



RESEARCH PAPER

The Impact of Green Human Resources Management to Enhance Pro-Environmental Behaviour among Organizational Employees

¹Zahid Nawaz Khan*, ²Irfan Iqbal and ³Sahrish Saba

1. MS Scholar, Department of Management Sciences, Shifa Tameer-e-Millat University, Islamabad, Pakistan
2. Senior lecturer, Department of Management Sciences, Shifa Tameer-e-Millat University, Islamabad, Pakistan
3. Assistant Professor, Department of Management Sciences, Shifa Tameer-e-Millat University, Islamabad, Pakistan

*Corresponding Author: znawazkhan2@gmail.com

ABSTRACT

This study aims to measure the impact of green HRM on Employee pro-environmental behavior and the mediating role of employee green commitment. The data were collected from Pakistan's manufacturing industry through an online and self-administered questionnaire. Quantitative methods were used to collect data from respondents. Online and self-administered questionnaires were used to collect the data conveniently. A total of 303 responses were used for final data analysis. Process-Hayes was to measure the mediation role of employees, green commitment between green HRM, and employee pro-environmental behavior. SPSS was utilized to analyze the hypothesized model and found full support for the hypotheses of current study. Study results show green HRM significantly influences the employee's pro-environmental behavior. Further, employee green commitment significantly mediates the relationship between green HRM and employee pro-environmental behavior. This study adds value to literature of green HRM and employee pro-environmental behavior. Practically, this study highlights the importance of green HRM for companies and suggests that firms should employ green practices to motivate their employees pro-environmentally.

KEYWORDS Green Human Resources Management, Pro-Environmental Behavior, Employees Green Commitment

Introduction

Most of the existing studies on Green Human Resource Management (GHRM) and Pro-Environmental Behavior (PEB) have been conducted in developed countries such as the United States, Germany, and the United Kingdom (Afsar et al., 2020; Bosnjak, 2020). These regions have advanced regulatory frameworks and environmental policies, which may create more favorable conditions for the adoption of green practices. However, there is a lack of research exploring how GHRM influences PEB in developing countries, particularly in regions with limited environmental regulations and awareness. This geographical gap highlights the need for further research in developing economies where environmental sustainability practices are still in the nascent stages and where cultural and economic factors may significantly affect employee green behavior.

Environmental degradation has become one of the world's biggest problems, especially due to industrialization and unsustainable business development. Dahiya (2020) noted that as human beings embarked on the industrial revolution, the uncommon progress which we owe to this revolution came with unwanted effects on the ecological system including pollution and natural resource depletion. The basically selfish use of resources to spur industrialization has created instability of ecosystems showing

humanity is closer to environmental disaster. These difficulties justify the necessity of ensuring adaptation of sustainable measures and policies in reference to the challenges affecting the environment. To this effect, businesses have a dual responsibility of being part of sources of problems as well as having the ability to solve them (Bahuguna, 2023).

One of the most recent techniques being adopted to counter these worries is Green Human Resource Management. GHRM is the DIP of sustainable environmental management practices into the process of management of human resources in an organization. This variable directly connects organizational goals with environment conservation as it promotes employee's positive perception of the environment. It is best to transmit environmental responsibility into recruitment, training, performance management and employee engagement activities so as to develop employees into stewards of sustainability. This is not just change in response to compliance pressures but representing a desire to seek sustainable justice on ecological terms while sustaining competitive advantage (Bosnjak, 2020).

Processes of industrialization are closely connected with economic development, but at the same time they present a negative impact on environmental conditions, that question the classical concept of business functioning. There is growing importance of corporate sustainability since organizations are incorporating green practices. In this transformation, GHRM also plays a role of a strategic tool that underlines environmental awareness, ethical approaches and green initiatives. In this respect (Afsar et al., 2020) note that the idea of sustainability and other closely related concepts need to be integrated into sustainable HRM to tackle global environmental issues such as climate change and scarcest resources. By so doing, through GHRM, organizations would be in a position to promote sustainable working and living standards that would ensure that employees embraced environmental friendly practices at their work places and beyond (Kodua, 2022). Every sustainable objective within an organization is dependent with the involvement of employees. PEB refers to the ways through which employees exert themselves regarding environmental sustainability including energy, waste and resources. These behaviors are important in responding to other more general ecological concerns and may be pivotal for organizational sustainability initiatives (Benner, 2002). Yet PEB is more than just about policies; it is about the states in which people are encouraged to exercise environmentally responsible behaviors.

The importance of GHRM in increasing organizational environmental performance and effectiveness of the green supply chain has been confirmed in previous studies including Neiati et al., 2017 and Kim et al., 2019. For instance, green recruitment practices capture or target environmentally sustainable workers, while green training engages employees in training to enable them to practice the sustainable practices. In the same way, bearing environmental criteria in performance assessments and ratios is likely to promote green behavior. Such practices help support organizational objectives while also allowing the development of internal eco responsibility (Tandon, 2023). The past few years have observed the adoption of a strategic orientation in HRM on the advancement of environmental responsibility, emerging studies investigate how the HRM practices can be beneficial to support the organizational environmental goals (Kautish & Sharma, 2020).

Literature Review

This is due to the growing research interest that has culminated in the emergence of GHRM as a subfield of the comprehensive HRM area. Chen et al. (2016) have found

that although GHRM is a rapidly growing topic in the literature, more comprehensive information is needed for evaluating its potential contribution to employees' anti-ecological conduct and organizational commitment (Maryam, 2022). About the research gaps in GHRM and PEBs, one of the fundamental gaps identified concerns the link between the two concepts. Albeit numerous research has signified the role of GHRM to support environmental sustainability at an organizational level, there is deficit of empirical research from which we can capture that how GHRM practices affect environmental awareness and concern level of responsibility. Specifically, the process by which GHRM influences PEBs and the level to which these behaviors are realized to gain concrete organizational results remains relatively researched (Bosnjak, 2020)

However, the literature review shows that while the field of GHRM has garnered increasing interest, its capacity to promote PEB among employees is not well understood. Although work has been done on the effect of GHRM on firm performance and supply chain sustainability, few efforts have been made to explore its consequences on manners on people. Benner (2002). Classified PEBs as actions concerning environmental sustainability stressing their relevance to overriding organizational imperatives (Andersson, Jackson, and Russell 2013). Also pointed out that PEBs are consistent with sustainability goals, which makes it important for organizations to promote such actions (Tian, 2022).

Most of the existing studies on Green Human Resource Management (GHRM) and Pro-Environmental Behavior (PEB) have been conducted in developed countries such as the United States, Germany, and the United Kingdom (Afsar et al., 2020; Bosnjak, 2020). These regions have advanced regulatory frameworks and environmental policies, which may create more favorable conditions for the adoption of green practices. However, there is a lack of research exploring how GHRM influences PEB in developing countries, particularly in regions with limited environmental regulations and awareness. This geographical gap highlights the need for further research in developing economies where environmental sustainability practices are still in the nascent stages and where cultural and economic factors may significantly affect employee green behavior.

Environmental degradation has become one of the world's biggest problems, especially due to industrialization and unsustainable business development. Dahiya (2020) noted that as human beings embarked on the industrial revolution, the uncommon progress which we owe to this revolution came with unwanted effects on the ecological system including pollution and natural resource depletion. The fundamentally selfish use of resources to spur industrialization has created instability in ecosystems, showing humanity is closer to environmental disaster. These difficulties justify the necessity of ensuring the adaptation of sustainable measures and policies in reference to the challenges affecting the environment.

To this effect, businesses have a dual responsibility of being part of the sources of problems as well as having the ability to solve them (Bahuguna, 2023). Consequently, organizations have begun integrating sustainability into their operations to mitigate their negative environmental impact. One of the most recent techniques being adopted to counter these worries is Green Human Resource Management. GHRM is the incorporation of sustainable environmental management practices into the process of managing human resources in an organization. This variable directly connects organizational goals with environmental conservation as it promotes employees' positive perception of the environment. It is best to transmit environmental responsibility into recruitment, training, performance management, and employee

engagement activities to develop employees into stewards of sustainability. This approach is not just a change in response to compliance pressures but represents a desire to seek sustainable justice on ecological terms while sustaining competitive advantage (Bosnjak, 2020). Through GHRM practices, businesses aim to align their corporate values with environmental sustainability goals, fostering a culture of green consciousness among employees.

Processes of industrialization are closely connected with economic development, but at the same time, they present a negative impact on environmental conditions, which questions the classical concept of business functioning. There is growing importance of corporate sustainability since organizations are incorporating green practices. In this transformation, GHRM also plays the role of a strategic tool that underlines environmental awareness, ethical approaches, and green initiatives. In this respect, Afsar et al. (2020) notes that the idea of sustainability and other closely related concepts need to be integrated into sustainable HRM to tackle global environmental issues such as climate change and scarce resources. By so doing, through GHRM, organizations would be able to promote sustainable working and living standards that would ensure that employees embraced environmentally friendly practices at their workplaces and beyond (Kodua, 2022). Every sustainable objective within an organization is dependent on the involvement of employees.

Pro-Environmental Behavior (PEB) refers to the ways through which employees exert themselves regarding environmental sustainability, including energy conservation, waste reduction, and efficient resource utilization. These behaviors are important in responding to other more general ecological concerns and may be pivotal for organizational sustainability initiatives (Benner, 2002). Yet PEB is more than just about policies; it is about the states in which people are encouraged to exercise environmentally responsible behaviors. Employees play a crucial role in contributing to an organization's environmental performance by adopting behaviors that reduce the environmental footprint of organizational activities. Hence, fostering PEB among employees through GHRM practices is vital in achieving sustainability goals.

The importance of GHRM in increasing organizational environmental performance and the effectiveness of the green supply chain has been confirmed in previous studies, including Neiati et al. (2017) and Kim et al. (2019). For instance, green recruitment practices capture or target environmentally sustainable workers, while green training engages employees in training to enable them to practice sustainable practices. In the same way, bearing environmental criteria in performance assessments and reward systems is likely to promote green behavior. Such practices help support organizational objectives while also allowing the development of internal eco-responsibility (Tandon, 2023). Additionally, GHRM practices can create a sense of shared responsibility among employees, enhancing their commitment to environmental sustainability.

However, the literature review shows that while the field of GHRM has garnered increasing interest, its capacity to promote PEB among employees is not well understood.

Although work has been done on the effect of GHRM on firm performance and supply chain sustainability, few efforts have been made to explore its consequences on individual employee behaviors. Benner (2002) classified PEBs as actions concerning environmental sustainability, stressing their relevance to overriding organizational imperatives. Andersson, Jackson, and Russell (2013) pointed out that PEBs are consistent with sustainability goals, which makes it important for organizations to promote such

actions. Moreover, Tian (2022) emphasized that fostering PEB through GHRM practices can significantly enhance the overall sustainability performance of organizations. Considering the growing environmental concerns, understanding the relationship between GHRM and PEB is of paramount importance. This study aims to address the existing research gap by exploring how GHRM practices influence employee pro-environmental behavior in developing countries. By examining this relationship, the study seeks to provide valuable insights into how organizations in developing economies can leverage GHRM practices to promote sustainability and contribute to global environmental conservation efforts. The findings of this study will not only advance academic knowledge but also offer practical implications for businesses seeking to implement effective green management strategies in their operations.

The current research endeavor will aim to fill the loopholes by evaluating the effects of GHRM on PEBs. With regards to the indirect effect, the present study aims to evaluate the mediating role of employees' green commitment (EGC) between green human resource management and pro-environmental employee behaviors. The EGC refers to an employee's involvement, identification, and emotional connection with ecological practices (Perez et al., 2009); (Pham, Hoang, and Phan., 2019). Argue that organizational execution of sustainable behaviors turns employees to be increasingly focused about environmental protection. More precisely, the firm's GHRM practices would affect EGC, leading further to employees' PEBs. Despite the growing interest in Green Human Resource Management (GHRM) and its positive impact on organizational performance and supply chain sustainability, limited research has been conducted on its influence on Pro-Environmental Behavior (PEB) among employees. While previous studies have explored the relationship between GHRM and firm performance, there is still a gap in understanding how GHRM practices directly foster employees' environmentally responsible behaviors. Furthermore, the role of Environmental Governance Climate (EGC) in strengthening the relationship between GHRM and PEB remains underexplored. This study aims to bridge this gap by investigating the combined impact of GHRM and EGC on promoting PEB within organizations. (Adamkiewicz, Kochańska, Adamkiewicz, Łukasik, & Chemistry, 2022). Co-creation will enable organizations to develop effective strategies towards the development of an environmentally sensitive workforce that will actively engage in contributing towards the achievement of organizational environmental goals and objectives (Tandon, 2023). Its ability to improve PEB among employees makes GHRM important on the background of modern global environmental issues. Climate change, depletion of resources, and pollution are the issues that require action now and enterprises have a key part to address them. This paper concludes that by adopting GHRM, organizations can counter these challenges meeting the sustainability agenda of organizations. This calls for what might be referred to as 'green culture change', which in simple terms means a change in perspective on environmental issues where such issues are seen not as constraining factors limiting growth, but as opportunities for development (Bahuguna, 2023).

With the above gaps in mind, this research seeks to establish the relationship between GHRM, EGC and PEB. It focuses on both GHRM practices and how a positive EGC can improve this relationship through changing employee behaviors. Therefore, to address this question, the study will examine the identified dynamics in a bid to enhance the understanding of processes by which organizations can foster the environmental responsibility of workers. This study adds to the existing literature in the area of GHRM and sustainability while providing potential management insights for organizations interested in improving their performance on environmental issues (Kodua, 2022). GHRM is a new sustainable perspective of HRM that concerns organization's goals and

environmental sustainability. Therefore, organizations should consider that the promotion of PEB among employees can lead to ecological objectives as well as a sustainable success of an organization in the long-term perspective. The linking of GHRM with EGC provides a route to establishing a green culture that will enable employees to be agents of sustainable change. This research aims to contribute to the literature by examining these dynamics and by demonstrating the importance of HRM interventions in encouraging prescriptive environmental action and organizational environmental initiatives (Maryam, 2022).

As the world is progressing towards industrial advancement at a fast pace, it has a fair share of devastating effect on the environment. The industrial revolution is partly responsible for environmental degradation to an extent. Thus, as the work of various institutions and environmental changes are interlocked so the institutions or companies must change their perspective towards reducing functions that are responsible for environmental hazards (Afsar & Umrani, 2020). In this quest, companies are struggling to go green and acquire pro-environmental practices and activities throughout the various departments. This struggle has risen the concept of green human resource management (GHRM). These are the various practices and behaviors carried out by the organization specifically by the human resource department that lead to the achievement of environmental protection and preservation.

Theoretical background and hypothesis development

Figure 1 depicts the theoretical framework of the current study. It exhibits the relationship between the dependent and independent variables i.e., Green HRM and Employee Pro-environmental Behavior. It also shows the role of Employee Green Commitment in the relationship between Green HRM and Employee Pro-environmental Behavior. Attitude Theory developed by Bull (1951) explains the theoretical framework for the present study. Based on the theory, employee reactions toward any policies or practices that organizations implement, including GHRM, are influenced by their attitude toward the subjects of interests. With regard to this study, the Attitude Theory posits that when employees hold positive affective responses towards GHRM practices, they will adopt PEBs because people with high commitment towards goals regarding the environment will undertake actions that support goals of this nature (Bosnjak, 2020).

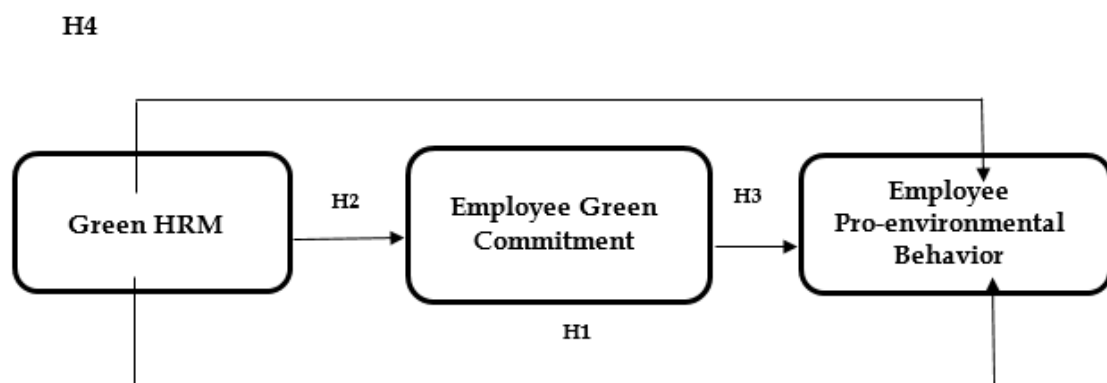


Figure 1: The proposed conceptual model

H1: Green HRM is positively related to employee pro-environmental behavior.

Green Human Resource Management (GHRM) has become an important strategic weapon that has the potential of driving employees' green commitment, a term

commonly referred to as the Employee Green Commitment (EGC). This commitment is an indication of the employee's interest in issues to do with the environment and his/her responsibility to the environment. Whereas orthodox human resource management strategies are concerned only with the strategic objectives of an organization and performance metrics of employees, GHRM broadens this role through utilizing environmental concerns within the policies of the business organization to ensure the employees embrace greener practices (Saeed et al., 2019).

The idea of Employee Green Commitment (EGC) moves a step further by including a true interaction with sustainable practices. They state of affairs reflects their beliefs, aspirations, and responsibilities that these members of personnel have to the organization and to the environment. An employee who is green committed is not only conscious of the various environmental situations but also has a desire and willingness in minimizing ecological impact that is exhibited by the organization where he/ she works and in his/ her own life. This paper, therefore, identifies EGC as a key determinant of PEBs and sustainability across organizations (Saeed et al., 2019).

H2: Green HRM is positively related to employee green commitment.

Employer commitment is essential to the success of the organization if it is employed in pursuit of organizational objectives and standards. In the environmental sustainability literature, Employee Green Commitment (EGC) is a multi-dimensional measure that describes the employee's strong perceived responsibility for contributing to the company's environmental goals. This form of commitment is therefore self-generated out of "an ethic of care" and support for sustainability; leading to the pursuit and encouragement of sustainable behaviors which are termed Pro-Environmental Behaviors (PEBs) by (Kim et al., 2019). This causal relationship between EGC and PEBs extends from the idea that engaged organizational employees will drive positive behaviors towards realizing their company's sustainability goals green. Such behaviors entail practices such as, conservation of energy, minimization of the use of resources, recycling and integrating sustainability in operations. Green commitment of the employees also helps them see waste and suggest innovative approaches to environmental issues because group values are congruent with the organizational mission in this case (Vallaster, 2017). The studies have suggested that organizations that were able to promote EGC in their employees usually report a higher incidence of PEBs in their population. This is the case because committed employees not only act on the green goals themselves, but they also potentially pressure others in the organization to do the same as well. This generates a virtuous cycle where environment friendly behaviors continue to be enacted by the organization's employees which in turn strengthen their green organizational commitment and develop shared organizational responsibility for environmental outcomes of the organization.

H3: Employee green commitment is positively related to employee pro-environmental behavior.

Employee green commitment acts as a variable that moderates the relationship between HRM and the extent of pro-environmental behavior among employees. When green policies are established in HRM, policy practice like training, incentives and leadership support, then policy practice that binds the employees psychologically to environmental goals makes a lot of sense. This commitment improves their willingness to practice sustainable workplace practices including those that promote energy efficiency and minimization on waste. Green commitment serves as a mediator between

HRM practices and the actual change in behavior for the environment. Hence, it becomes crucial for organizations that are seeking to establish green at the corporate and operations level, to cultivate a powerful green attitude among its employees (ElHaffar, 2020). Green Human Resource Management (GHRM) refers to human resource management practices that are incorporated towards attaining organizational environmental sustainability. This concept overlays environmental management onto the classical HRM roles of staffing, training, performance appraisal, and employee engagement to instill environmentally responsible behaviors in employees (Al-Ghazali & Afsar, 2020). It encompasses green competencies development and enthronement of environmental responsiveness at the corporate level, availing and provoking the organizational workforce to exhibit and support green practices that augment the organizational set environmental goals (Saeed et al., 2019).

H4: Employee green commitment mediates the relationship between green HRM and employee pro-environmental behavior

Green Human Resource Management (Green HRM) is a critical approach to influence PEB in organization through introducing green principles in selection, training, and performance appraisal and compensation policies. Those organizations that have effectively created stringent environment policies to support green management may not necessarily change the behaviors of employees where Green HRM would not act as a bridge to facilitate value, skill and motivation change towards sustainability. Green HRM encapsulates the behavioral change management framework aimed at promoting environmental-friendly behavior at the workplace through offering correct knowledge, tools and promos. For example, green training programs involve the use of appropriate information to teach employees the best practices to apply in sustainability, whereas green performance management and rewarding encourage employees to absorb appropriate green practices. Altogether, when employees of the organization buy into the concept because the firm embraces Green HRM practices, it can be taken for certain that such individuals shall then proceed to replicate the same in the surrounding environment. The literature review reveals that Green HRM increases the psychological ownership and commitment towards sustainability within the employees and increases the connection between organizational environmental activities and voluntary environmental actions by employees. This mediation effect shows that HRM is a key to enhancing corporate sustainability and the achievement of overall long term environmental objectives.

Material and Methods

The above-mentioned hypotheses were tested in present study. The purpose of the study was to identify the link among variables. In this study, survey method (online survey) was used to analyze the variables relationships, because survey method is one of the most popular and effective method for conducting research (Lefever, Dal, & Matthiasdottir, 2007). Natural environment was followed during steering the research. There was no interference by the researcher. The respondents' information was kept secret according to research ethical values. Data were collected from the employees of manufacturing industry of Pakistan. The nature of the study was cross-sectional in a non-contrived scenario which is quantitative and correlational in nature at specific point of time. Because workers in this sector are expected to supply the necessary data for this study, the Pakistani manufacturing sector is the focus of the current investigation. Pesticides, chemicals, fertilizer, textiles, cement, pharmaceuticals, and many other industrial items are produced by a variety of industries in Pakistan's production sector.

Given the importance of these industries to Pakistan's economy, it is beneficial to understand employee dedication, habits, and organizational procedures, especially those pertaining to green human resource management (GHRM) (Bahuguna, 2023). 400 copies of the questionnaires were distributed to the respondents in order to create a pool of comprehensive and reliable data. Convenience sampling was used to select participants from the manufacturing industry of Pakistan, including managerial, administrative, and executive, operators, technicians, engineers, and other factory employees. This method allowed easy access to participants, ensuring diverse perspectives from various departments, ranging from product assembly workers to management staff, for a comprehensive understanding of green HRM practices. Because the manufacturing industry of Pakistan is the central topic for this research, all the employees of this sector were included in the population of this study. Since the focus is on the industrial segment, people from different employment categories like managerial, administrative and executive, operators, technicians, engineers and other factory employees were covered. This process guarantee that all data collected from different departments is a richer set of perspectives from call center employees – from those whose primary activity involves physically assembling products to those employees in management positions (Kodua, 2022). The study unit of this research is the employee of the manufacturing sector of Pakistan. Collected data concern personal employee commitment in environmental practices, employee opinions regarding company's GHRM policies, and self-reported pro-environmental behavior at the workplace, given that the study concentrates on individual participants. The target population for this research since it will employ a quantitative research method employed a structured questionnaire in data collection from the respondents. The items in the administered questionnaire are borrowed from previous, valid, and reliable studies to provide the same level of reliability and validity of the chosen instrument. The questions were developed according to the needs of this study, and major attention is paid to GHRM practices, the attitude of the employees to environmental activities, and their behavior in this aspect. To examine the level of GHRM implementation, a 6-item GHRM scale adopted from Dumont, Shen, and Deng (2017) was employed. This scale has been used in most of the GHRM research and is deemed to provide a valid measure when evaluating the way organizations adopt sustainable human resource management practices. The level of Employee Green Commitment is measured using 8-item, which Raineri and Paillé (2016) recommended to measure the level of green commitment to organizational activities. Finally, the measurement of Employee Pro-Environmental Behavior is done by using "7-item scale of pro-environmental behaviors developed by Robertson and Barling (2013) that has been widely applied to establish employees' reasonable level environmental actions in the workplace Shen and Deng (2017). Data collection in this research was done systematically to enhance reliability and validity in accomplishing the study objective. First, the researcher visited the companies, employing top officials including managers and CEOs to explain to them the purpose of the study as well as the objectives behind the study. These officials' permission was formally requested to access their employees for data collection purposes. It was briefed to respondents that the goal of the study is to maintain an honest and accurate report which does not reveal the identity of any respondent. The questionnaires were then administered to the employees and allow enough time for them to fill those (Shen & Deng (2017). In this study data analysis software SPSS was used. First data reliability and validity were measured to check the accuracy of data. Then hypotheses testing was done by applying the correlation and regression analysis.

Results and Discussion

The results of descriptive statistics show that the minimum value for all variables is 1 and maximum value is 5. Whereas values are 3.5 and 3.6, which means most of the data remain around the central point. The results of skewness and kurtosis show that data is in normal range. As the acceptable range of skewness is (+1, -1) and kurtosis is (+3, -3) the results show that all values are in acceptable range

Table 1
Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
EPB	1	5	3.4967	1.04162	-0.488	-0.454
EGC	1	5	3.4547	0.66746	-0.443	1.051
GHRM	1	4.75	3.6151	0.63916	-0.164	-1.337

Reliability

The process of analyzing an instrument's consistency is called reliability analysis. Cronbach's alpha is the test used to gauge reliability. Goh et al. (2016) and Sekaran (2004) state that 0.7 is the interpretation for accepting dependability of the scale. The current study's findings indicate that the Cronbach Alpha values for GHRM, EGC, and EPB are all greater than 0.7, at 0.7, 0.8, and 0.85, respectively. All values fall within the permitted range, indicating that the data is normal.

Table 2
Construct Reliability

Constructs	Cronbach's Alpha
GHRM	0.761
EGC	0.814
EPB	0.852

Correlations

Correlation analysis was used to measure the relationships between the variables. Additionally, correlation quantifies the direction and intensity of relationships between variables. "-1 to +1" is the typical correlation range. Correlation analysis is subject to certain requirements. There is no association between the variables if the value of "r" equals "zero." A positive "r" value indicates a directly proportional relationship between the variables. In contrast, a negative value for "r" indicates an inversely proportionate relationship between the variables. The value of < 0.09 for "r" suggests that there is little correlation between the variables.

Table 4.4 Correlation

	GHRM	EGC	EPB
GHRM	1		
EGC	.503**	1	

EPB	.435**	.611**	1
-----	--------	--------	---

The association is weak if the value of "r" is between 0.10 and 0.29; if it is between 0.30 and 0.49, then the relationship is moderate. If the value of "r" is in between 0.50 to 0.69 then it is a substantial relationship. If the value of "r" is ≥ 0.70 it indicates that the variables are strongly correlated. According to the results, values of all variables were significant as their p-values were less than 0.01. The correlations indicate that GHRM, employee organizational commitment and pro-environmental behavior are significantly positively interrelated. Employee organizational commitment has the strongest influence on pro-environmental behavior as shown in Table 4.4 underlining its crucial role in promoting eco-friendly actions.

Regression Analysis

The magnitude and strength of the relationship among variables is described by regression analysis (Wijaya, 2013). The hypotheses of the study were tested through regression analysis.

Table 4.5 Hypotheses Testing

	Hypotheses	Hypothesis	Beta	t-Value	P-value	LCI	LCI	LCI	U
1	F	GHRM → EPB	0.1489	2.91	0.005	0.9225	0.992	0.4	
2	F	GHRM → EGC	0.246	42	0.025	0.5935	1007	0.	
3	F	EGC → EPB	0.047	2.96	0.007	0.3651	2709	0.	
4	F	GHRM → EGC → EPB	0.116	--	--	0.0798	1103	0.	

Therefore, it was proved that regression analysis was valid for testing the hypotheses. In present study model is tested by applying the process-Hayes method. As in present study employee green commitment is working as mediating variable. Therefore, model 4 of Hayes method is applied to test the direct and indirect effects. The results of study are given below in Table 4.5. It explains that mediating role of employee green commitment in the relation between green HRM and employee pro-environmental behavior. The results of the study reveal a significant effect of GHRM on EGC (coefficient = 0.246, $p < 0.001$), and of EGC on EPB, with a coefficient of 0.047, and a value of $p < 0.001$. The direct effect of GHRM on EPB is highly significant at a coefficient value of 0.148, $p < 0.001$ that indicates a direct positive relationship. However, the effect is also highly significant indirectly via EGC, as read (coefficient = 0.116, BootLLCI = 0.0798, BootULCI 0.1103). This makes employee green commitment a partial mediator of the relationship between GHRM and EPB. The direct effect of GHRM on EPB remains significant and this indicates that EGC partially mediates this effect. These findings suggest that GHRM enhance environmentally friendly employee behavior directly and by encouraging stronger employee green commitment.

Results and Discussion

The purpose of this study is to investigate how G-HRM practices affect employees' PEB. Considering Saeed et al.'s (2019) suggestion that green commitment has a mediating function. When management supports staff members through employee empowerment, green training, and a green reward scheme. It influences their dedication to greening and improves their green response. (2019, Tuan). Attitude theory was used to support the study's model. A survey questionnaire has been used to collect data from Pakistan's manufacturing industry to meet the goals. SPSS was used to test the significance of the t value. The study results indicate that G-HRM has a significant positive impact on employees' pro-environmental behavior. Which means G-HRM practices promote employees' behavior to act in sustainable manner and they play their role in exhibiting green behavior. According to the study, GHRM influences and preserves employee behavior in a good way. This suggests that employees' displays of conserving and influencing other behaviors increase with the effectiveness of the company's GHRM programs (Ansari et al.,). Employees are more likely to exhibit environmentally friendly behavior when a company implements GHRM activities that are successful (Čincera & Krajhanzl, 2013). According to earlier research (e.g., Dumont et al., 2017; Saeed et al., 2019), companies can use green HR practices as a helpful motivator for staff members to display environmentally friendly behaviors. The reason for this is that when businesses truly invest in GHRM, they sincerely try to hire, educate, and inspire their employees about green practices and initiatives. Therefore, the current study's findings support the idea that companies might affect employees' PEB by offering a GHRM-enriched environment.

Further, the second hypothesis of the present study suggests that GHRM has significant impact on employee green commitment which means if firms are following the green HRM practices employees will show commitment to the firm leading to acceptance of H2. These results are in accordance with previous research as the study suggests that management supports staff members through employee empowerment, green training, and a green reward scheme. It influences their dedication to greening and improves their green response. (2019, Tuan). Further, the study proves that green commitment significantly influences the employee pro-environmental behavior which indicates that if employees are committed to the organization due to their green practices, they will show environmentally friendly behaviour (Nasir et al., 2023). The purpose of this study is to investigate how Green Human Resource Management (G-HRM) practices affect employees' Pro-Environmental Behavior (PEB). Saeed et al.'s (2019) suggestion that green commitment has a mediating function serves as a key foundation for this research. When management supports staff members through employee empowerment, green training, and a green reward scheme, it significantly influences their dedication to greening and enhances their green response (Tuan, 2019). The study is grounded in attitude theory, which underpins the model by explaining how employees' attitudes and behaviors are shaped by organizational practices. To achieve the research objectives, a survey questionnaire was used to collect data from the manufacturing industry in Pakistan.

The study results indicate that G-HRM has a significant positive impact on employees' pro-environmental behavior. This finding suggests that G-HRM practices promote employees' behavior to act in a sustainable manner, enabling them to play a critical role in exhibiting green behavior. According to Ansari et al., G-HRM influences and preserves employee behavior positively, suggesting that employees' displays of conserving and influencing other behaviors increase with the effectiveness of the

company's G-HRM programs. Similarly, Čincera and Krajhanzl (2013) argue that employees are more likely to exhibit environmentally friendly behavior when a company implements successful G-HRM activities. These findings align with earlier research, such as Dumont et al. (2017) and Saeed et al. (2019), which suggest that companies can use green HR practices as a helpful motivator for staff members to display environmentally friendly behaviors.

Conclusion

This research investigated the influence of green HRM on employee pro-environmental behavior through employees' green commitment. This research highlights the importance of HRM practices and establishes a link between HRM practices and employees' pro-environmental behavior. Moreover, this study establishes the mediating role of employee green commitment between green HRM and employee pro-environmental behavior. The result of the study suggests that if firms follow the green HRM practices, employees will feel committed to organization and intern they behave in favor of the environment. The present study explored the impact of green HRM practices on employees' pro-environmental behavior, emphasizing the mediating role of employees' green commitment. The findings highlight the significance of green HRM practices in shaping employees' attitudes and behaviors toward environmental sustainability. This research establishes a vital link between green HRM practices, employees' green commitment, and their pro-environmental behavior, contributing to the growing body of knowledge in the field of sustainable human resource management. The study reveals that when organizations implement green HRM practices, employees are more likely to feel committed to the organization's environmental goals, which in turn motivates them to engage in pro-environmental behavior. This study provides valuable insights for organizations aiming to promote sustainability by integrating green HRM practices into their strategies. The results suggest that fostering employee green commitment through green HRM practices can significantly enhance employees' environmentally friendly behavior, ultimately contributing to the overall sustainability objectives of the organization.

Recommendations

Even though recent research has important theoretical and practical ramifications, several topics still require further investigation. First, there are concerns about the external validity of the study's conclusions because it is restricted to manufacturing industries. It will be easier to determine whether the current study's findings are applicable to other sectors or not. Therefore, it is suggested that future research should test the framework in other industries as well. Second, this study examines the impact of GHRM practices within the framework of Pakistan, a single growing economy. Future research would yield useful results if the current findings were extended to other developing and rising economies with pertinent cultural characteristics.

References

- Ansari, N. Y., Farrukh, M., & Raza, A. (2021). Green human resource management and employees' pro-environmental behaviours: Examining the underlying mechanism. *Corporate Social Responsibility and Environmental Management*, 28(1), 229-238.
- Andersson, L., Jackson, S. E., & Russell, S. V. (2013). Greening organizational behavior: An introduction to the special issue. *Journal of Organizational Behavior*, 34(2), 151-155.
- Afsar, B., Umrani, W. A., & Gul, H. (2020). The effects of perceived green HRM practices on employees' environmental performance: The mediating role of pro-environmental behaviors and the moderating effect of individual green values. *Corporate Social Responsibility and Environmental Management*, 27(1), 76-89.
- Bull, N. (1951). *The attitude theory of emotion*, New York, NY: Coolidge Foundation
- Bahuguna, P. S. (2023). Two-decade journey of green human resource management research: a bibliometric analysis. *Benchmarking: An International Journal*, 30(2), 585-602.
- Bagozzi, R. P. (1992). The Self-Regulation of Attitudes, Intentions, and Behavior. *Social Psychology Quarterly*, 55(2), 178. <http://dx.doi.org/10.2307/2786945>.
- Bosnjak, M. A. (2020). The theory of planned behavior: Selected recent advances and applications. *Europe's journal of psychology*, 16(3), p.352.
- Chaudhary, R. (2019). Green human resource management and job pursuit intention: Examining the underlying processes. *Corporate Social Responsibility and Environmental Management*, 26(4), 929-937
- Cheema, S., Afsar, B., & Javed, F. (2019). Employees' corporate social responsibility perceptions and organizational citizenship behaviors for the environment: The mediating roles of organizational identification and environmental orientation fit. *Corporate Social Responsibility and Environmental Management*, 27, 9-21.
- Dahiya, R. (2020). Does organizational sustainability policies affect environmental attitude of employees? The missing link of green work climate perceptions. *Business Strategy & Development*, 3, 395-403
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56 (4), 613-627.
- ELHaffar, G. D. (2020). Towards closing the attitude-intention-behavior gap in green consumption: A narrative review of the literature and an overview of future research directions. *Journal of cleaner production*, 275, p.122556.
- Goh, Y. M., Sa'adon, N. S., & Ismail, A. R. (2016). The reliability analysis of a safety culture questionnaire. *MATEC Web of Conferences*, 66, 00091

- Hair Jr., J. F., Marko Sarstedt, Christian M. Ringle, Siegfried P. Gudergan et al. (2017). *Advanced issues in partial least squares structural equation modeling*, Los Angeles: Sage Publications.
- Islam, T. K. (2021). . Promoting in-role and extra-role green behavior through ethical leadership: mediating role of green HRM and moderating role of individual green values. *International Journal of Manpower*, 42(6), pp.11.
- Jabbour, C. J. C., Santos, F. C. A., & Nagano, M. S. (2008). Environmental management system and human resource practices: Is there a link between them in four Brazilian companies? *Journal of Cleaner Production*, 16(17), 1922–1925.
- Kodua, L. X. (2022). Barriers to green human resources management (GHRM) implementation in developing countries. Evidence from Ghana. *Journal of cleaner production*, 340, p.130671.
- Kautish, P., & Sharma, R. (2020). Determinants of pro-environmental behavior and environmentally conscious consumer behavior: An empirical investigation from emerging market. *Business Strategy & Development*, 3(1), 112–127.
- Kim, Y. J., Kim, W. G., Choi, H.-M., & Phetvaroon, K. (2019). The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance. *International Journal of Hospitality Management*, 76, 83–93.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607–610.
- Lefever, S., Dal, M., & Matthíasdóttir, Á. (2007). Online data collection in academic research: advantages and limitations. *British journal of educational technology*, 38(4), 574–582.
- Mahdy, F. A. (2023). Imperatives, benefits, and initiatives of green human resource management (GHRM): A systematic literature review. *Sustainability*, 15(6), 4866.
- Nejati, M., Rabiei, S., & Jabbour, C. J. C. (2017). Envisioning the invisible: Understanding the synergy between green human resource management and green supply chain management in manufacturing firms in Iran in light of the moderating effect of employees' resistance to change. *Journal of Cleaner Production*, 168, 163–172.
- Nasir, M., Asad, N., Hashmi, H. B. A., Fu, H., & Abbass, K. (2023). Analyzing the pro-environmental behavior of pharmaceutical employees through Green HRM practices: the mediating role of green commitment. *Environmental Science and Pollution Research*, 30(3), 7886–7903.
- Perez, O., Amichai-Hamburger, Y., & Shterental, T. (2009). The dynamic of corporate self-regulation: ISO 14001, environmental commitment, and organizational citizenship behavior. *Law & Society Review*, 43(3), 593–630.
- Pham, N. T., Hoang, H. T., & Phan, Q. P. T. (2019). Green human resource management: a comprehensive review and future research agenda. *International Journal of Manpower*, ahead-of-print. <http://dx.doi.org/10.1108/ijm-07-2019-0350>

- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies, *Journal of Applied Psychology*, 88(5), 879–903
- Raineri, N., & Paillé, P. (2016). Linking corporate policy and supervisory support with environmental citizenship behaviors: The role of employee environmental beliefs and commitment. *Journal of Business Ethics*, 137(1), 129–148.
- Renwick, D. W. S., Jabbour, C. J. C., Muller-Camen, M., Redman, T., & Wilkinson, A. (2016). Contemporary developments in Green (environmental) HRM scholarship. *The International Journal of Human Resource Management*, 27(2), 114–128. <http://dx.doi.org/10.1080/09585192.2015.1105844>.
- Robertson, J. L., & Barling, J. (2013). Greening organizations through leaders' influence on employees' pro-environmental behaviors. *Journal of Organizational Behavior*, 34(2), 176–194.
- Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's pro environmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management*, 26(2), 424–438.
- Scherbaum, C. A., Popovich, P. M., & Finlinson, S. (2008). Exploring individual-level factors related to employee energy-conservation behaviors at work 1. *Journal of Applied Social Psychology*, 38(3), 818–835.
- Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's pro environmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management*, 26, 424–438
- Sekaran, U. (2004). *Research methods for business: A skill-building approach* (4th ed.). John Wiley & Sons.
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of GHRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56, 613–627
- Tandon, A. D. (2023). Green and non-green outcomes of green human resource management (GHRM) in the tourism context. *Tourism Management*, 98, 104765.
- Tian, H. a. (2022). Pro-environmental behavior research: Theoretical progress and future directions. *International Journal of Environmental Research and Public Health*, 19(11), 6721.
- Vallaster, C. (2017). Managing a company crisis through strategic corporate social responsibility: A practice-based analysis. *Corporate Social Responsibility and Environmental Management*, 24(6), 509–523
- Wesselink, R., Blok, V., & Ringersma, J. (2017). Pro-environmental behavior in the workplace and the role of managers and organization. *Journal of Cleaner Production*, 168, 1679–1687.