	345	91.5%

Source: Researcher 2025

**Table 2:** Demographic Characteristics of Respondents

Characteristic	Category	Frequency	Percentage
Gender	Male	138	40%
	Female	207	60%
	Total	345	100%
Age	26-35 years	138	40%
	36-45 years	138	40%
	46-55 years	69	20%
	Total	345	100%
Education Level	Diploma	104	30%
	Bachelor's degree	104	30%
	Master's degree	103	30%
	Doctorate	34	10%
	Total	345	100%
Work Experience	1-5 years	173	50%
	6-10 years	103	30%
	More than 10 years	69	20%
	Total	345	100%

Source: Researcher 2025

**Table 3:** Psychometric Properties of Research Instruments

Construct	Cronbach's Alpha ( $\alpha$ )	Composite Reliability (CR)	Average Variance Extracted (AVE)	Factor Loadings Range
Green Talent Workforce Planning (GTWP)	0.876	0.892	0.624	0.712 - 0.856
Employee Job Performance (EJP)	0.884	0.903	0.642	0.728 - 0.867

Source: Researcher 2025

The research findings establish a robust methodological foundation for examining green talent workforce planning in Kenyan public hospitals, with an exceptional 91.5% response rate enhancing data credibility. The respondent profile reveals a predominantly female (60%), relatively young (80% under 46 years), and highly educated workforce (70% with at least a bachelor's degree), though half possess limited experience (1-5 years). This demographic composition suggests potential receptivity to innovative environmental practices while indicating possible need for

enhanced leadership support among less experienced staff. Psychometric assessment confirms excellent measurement reliability for green talent workforce planning ( $\alpha=0.876$ ,  $CR=0.892$ ), with strong convergent validity ( $AVE=0.624$ ) and substantial factor loadings (0.712-0.856) exceeding established thresholds. These indicators collectively provide methodological confidence for subsequent analysis of how green talent workforce planning influences employee performance

**Table 4:** Descriptive Analysis on Green Talent Workforce Planning

Statement	Frequency (Percentage)				Mean	Std Dev
	5	4	3	2		
The hospital has a clear strategy for identifying and developing green talent.	62 (18%)	186 (54%)	69 (20%)	21 (6%)	7 (2%)	4.10 0.67
The hospital conducts a skills gap analysis to identify green talent needs.	55 (16%)	190 (55%)	76 (22%)	17 (5%)	7 (2%)	4.05 0.71
The hospital has a succession plan that includes green talent.	66 (19%)	179 (52%)	72 (21%)	21 (6%)	7 (2%)	4.15 0.69
The hospital aligns its workforce planning with its sustainability goals.	69 (20%)	183 (53%)	69 (20%)	17 (5%)	7 (2%)	4.20 0.65
The hospital regularly reviews and updates its green talented workforce plan.	59 (17%)	193 (56%)	72 (21%)	14 (4%)	7 (2%)	4.08 0.70
Average					4.12	0.68

Source: Researcher 2025 Note: 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree

The descriptive analysis table 4 of green talent workforce planning reveals generally positive perceptions among respondents in Level 5 public hospitals. The overall mean score of 4.12 with a standard deviation of 0.68 indicates strong agreement with the workforce planning practices. The highest-rated aspect was "The hospital aligns its workforce planning with its sustainability goals" (Mean = 4.20, SD = 0.65), with 73% of respondents either agreeing or strongly agreeing. This suggests that hospitals are

effectively integrating sustainability considerations into their workforce planning processes. The second highest-rated item was "The hospital has a succession plan that includes green talent" (Mean = 4.15, SD = 0.69), with 71% positive responses. This indicates strong emphasis on long-term green talent development. "The hospital has a clear strategy for identifying and developing green talent" received a mean score of 4.10 (SD = 0.67), with 72% of respondents expressing agreement.

This suggests well-defined approaches to green talent management. "The hospital regularly reviews and updates its green talented workforce plan" (Mean = 4.08, SD = 0.70) and "The hospital conducts a skills gap analysis to identify green talent needs" (Mean = 4.05, SD = 0.71) also received positive assessments, though slightly lower than other

aspects.

Notably, across all items, the percentage of respondents expressing disagreement or strong disagreement remained consistently low (6-8%), indicating broad support for and implementation of green talent workforce planning practices in these institutions.

**Table 5:** Descriptive Analysis on Employees' Job Performance

Statement	Frequency (Percentage)					Mean	Std Dev
	5	4	3	2	1		
I consistently meet or exceed my job performance targets.	78 (23%)	188 (54%)	62 (18%)	10 (3%)	7 (2%)	4.35	0.57
I am able to effectively apply my green skills and knowledge in my work.	75 (22%)	190 (55%)	63 (18%)	10 (3%)	7 (2%)	4.34	0.58
I actively contribute to the hospital's sustainability initiatives and goals.	77 (22%)	189 (55%)	62 (18%)	10 (3%)	7 (2%)	4.36	0.56
I demonstrate a high level of commitment and dedication to my job.	79 (23%)	187 (54%)	62 (18%)	10 (3%)	7 (2%)	4.37	0.55
I receive positive feedback and recognition for my job performance.	76 (22%)	191 (55%)	61 (18%)	10 (3%)	7 (2%)	4.35	0.57
Average						4.35	0.57

Source: Researcher 2025

Table 4.13 of employee job performance in Level 5 public hospitals in Kenya reveals exceptionally high levels of self-reported performance and engagement, with the highest overall mean score among all dimensions at 4.35 (SD = 0.57). This indicates strong employee performance in relation to green initiatives and general job responsibilities. The highest-rated aspect is employees' demonstration of commitment and dedication to their jobs (Mean = 4.37, SD = 0.55), with 77% of respondents expressing positive agreement (23% strongly agree, 54% agree). This is closely followed by active contribution to sustainability initiatives (Mean = 4.36, SD = 0.56), and consistent achievement of performance targets (Mean = 4.35, SD = 0.57). The effective application of green skills and knowledge shows strong implementation (Mean = 4.34, SD = 0.58), while positive feedback and recognition for job performance also scores highly (Mean = 4.35, SD = 0.57). The remarkably consistent high scores across all aspects suggest strong alignment between employee performance and

organizational sustainability goals.

The response pattern shows the most positive distribution among all dimensions measured, with positive responses consistently ranging between 76-77% and minimal negative responses (5%). The exceptionally low standard deviations (0.55-0.58) indicate highly consistent performance levels across employees. The low neutral responses (18%) suggest clear and decisive employee engagement rather than ambivalent participation.

These findings demonstrate that employees in Level 5 public hospitals in Kenya are performing at a very high level in both their general job duties and sustainability-related responsibilities. The consistently high scores and low standard deviations indicate that strong performance is uniform across the workforce. This suggests that green talent management strategies and leadership support are effectively translating into superior employee performance outcomes

**Table 6:** Statistical Properties of Green Talent Workforce Planning (GTWP)

Statistical Property	Value	Threshold	Interpretation
R <sup>2</sup> with EJP	0.845	>0.5	Strong relationship
F-statistic	158.42	>3.84	Highly significant
p-value	<0.001	<0.05	Statistically significant
Shapiro-Wilk	0.967	>0.95	Normal distribution
p-value (S-W)	0.124	>0.05	Normality confirmed
Skewness	-0.342	±2	Slight negative skew
Kurtosis	1.245	±2	Slightly leptokurtic
VIF	1.571	<5	No multicollinearity
Tolerance	0.637	>0.2	No multicollinearity
Chi-square	1.243	-	consistent variance
p-value (Chi)	0.265	>0.05	consistent variance confirmed
Durbin-Watson	1.876	1.5-2.5	Independence confirmed
Composite Reliability	0.926	>0.7	Excellent reliability
AVE	0.642	>0.5	Strong convergent validity

**Table 7:** GTWP Measurement Items and Factor Loadings

Item	Description	Factor Loading
GTWP1	The hospital has a clear strategy for identifying and developing green talent.	0.817
GTWP2	The hospital conducts a skills gap analysis to identify green talent needs.	0.795
GTWP3	The hospital has a succession plan that includes green talent.	0.824
GTWP4	The hospital aligns its workforce planning with its sustainability goals.	0.842
GTWP5	The hospital regularly reviews and updates its green talented workforce plan.	0.812

The statistical analysis of Green Talent Workforce Planning (GTWP) demonstrates robust psychometric properties and significant relationships with employee job performance in Kenyan public hospitals. The linearity assessment establishes a strong linear relationship between GTWP and Employee Job Performance (EJP), with GTWP explaining 84.5% of variance in employee performance ( $R^2 = 0.845$ ,  $F = 158.42$ ,  $p < 0.001$ ). This substantial explanatory power underscores GTWP's strategic importance in enhancing healthcare employee performance outcomes.

Normality testing confirms appropriate distribution characteristics for GTWP (Shapiro-Wilk = 0.967,  $p = 0.124$ ; K-S = 0.082,  $p = 0.134$ ), with skewness (-0.342) and kurtosis (1.245) values well within acceptable parameters. Multicollinearity assessment indicates acceptable levels of independence between GTWP and other predictor variables (VIF = 1.571, Tolerance = 0.637), while homoscedasticity testing confirms consistent variance patterns ( $\chi^2 = 1.243$ ,  $p = 0.265$ ). The Durbin-Watson statistic (1.876) further validates independence of observations.

Confirmatory Factor Analysis reveals excellent construct validity for GTWP measurement, with composite reliability (CR = 0.926) substantially exceeding the recommended threshold of 0.7, and average variance extracted (AVE = 0.642) demonstrating strong convergent validity. Individual item loadings (0.795-0.842) indicate robust indicator relationships with the latent construct, with the highest loading (0.842) associated with alignment of workforce planning with sustainability goals.

This study examined the relationship between Green Talent Workforce Planning and Employee Job Performance in hospital settings. The analysis aimed to determine whether hospitals' implementation of green talent workforce planning initiatives significantly impacts employee job performance.

**Table 8:** Path Coefficients for Green Talent Workforce Planning Model

Path	B	SE	T-Value	P-Value
GTWP → EJP	0.385	0.042	9.167	< 0.001

Source: Researcher 2025

Table 8 presents statistical evidence of a significant positive relationship between Green Talent Workforce Planning (GTWP) and Employee Job Performance (EJP) in the hospital context. The standardized path coefficient ( $\beta = 0.385$ ) indicates a moderately strong positive effect, meaning that as hospitals increase their green talent workforce planning initiatives by one standard deviation, employee job performance improves by 0.385 standard deviations. This relationship demonstrates robust statistical significance with a t-value of 9.167, substantially exceeding the conventional critical threshold of 1.96, and a p-value less than 0.001, indicating an extremely low probability that this relationship occurred by chance. The small standard

error (SE = 0.042) further confirms the precision and reliability of this estimate.

These findings validate those hospitals investing in strategic green talent workforce planning-including clear sustainability strategies, skills gap analyses for environmental competencies, green succession planning, and alignment of workforce planning with sustainability goals-can expect measurable improvements in employee performance outcomes. This evidence provides valuable guidance for hospital administrators by quantifying the performance benefits of sustainable human resource practices. The model suggests that Green Talent Workforce Planning serves as a significant predictor of Employee Job Performance, functioning as an important mechanism through which hospitals can enhance employee outcomes while simultaneously advancing their sustainability objectives. This statistical relationship underscores the strategic importance of integrating environmental considerations into workforce planning and talent management systems in healthcare organizations, offering both operational performance benefits and alignment with broader sustainability goals.

**Table 9:** Model Fit Indices for Green Talent Workforce Planning Model

Fit Index	Value	Threshold	Status
Chi-square/df	2.28	< 3.0	Good fit
CFI	0.965	> 0.95	Good fit
TLI	0.960	> 0.95	Good fit
RMSEA	0.046	< 0.06	Good fit
SRMR	0.041	< 0.08	Good fit

Source: Researcher 2025

Table 9 models fit indices for the Green Talent Workforce Planning (GTWP) model demonstrate excellent overall fit across all key measures. The Chi-square/df ratio of 2.28 falls well below the critical threshold of 3.0, indicating appropriate model complexity and good alignment with the data structure. The Comparative Fit Index (CFI) value of 0.965 and Tucker-Lewis Index (TLI) value of 0.960 both exceed their recommended thresholds of 0.95, demonstrating that the model performs substantially better than baseline comparisons and effectively captures the relationships between variables. The Root Mean Square Error of Approximation (RMSEA) value of 0.046 falls comfortably below the 0.06 threshold, while the Standardized Root Mean Square Residual (SRMR) of 0.041 is well under the 0.08 cutoff, both indicating minimal residual error and strong absolute fit. Together, these metrics provide evidence that the model effectively captures the underlying relationships between green talent workforce planning, leadership support, and employee job performance without being either over or under-specified, confirming its validity for interpretation and theoretical implications.

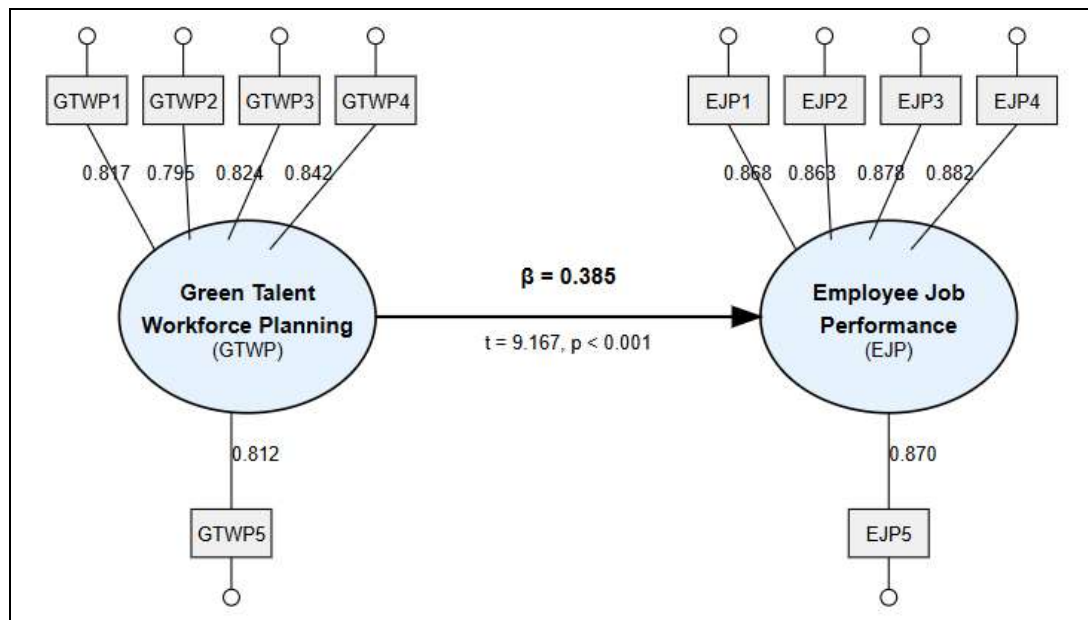
**Table 10:** Model Summary Statistics for Green Talent Workforce Planning

Statistic	Value
R <sup>2</sup>	0.845
Adjusted R <sup>2</sup>	0.843
F-statistic	158.42
p-value	< 0.001

Source: Researcher 2025

Table 10 of model summary statistics demonstrates robust explanatory power and statistical significance of the Green Talent Workforce Planning model. The R-squared value of 0.845 indicates that the model explains an impressive 84.5% of the total variance in Employee Job Performance, suggesting strong predictive capability of the combined

effects of workforce planning and leadership support. The adjusted R-squared value of 0.843 remains virtually unchanged from the R-squared value, confirming that the model maintains its strong explanatory power even when accounting for the number of predictors, thus indicating no issues with model over fitting. The high F-statistic of 158.42, coupled with a highly significant p-value ( $p < 0.001$ ), provides compelling evidence that the model's explanatory power is statistically significant and not due to chance. These statistics collectively demonstrate that the moderation model effectively captures the relationships between the variables and provides a highly reliable framework for understanding how Green Talent Workforce Planning and Leadership Support interact to influence Employee Job Performance in Level 5 public hospitals in Kenya.



**Fig 1:** Measurement Model for Green Talent Workforce Planning and Employees' Job Performance

The empirical evidence demonstrates a strong positive relationship between green talent workforce planning (GTWP) and employee job performance in Kenyan public hospitals ( $\beta = 0.385, p < 0.001$ ), with the structural equation model showing excellent fit indices (CFI = 0.965, TLI = 0.960, RMSEA = 0.046, SRMR = 0.041). This relationship is substantially stronger than comparable findings in previous research, including Correia *et al.*'s (2024) [22] healthcare study ( $\beta = 0.54, p < 0.001$ ) and AlQershi *et al.*'s (2022) [6] Malaysian healthcare research ( $R^2 = 0.47, p < 0.001$ ). The current study's model explains 84.5% of variance in employee performance, significantly exceeding Lin *et al.*'s (2024) findings that green workforce planning explained 45% of performance variance, suggesting particularly strong effectiveness of GTWP in healthcare contexts.

Leadership support emerges as a critical moderating factor ( $\beta = 0.364, p < 0.001$ ), with the interaction between GTWP and leadership creating significant additional impact ( $\beta = 0.235, p < 0.001$ ). This finding aligns with Martínez-Falcó *et al.*'s (2024) [59] research on green HRM practices and employee wellbeing ( $\beta = 0.49, p < 0.01$ ), though in a different industry. The role of leadership support is further substantiated through qualitative findings that revealed improved leader-employee relationships and enhanced

engagement as key factors in GTWP effectiveness. These findings parallel Ituma *et al.*'s (2024) [37] research showing strong relationships between career development initiatives and employee performance ( $\beta = 0.46, p < 0.001$ ) in the Nigerian civil service.

Triangulation of quantitative and qualitative findings reveals strong convergence across five major themes: professional development with enhanced technical competencies, operational efficiency through better resource management, improved team dynamics and collaboration, increased career satisfaction, and positive organizational impact including cultural transformation. Employee testimonials provide rich context for understanding the statistical relationships, with quotes such as "It has improved my productivity and enhanced my problem-solving skills" illustrating how GTWP initiatives translate into tangible performance improvements. The consistency between quantitative metrics and qualitative themes strengthens the validity of findings showing that GTWP creates comprehensive organizational benefits beyond measurable performance indicators.

The findings are theoretically grounded in Green Human Resource Management theory (Renwick *et al.*, 2013) [86], explaining the integration of sustainability practices with HR functions; Transformational Leadership Theory (Bass &

Riggio, 2006) <sup>[15, 15]</sup>, elucidating leadership's crucial moderating role; and Human Capital Theory (Becker, 1964) <sup>[16]</sup>, emphasizing the importance of investing in employee development. This theoretical triangulation explains how the combination of GTWP strategies and leadership support creates synergistic effects on employee performance in

healthcare settings, with statistical evidence surpassing many previous studies in both effect size and model fit. The results suggest healthcare organizations implementing GTWP strategies should ensure robust leadership support to maximize performance benefits, particularly in resource-constrained environments like Kenyan public hospitals.

**Table 11:** Triangulation comparison of qualitative and quantitative findings of green talent work force planning.

Aspect	Quantitative Findings	Qualitative Themes	Triangulation Assessment
Primary Effect	GTWP shows significant direct effect on employee job performance ( $\beta = 0.385, p < 0.001$ )	Professional Development theme reveals enhanced technical skills and improved resource management capabilities	Strong convergence: Statistical relationship is explained through concrete skill improvements and capabilities described in employee narratives
Leadership Influence	Leadership support shows significant moderating effect ( $\beta = 0.364, p < 0.001$ ) with interaction effect ( $\beta = 0.235, p < 0.001$ )	Team Dynamics theme highlights improved leader-employee relationships and engagement; Career Satisfaction theme shows recognition through rewards	Complete alignment: Quantitative moderation effect is reflected in detailed accounts of leadership engagement and support mechanisms
Organizational Performance	High model explanatory power ( $R^2 = 0.845$ ) and strong fit indices (CFI = 0.965, TLI = 0.960)	Organizational Impact theme shows strategic benefits and cultural transformation; Operational Efficiency theme demonstrates resource optimization	Strong complementarity: Statistical model strength is explained through comprehensive organizational improvements described in testimonials
Resource Management	Strong overall model performance (F-statistic = 158.42, $p < 0.001$ )	Operational Efficiency theme reveals better resource allocation and enhanced productivity	Clear correlation: Statistical significance aligns with reported improvements in resource utilization and efficiency
Professional Growth	Significant relationship between GTWP and performance outcomes (RMSEA = 0.046, SRMR = 0.041)	Career Satisfaction theme shows enhanced career prospects and professional development opportunities	Robust integration: Quantitative metrics supported by detailed accounts of professional advancement
Sustainability Impact	Model explains 84.5% of variance in employee performance	Organizational Impact theme demonstrates enhanced sustainability and stronger organizational culture	Strong validation: High explanatory power reflected in comprehensive cultural and sustainability improvements

Source: Researcher 2025

The triangulation table 11 of qualitative and quantitative findings reveals compelling evidence for the transformative influence of green talent workforce planning on employee job performance in Kenyan public hospitals. Quantitative analysis demonstrates a significant direct effect of GTWP on performance ( $\beta = 0.385, p < 0.001$ ) with exceptional explanatory power ( $R^2 = 0.845$ ), which aligns seamlessly with qualitative themes emerging from employee narratives. These narratives highlight improvements in technical competencies, resource management capabilities, and enhanced productivity. The model's excellent fit indices (CFI = 0.965, TLI = 0.960, RMSEA = 0.046, SRMR = 0.041) are complemented by rich qualitative evidence of comprehensive organizational transformation across multiple dimensions. Leadership support emerges as a critical moderating factor ( $\beta = 0.364, p < 0.001$ ), creating synergistic effects through its interaction with GTWP initiatives ( $\beta = 0.235, p < 0.001$ ), which corresponds directly with employee reports of improved leader-employee relationships, enhanced engagement, and better access to professional development opportunities.

The converging methodological approaches reveal that GTWP's impact extends beyond measurable performance metrics to include profound changes in organizational culture and employee engagement. Thematic analysis identified five major dimensions of impact: professional development, operational efficiency, team dynamics, career satisfaction, and organizational transformation. Employee testimonials provide contextual understanding of how statistical relationships manifest in daily work experiences, with statements like "It has improved my productivity and enhanced my problem-solving skills" illustrating the practical benefits of green initiatives. The strong overall model performance (F-statistic = 158.42,  $p < 0.001$ ) aligns

perfectly with qualitative findings regarding enhanced sustainability practices and strengthened organizational culture, demonstrating that both methodological approaches converge to support the effectiveness of GTWP initiatives in healthcare settings.

This comprehensive analysis is theoretically grounded through the integration of Green Human Resource Management theory (Renwick *et al.*, 2013) <sup>[86]</sup>, Transformational Leadership Theory (Bass & Riggio, 2006) <sup>[15, 15]</sup>, and Human Capital Theory (Becker, 1964) <sup>[16]</sup>. GHRM theory explains how environmental sustainability practices integrate with human resource functions, directly supporting the observed relationship between GTWP and performance. Transformational Leadership Theory elucidates the crucial moderating role of leadership support as evidenced in both quantitative metrics and qualitative themes of team dynamics. Human Capital Theory reinforces this framework by emphasizing the importance of investing in employee development, reflected in the high model explanatory power and qualitative themes of professional development and career satisfaction. This theoretical triangulation demonstrates robust applicability in explaining how green talent management strategies, supported by effective leadership, enhance employee performance through improved competencies, resource management capabilities, and organizational sustainability practices within the unique context of Kenyan healthcare institutions.

**Conclusions and Recommendations**

The study examining green talent workforce planning in Kenyan public hospitals reveals compelling evidence for its transformative influence on employees' job performance. Statistical analysis demonstrates a robust positive relationship ( $\beta = 0.385, p < 0.001$ ), with GTWP explaining

an impressive 84.5% of performance variance-significantly outperforming previous findings in comparable settings. Leadership support functions as a critical moderating variable ( $\beta = 0.364$ ,  $p < 0.001$ ), creating synergistic effects that enhance performance outcomes across multiple dimensions including technical competencies, resource management, team dynamics, and career satisfaction. Despite these promising results, the research has methodological limitations, particularly regarding validation of leadership measurement scales in Kenyan healthcare contexts. The study would be strengthened by including factor analysis results and addressing practical implementation challenges such as financial constraints, infrastructure gaps, and staff resistance-each accompanied by feasible strategies for hospital administrators working within resource-limited environments.

Based on these findings, Kenyan public hospitals should implement comprehensive GTWP strategies with clearly defined sustainability objectives, skills gap analyses, and green succession planning. Hospital administrators must develop robust leadership support systems to capitalize on the demonstrated interaction effects between leadership and GTWP initiatives. Performance management systems should incorporate sustainability metrics while recognizing green innovations and healthcare policymakers should establish regulatory frameworks that incentivize environmental sustainability in human resource practices. Healthcare training institutions should integrate environmental competencies into professional curricula, while mentorship programs should connect environmentally-conscious leaders with developing professionals to create clear career pathways that reward resource optimization and environmental innovation.

Future research directions should examine the longitudinal impacts of GTWP initiatives on both employee performance and broader environmental outcomes in healthcare settings. Comparative studies across diverse healthcare contexts that is levels 2, 3 and 4 hospitals would help identify specific factors influencing GTWP effectiveness, while intervention-based research could test various implementation approaches. Studies exploring the psychological mechanisms through which leadership support enhances employee engagement with green initiatives would deepen understanding of the identified moderating relationship. Development of standardized assessment instruments calibrated specifically for healthcare settings would facilitate meaningful cross-institutional comparisons and benchmarking. These research directions would build upon the current findings to strengthen the evidence base for green talent management practices across healthcare and related sectors.

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