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# Employee green behavior to green HRM: Considering environmental knowledge mediating Model

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**Abstract:**

The existing study purpose examines green HRM practices can influence behavior of employees towards the environment. The study also focuses on how supervisory managers in hospital environments could improve understanding of environmental issues through green HRM and environmental knowledge. The research approach used was cross-sectional, and it investigated relationship among green HRM, EGB and environmental knowledge. The study analyzed 145 valid responses using a smart PLS, which assessed how these variables interacted with each other. The results showed green HRM positively affects EGB, and that environmental knowledge plays key role as mediator.

**Keyword:** Employee green behavior, hospital, environmental knowledge, Smart PLS, Green HRM.

## Introduction

The environmental sustainability concept has become increasingly important for both society and organizations. According to Sherman et al. (2020), accelerated climate change, and more frequent natural disasters are concerning trends. The current state of environment is consequences of variety of factors, including deforestation, fossil fuel consumption, and the environment release, such as recycling and reducing energy usage. According to Mondejar et al. (2021), one of primary goals of the United Nations is ensure sustainable environment. To achieve this goal, employees' attitudes and environmental performance are crucial to organizations successes that have undertaken green initiatives, as emphasized by Al-Swidi et al. (2021). Research has focused on environmental management systems (EMS) from an organizational perspective, and shows that environmental sustainability offers an opportunity for industrial firms to build trust. Similarly, green HRM techniques were investigated by Nisar et al. (2021) to determine EGB and hospital sustainability. Similarly, Mousa & Othman (2020) evaluated green HRM on hospital employee green behavior. Hamzah et al. (2021) described most effective procedures that would implemented to ensure success of EGB in hospital industry. They also emphasize that employee attitudes in hospital industry are extremely important in minimizing environmental destruction, guaranteeing successful environmental initiatives, and having positive impact on society. Healthcare managers are increasingly receiving greater resources to implement eco-conscious strategies within their facilities (Mousa & Othman, 2020). These initiatives encompass range of measures including recycling, energy efficiency

improvements, water conservation efforts, green procurement practices, and the promotion of sustainable transportation options. If not disposed of appropriately, materials used in hospitals have potential to damage both the water supply and the environment. Hospitals have embraced ethos of "Go Green, Reduce Carbon Footprints, Business Sustainability," reflecting commitment to creating environmentally friendly workplaces (Hamzah et al., 2021). This initiative aims to minimize carbon emissions and promote responsible resource utilization within hospital sector.

Employee Green Behavior (EGB) is a term that refers to workers' actions that support an organization's efforts to reduce carbon emissions. EGB is crucial for the successful execution of Environmental Management Systems (EMS), as employees' participation is essential to effectiveness of EMS. Empirical studies have demonstrated that the hospital sector views environmental sustainability as a secondary consideration to its core responsibilities and has a poor understanding of how to effectively contribute to environmental sustainability initiatives.

Such lack of awareness among staff, including healthcare professionals, about environmental initiatives, despite their implementation in other sectors, leads to reluctance to support EMS & EGB. This lack of clarity on the concept of "sustainability" creates a substantial obstacle to establishing positive behavior within hospital environments. Environmental unawareness can result in feelings of intimidation and cause individuals to avoid engaging in activities that are beneficial to the environment.

The absence of actionable environmental knowledge suggests that hospital staff may not engage in ecologically beneficial practices. This lack of involvement could impede initiatives focused on environmental management. However, research has shown that green HRM (Human Resource

Management) contributes to environmental knowledge enhancement. Increasing employees' environmental awareness, comprehension, and knowledge is the goal of green HRM. This could assist employees in adopting and exhibiting environmentally friendly behavior while they are at work.

Hospital staff has been relatively overlooked in research efforts. Within hospitals, healthcare professionals play pivotal roles and serve as conduits of information within and beyond hospital setting. They constitute significant portion of workforce and their duties extend to disseminating information about hospital operations to the public, mentoring and setting examples for colleagues, as well as engaging in consultancy roles with external organizations.

The participation and involvement of healthcare professionals are essential for successfully implementing policies and providing behavioral support in the hospital sector. It is responsibility of hospital professionals to promote an ecologically sustainable environment in the hospital by aligning human resource practices to motivate environmentally conscious behavior among staff. However, employees typically resist new initiatives such as environmental management systems (EMS), which is why green HRM practices play crucial role in successfully implementing EGB, (Mousa & Othman, 2020; Bhattarai et al., 2023).

Green HRM refers to implementation of HRM practices that encourage employees to consider environmental factors. However, very little research has looked into how employee behavior is impacted by green HRM (Farrukh et al., 2022). Employee transformation is crucial to achieving environmental performance in an organization, and policies are used to influence employee behavior toward environmental sustainability goals. Various industries, including manufacturing

sector, education, and IT, have explored empirical green HRM studies (Anwar et al., 2020; Yong et al., 2020; Malik et al., 2020). However, the hospital healthcare sector's attempts to implement sustainability initiatives through green HRM have received scant attention (Mousa & Othman, 2020). Mousa & Othman (2020) also described human resources and talent management as two of the most crucial factors in effective greening of hospital industry.

As per study conducted by Luo et al. in 2024, it is essential to incorporate green practices into environmental management framework in hospital environments. This integration could help increase employee dedication, improve financial knowledge, and promote environmental awareness. The study recommends adopting green HRM strategies to encourage individual employees to green behavior and achieve environmental knowledge management objectives.

## Literature Reviews

### AMO Theory:

As the Bos-Nehles et al. (2023), demonstrate, skills, motivation, and opportunity play critical roles in employee decision-making participation. To enhance employee performance, it is necessary to take initiative and increase their capacity, incentive, and opportunity to conduct EGB. Organizations HRM strategies could use AMO theory to evaluate green-performance. This would be achieved by hiring and training highly skilled workers who share green values, motivating staff through eco-friendly policies and incentives, and encouraging employee involvement through knowledge-sharing activities (Bos-Nehles et al., 2023).

Studies suggest HRM encourages green EGB activities and encourages employee participation in such projects (Bos-Nehles et al., 2023).. This can be accomplished by providing opportunities for

employees to confer with one another and offer suggestions on how to improve environmental management initiatives. Implementing AMO theory would motivate employees to fulfill their EGB commitments and contribute more to overall organization performance via green knowledge green HRM.

## Green HRM

An increasing number of studies are focusing on individual green behavior and attitudes (Katz et al., 2022), while the majority of existing studies have concentrated on green HRM research (Paulet et al., 2021). To achieve both environmental performance and long-term competitive advantage, organizations must prioritize green HRM. Personnel components are essential for environmental performance. Mousa & Othman (2020) define green HRM as HRM practices that sustain resource usage for environmentally sustainable purposes. Green HRM techniques promote environmental consciousness among employees and behavior modification to produce environmentally friendly attitudes. Hamzah et al. (2021) describe green HRM management strategy as a way to motivate staff members to act in an ecologically conscious manner while on job.

## Employee green behavior (EGB)

Businesses that show environmental concern and adopt ecologically responsible practices can gain a competitive edge. It is crucial to promote and align employee behavior with green goals and objectives since employees serve as agents responsible for implementing green policies and

practices. The actions of people who are more ecologically conscious than others are referred to as "green behavior." EGB has become of great interest to a number of scholars, including Chaudhary (2020). It has become increasingly evident in recent years how important it is to promote environmentally friendly behavior or EGB.

Tian et al. (2020) discuss how observable worker behavior, also known as EGB, can help organizations achieve their environmental sustainability goals in the workplace. EGB minimize employees' actions adverse effects on environment by making most use of paper, consuming the least amount of electricity, and properly recycling things. Organizations support EGB as a way to further improve their environmental performance. This type of eco-friendly behavior is categorized as an extra role related to green behavior (Al-Ghazali & Afsar, 2021). Although these two unique behaviors are not the same, they are similar in that they both improve a business's environmental performance.

The behavior necessary for carrying out an employee's formal duties, which are assessed as part of the employee's performance review, is referred to as "in-role green behavior." A couple of examples of in-role green behavior are reducing the amount of paper used for printing and recycling appropriately. Extra-role green behavior is defined by Al-Ghazali & Afsar (2021) as behaviors that extend beyond regular duties but are not specifically mentioned in the job description. Making suggestions to enhance the company's environmental performance is one of these actions, as is motivating colleagues to practice environmentally conscious behavior at work. Green habits include things like shutting down the computer and lights after work and reporting any visible water leaks. Nonetheless, Sabbir & Taufique (2022) have highlighted distinct antecedents for extra-role green behavior due to varying degrees of choice that

employees possess concerning when and how to exhibit EGB in the workplace. That being said, there are others who contend that green behavior should be part of EGB performance. Tian et al. (2020) discuss how observable worker behavior, also known as EGB, would help organizations achieve their environmental sustainability objectives. EGB aims to minimize the adverse effects of employees' actions on environment by making most paper use, consuming least amount of electricity, and properly recycling things. Organizations support EGB as way to further improve their environmental performance. This type of eco-friendly behavior is categorized as an extra role related to green behavior (Al-Ghazali & Afsar, 2021). Although these two unique behaviors are not the same, they are similar in that they both improve a business's environmental performance.

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the workplace. That being said, there are others who contend that green behavior should be part of EGB performance.

**Environmental Knowledge**

Environmental knowledge (ENV-Kn) is crucial aspect of promoting green behavior among employees. Organizations support ENV-Kn as means to improve their environmental performance. Environmental psychologists define environmental knowledge as information that humans possess regarding the state of the environment, climate change, environmental perspectives, and the ecological consequences of consumption and production (Mahrinasari et al., 2021). Having awareness of environmental issues is a form of environmental knowledge. Employee interest and perception of environmental issues enable them to attain an adequate level of knowledge. Moreover, knowledge of the prevalence of environmental issues is essential in understanding environmental risks and concerns (Anwar et al., 2020). According to Ahmad et al. (2021), providing individuals with comprehensive information about environmental concerns can increase their levels of environmental concern. Environmental knowledge has an indirect effect on individuals' green human resource management intention in conservation efforts, making it an important factor in models that predict individuals' environmental green behavior (Al-Swidi et al., 2021).

**Green HRM and EGB**

Environmental psychologists are highly concerned about motivational source known EGB. Because employees are not held accountable for the direct expenses linked to the use of resources at work, there are situations when the use of resources (such energy) without thinking

through consequences. Consequently, strategies that incentivize employees to conserve resources must be developed. There have been several studies that look into the predictors of EGB. Within these inquiries, consideration was given to both external and internal opinions. Researchers have examined several internal components, such as the impact of norms, values, and attitudes on employee green behavior (Sabbir & Taufique, 2022). However, other researchers have used the feeling of support to predict EGB (Zacher et al., 2023). Scholars have examined how different leadership philosophies affect different situations. They have specifically concentrated on relationship among green HRM (HRM) and management commitment as a precondition for EGB (Sabokro et al., 2021). Nevertheless, studies on green HRM in relation to EGB are still in their infancy, and more study is needed to fully comprehend the impact of this approach (Mehrajunnisa et al., 2023). Hence:

**H1. Green HRM positive significantly affects EGB.**

**Green HRM and ENV-Kn**

Environmental knowledge (ENV-Kn) encompasses human activity, environmental problems resulting from such interactions, and relationships found in ecological systems, as defined by Fawehinmi et al. (2020). Having this kind of information will help develop the skills necessary to reduce the negative impact on the environment, which will lead to efforts to preserve the natural world. Khaleeli et al. (2021) suggest that there is a relationship between mitigation strategies, environmentally conscious behavior, and awareness of problems. However, recent surveys indicate that people's knowledge and understanding of environmental issues is inadequate, despite efforts to promote environmental sustainability. This could be due to the

organization's inability to integrate environmental management with green HRM, as suggested by Fawehinmi et al. (2020).

Molina-Azorin et al. (2021) argue that it is crucial to combine environmental management with green HRM to encourage employees to engage in environmental management activities by enhancing their knowledge and attitudes. According to Mousa & Othman (2020), green HRM practices can improve employees' environmental awareness. Organizations can improve staff members' environmental knowledge, awareness, and understanding of workplace greening by supporting environmental preservation, education, and training. HR policies can help create and promote green knowledge through environmental hiring, rewards, and involvement, as well as training and knowledge sharing, as suggested by Mahrinasari et al. (2021).

**H2: Green-HRM positive significantly affects ENV-Kn.**

**Mediating ENV-Kn effects**

A successful green HRM concept that incorporates functions of training (ability), motivating (motivation), and providing opportunities for green projects is proposed employees to do in line with company's goals (Al-Swidi et al., 2021) proposed the idea. Still in its early stages, research is being done to understand underlying mechanisms. It has been established an impact on employees' EGB. However, Al-Swidi et al. (2021) emphasized paucity of research examining role that environmental knowledge plays in mediating link among green HRM & EGB, (S. Ahmad et al., 2021) review of literature indicates that environmental knowledge plays a role in relationship among green HRM & environmental accountability.

Green HRM refers to an outside factor that ensures workers' actions are in line with strategic

environmental objectives. However, Katz et al. (2022) state that these external factors influence employees' internal and cognitive traits, which in turn influences their EGB behavior. An essential tool for implementing environmental governance is environmental knowledge. The formation of environmental knowledge requires that employees have a psychological willingness to learn about the environment. Finding and choosing individuals who share these values is essential to achieving this, as is making sure they receive the appropriate GT. Giving employees GT enhances their environmental knowledge and abilities, which increases their psychological propensity to participate in environmental business practices and governance.

Additionally essential to the system that guarantees incentive to learn about environment are GPM and GPR. Green performance management, or GPM, is in charge of assessing an employee's green performance and deciding if more training is necessary. Employee compensation is determined by Green Reward, on the other hand, depending on performance management. When workers know what the performance review is about and what they stand to gain from it, they will be motivated to strive towards the standards that have been set and demanded of them. The pursuit of methods to increase one's awareness of the environment is one illustration of this. Depending on the situation, this award may be monetary or non-monetary (verbal appreciation). Monetary rewards versus non-monetary incentives for employee motivation is an ongoing debate (Mahrinasari et al., 2021). Conversely, many others think that maximize employee motivation, both kinds of rewards should be used (Al-Ghazali & Afsar, 2021). This would make it possible to encourage the gathering of additional environmental data and the teaching of people how to use EGB to contribute more to the environment.

Participating in environmental management encourages employees to take on more responsibility

and boosts morale. Actively involved workers may learn more about the environment and be more driven to implement green projects. Participating in green initiatives and offering GT can improve employee knowledge, skills, and talents through knowledge exchange and enhancement. Furthermore, it is anticipated to increase employees' psychological openness to adopt eco-friendly actions (Chaudhary, 2020). GT is employed in order to do this. Based on this, it can be concluded that environmental consciousness has a special role in influencing how well green HRM practices influence employees' conduct.

Bhattarai et al. (2023) also explained green HRM influence via governance, social, and environmental activities as environmental knowledge increases. Furthermore, Bhattarai et al. (2023) asserted that a company can enhance its employees' environmental awareness by fostering their abilities, inspiring them, and giving them chances to participate in environmental governance and business practices. According to Fawehinmi et al. (2020), employee cognition plays critical role in EMS by affecting EGB performance and green HRM. For green HRM strategies to work, higher environmental knowledge is needed. Consequently, activities people engage in are a reflection of environmental knowledge, and the growth of ENV-Kn via green HRM similar to production of environmental green behavior. Thus, the stance of this argument is that employees' understanding of environmental issues will be impacted by green HRM practices. Consequently, proposed that:

**H3. ENV-Kn mediating roles among green HRM and EGB.**

## Methodology

Results were gathered by having participants fill out via self-administered survey. With purposive sampling, 185 questionnaires were distributed in person or online for cross-sectional study. An impressive 78.37% response rate was achieved from 145 valid questionnaires that were returned. Several hospitals in major cities (Nowshera, Peshawar, Charshada) were included in sample including health clinics, for increasing population variance and generalizability. The supervising managers were chosen for their roles in green HRM planning and environmental protection and their comprehension and response rates to questionnaires were checked.

### Demographics variable

The demographic survey collected data on respondents' gender and educational background. Of the 145 Strategic Managers who took part, 66% men and 34% women. For education, the results show that 38.62% of respondents had a master's degree, indicating that respondents understood importance of sustainability and the English language. Qualifications are important for managers in the healthcare industry who oversee subordinates; 39% of them have the highest degree, which enhances Green HRM in organizations.

**Table: 01 Demographics Profile**

| Variable | No. | % |
|---|---|---|
| **Gender (Male)** | 95 | 65.52% |
| **Female** | 50 | 34.48% |

| | | |
|---|---|---|
| **Age (Below 20)** | 26 | 17.93% |
| **21-30** | 61 | 42.07% |
| **31-40** | 43 | 29.66% |
| **Above 40** | 15 | 10.34% |
| **Qualification -Ph.D** | 14 | 9.66% |
| **Master's degree** | 56 | 38.62% |
| **Bachelor's degree** | 28 | 19.31% |
| **other** | 47 | 32.41% |

**Table 2 Mean & S.D**

| Variables | Mean | S.D |
|---|---|---|
| **E-G-B** | 3.52 | .84 |
| **ENV-Kn** | 3.84 | .74 |
| **Green HRM** | 2.73 | .94 |

**Measurement Scale:**

The current study employed self-reported questionnaire for data collection. For each issue, five-point Likert scale were utilized, "1" indicated "strongly disagree" & a "5" strongly agree". More, GHRM was measured using six-items scale (Dumont et al., 2017). EK were measured using 7-

item scales adopted from Saeed et al. (2019); and EGB was measured using 6-items adopted scale via Blok et al. (2015).

**Data Analysis techniques:**

The study model was analyzed using SPSS 25 and Smart PLS. Following measurement model establishment, structural model was analyzed using the previously established procedures (Hair Jr et al., 2017). Furthermore, the CMV was utilized, for data were acquired from single source, this would pose dilemma (Podsakoff et al., 2024). CMV was overcome by using Harman single factor test. If over 40% of variance in study is explained by first element, there is significant issue with CMV. It was determined by looking at un-rotated factor analysis, so CMV is not serious issues because first component explained 27.50% of the total variation explained.

**Findings:**

The model was assessed via discriminant validity & convergent validity. Podsakoff et al. (2024) utilize for F.l, AVE and CR are assessing convergent validity. Table III shows that the majority of specific factor loading exceeding 0.7 and most AVE exceeding 0.5. The factor-loadings should vary 0.4 to 0.7, hence provided that CR and AVE are adequate. AVE and composite reliability above 0.6 could indicate adequate convergent validity (Fornell & Larcker, 1981). Hence, the Henseler et al. (2015) study indicated discriminate validity using HTMT ratio. However, HTMT values more than 0.85 specify severe issue. Table IV, HTMT criterion .85 and less, indicating discriminate validity.

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**Table 3**

| | Items | F.L | AVE | CR |
|---|---|---|---|---|
| **EGB** | EGB1-EGB6 | 0.559-0.669 | 0.661 | 0.921 |
| **ENV-Kn** | ENV- Kn 1- ENV- Kn -6 | 0.577-0.930 | .637 | 0.836 |
| **Green HRM** | GHRM1-GHRM6 | .782-.853 | .410 | .730 |

**Table 4 Discriminant Validity**

| | EGB | ENVKn | Green HRM |
|---|---|---|---|
| **EGB** | | | |
| **ENVKn** | 0.271 | | |
| **Green]HRM** | .228 | 0.412 | |

**Table5 Testing of hypothesis**

| | Beta | error | VIF | t | Significance |
|---|---|---|---|---|---|
| **H2:Green HRM →ENV-KN** | **0.42** | **0.04** | **1.00** | **8.97** | **0.00** |
| **H1;Green HRM →EGB** | **0.05** | **0.05** | **1.21** | **1.08** | **0.27** |

**Table6 Mediating effect**

| | Beta | error | LL | UL | t-stat. | Significance |
|---|---|---|---|---|---|---|
| **H3:Green HRM → ENVKN → EGB** | 0.09 | 0.02 | 0.04 | 0.13 | 4.04 | 0.00 |

Hypotheses were accepted via p-value, t-value. This was done for the purpose of testing the hypothesis, which was done using the bootstrapping approach with resampling of 5,000. It was determined that just two of the three hypotheses that were established were supported. Based on the findings shown in Table V, it was revealed that green HRM had positive correlation on environmental awareness (β = 0.42, t = 8.97). Therefore, the H2 satisfied.

Hence, study concluded H1 not satisfied that no positive correlation among green HRM & EGB (β = 0.05, t = 1.08). According to the findings presented in Table VI, evident that environmental knowledge plays meaningful role in mediating association among green-HRM & EGB (βeta=0.09, t-value=4.04, lower level=0.04, upper level=0.13). Therefore, H3 was validated (Figure 1)

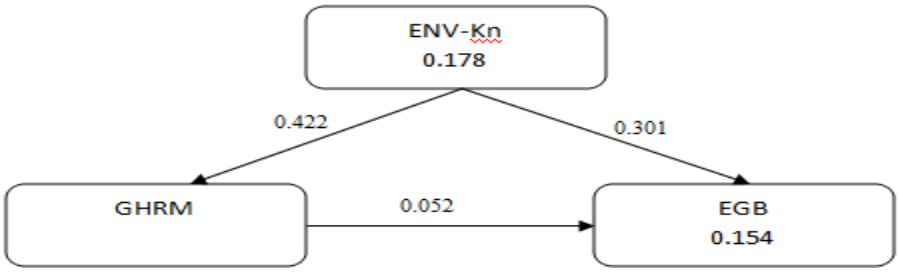


Fig: 1 Structural framework

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**Table7 $F^2$, $R^2$ & $Q^2$**

| Items | $Q^2$ value | $R^2$ value | Effect size | Results |
|---|---|---|---|---|
| **Employee green behavior** | .05 | .15 | | |
| **Green HRM** | | | .003[a]:.216[b] | NIL (medium) |
| **Environmental knowledge** | .09 | .17 | .087[a] | Small |

Table 7 displays the analysis results for R2, effects size (f2), and Q2-predictive importance of independent on endogenous variables such as Env-Kn and EGB. R2 value represents approximately 0.154 percent of EGB's overall variance. With an R2 value of 0.178, green HRM alone contributed for 17.8 percent of overall variation in EGB. The R2 0.178 value suggested green HRM described Env-Kn 17.8 percent overall variance. This was demonstrated by R2 (0.178.). Hair et al. (2017) concluded R2 at least 0.10 are believe good. Hair et al. (2017) present an R2 criterion based not only on model complexity but also on type of study being conducted. The R2 value of 0.10 is considered appropriate for forecasting human behavior goals, a tough endeavor. In context of this investigation, the $R^2$ values ranging from 15.4 to 17.8% are considered satisfactory.

The study employed Geisser's (2017) Q2 to assess the expected accuracy. A blindfolding experiment was carried out to determine the accuracy of the model's predictions. In Hair et al., (2017) they found that a Q2 score above zero indicated predictive value. This is determined by

performing an analysis with a distance of seven. The endogenous variables' Q2 values were 0.053 and 0.096, indicating that they had strong predictive ability.

According to Maxwell (2000) described effect sizes of .35, .15, and .02 are considered big, medium & minor. According to study's findings, ENV-Kn has minor impact on EGB (0.087; 0.09), however green HRM had positive impact on ENV-Kn (.216). Thus, green HRM has no positive influence toward EGB (.003). However, Hair Jr. et al. (2017) advise that prediction capacity be evaluated using predictive table developed of accuracy. If PLS model's MAE, RMSE, and MAPE are lower, than linear model (LM), and PLS model's Q2 values are greater than LM, the model is thought to have less predicting error (Shmueli et al., 2016). Every value fits the conditions stated in Table VIII; thus, theoretically created path-model increases prediction capacity of currently indicator data.

**Discussion:**

The research aim is evaluating how implementation of green HRM impacts the EGB of healthcare including multiple hospitals. Additionally, study sought to delve into underlying mechanism of these associations, particularly through exploration of environmental knowledge as a potential mediator.

Surprisingly, findings revealed that no positive direct association among green HRM & EGB. However, this also contradicted some previous studies ( Luo et al., 2024; Dumont et al., 2017). This suggests that simply having green HRM a practice in place does not guarantee employees' adoption of environmentally friendly behaviors. Therefore, it's crucial to effectively implement

green HRM practices to motivate employees towards EGB. Identifying underlying determinants is crucial for green HRM to influence EGB.

Existing research indicated green HRM approaches improve employees' ENV-Kn. This underscores how effective green HRM practices add more understanding of environmental issues. While Green Training (GT) plays a role in educating employees, other practices like green information provision (GIP), green performance management (GPM), rewards, & collectively work to cultivate the necessary to acquire and advance ENV-Kn, aligning with organizational goals and objectives. So, this assertion support by prior research indicating useful green HRM enhance employees' environmental knowledge (Farrukh *et al.,* 2022).

The current study's findings support indirect and significant association among green HRM & EGB, mediated by ENV-Kn. This contribution expands existing literature by highlighting that HRM influences workplace outcomes through underlying mechanisms such as ENV-Kn (Paulet et al., 2021). This assertion aligns with studies indicating that employees are engaging in environmentally friendly behaviors when they have sufficient ENV-Kn (Aftab et al., 2022; H. Ahmad, Yaqub, & Lee, 2024), regardless of the presence of green HRM practices. Moreover, studies have shown that higher levels of ENV-Kn strengthen relationship among green HRM & EGB (Dumont et al., 2017). Notably, existing study is one of the first to investigate environ ENV-Kn as mediator among green HRM and EGB in Khyber Pukhtuntwa.

**Theoretical implications**

The research provides valuable insights to existing knowledge. The findings suggest that employees are equipped with requisite capabilities, motivations, and opportunities; they tend possess both declarative and procedural knowledge essential for comprehensively understanding

environmental issues and effectively implementing measures to address them. This assertion finds support (Dumont et al., 2017) research which underscores green HRM practices pivotal role in augmenting employees' environmental knowledge, thus fostering environmental sustainability.

Secondly, for environmental knowledge mediating role among green HRM & EGB, this study extends findings (Jermsittiparsert, 2021) who proposed that bolstered influence behavior through enhanced environmental knowledge. It indicates that when managers receive adequate guidance, knowledge, stimulus, and environmental sustainability involvement, their environmental knowledge serves as a catalyst for promoting environmentally friendly behavior. The findings align with observations like (Aftab et al., 2023), who suggested that environmental knowledge, when supported by top management, influences employees' EGB.

Furthermore, study contributes to green HRM literature & EGB via healthcare centre & hospitals. This is significant because healthcare supervisor play a crucial role in driving environmental sustainability within society. The insights gained from this study can inform strategies aimed at enhancing the green behavior, emphasizing the intrinsic connection between green behaviors.

**Practical implications**

Although this study was conducted within healthcare sectors and hospitals, its implications extend to green workforce initiatives globally. This assertion is rooted in the recognition that fostering green workforce would crucial addressing pressing global climate challenges (Aiken, Clarke, Sloane, & Consortium, 2002). Scholars and practitioners within the healthcare sector have increasingly acknowledged the pivotal role of environmental sustainability (Li et al., 2023)

To fulfill this responsibility, Healthcare must effectively implement green HRM that support ENV-Kn. The study also underscores health sector role via adopting suitable green HRM to enhance employee ENV-Kn and understanding of environmental issues, ultimately leading to improved environmental performance within HEIs and society. These practices encompass various HR functions such as recruitment and selection, where HEIs should prioritize candidates who align with environmental values, orientation programs emphasizing environmental considerations, environmental training to equip staff with mitigation skills, and performance appraisals linked positive environmentally friendly behavior.

Therefore, the study recommends that top management establish environmental management principles for devising green HRM. Hence, crucial for healthcare plus hospital to recruit staff who shares ecological conservation principles, highlighting importance of considering environmental values during recruitment and selection processes. HR professionals can set an example by integrating clean ethics culture into job advertisements and assessing candidates' environmental values during interviews.

Furthermore, hiring managers should provide education and training tailored to ENV-Kn, enabling to fully grasp environmental procedures & environmental sustainability significance. Consequently, educators can conscientious about environment degradation and preventive measures, like monitoring waste and carbon emissions. Also, this can involve tracking paper usage and printing activities, setting benchmarks for resource consumption, and incentivizing environmentally friendly behaviors through rewards and compensation. Additionally, post-

appraisal measures like training, environmental management actions and advice mechanisms that could further enhance hospital staff environmental knowledge and behaviors.

**Limitation and future studies**

This study identifies several limitations for future research endeavors. First, research was confined to health centre & hospital, thus limiting generalizability to other sectors (such as manufacturing etc) due to differences in organizational structures and funding mechanisms. Additionally, caution exercised when applying study's finding to other countries, as varying cultural contexts may influence the interpretation of results.

Furthermore, while this study found that ENV-Kn fully-mediated association among green HRM and EGB, there remains require exploring role of additional variables in elucidating mechanisms underlying this connection. Future investigations could incorporate construct like self-efficacy. Research suggests that individuals with high self-confidence are engaging in pro-environmental behaviors (Mungai et al., 2020) thus future studies could examine their potential mediating role among green HRM & EGB.

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