

Green HR Practices and Employee Performance: Analyzing the mediating mechanism of Employee Engagement

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Abstract

Recent studies of green HR practices focuses on motivating employees to develop ideas and strategies to accomplish the company goals (Ahmad et al., 2021). Further, engaged employees help businesses to identify creative answers of their long-term problems, thus, scholars nowadays have put a great deal of attention on the employee performance, particularly in examining the factors that contribute to it. With employee engagement acting as a mediator, the study investigates the direct and indirect relationships between employee performance and Green HR practices (GHRP) and AMO theory serves as the basis for study's hypothesis. Data collected from 370 employees from BPO's call centers of Pakistan's IT industry in Rawalpindi and Islamabad. The structural modeling and measurement model (PLS-SEM) is used to statistically assess the quantitative data

that was gathered via self-administered surveys. The findings indicate an encouraging relationship between GHRPs and employee performance. The findings also support the mediating role of employee engagement. GHRPs is a procedure that improves performance outcomes in relation to real-world applications and outlines areas of opportunity for further study.

Keywords: Green HR practices, Employee engagement, Employee performance

1. Introduction

Green HR practices (GHRPs) are crucial part of organization nowadays (AlZgool et al., 2021). Recent concepts in green HR practices focus on motivating employees, recruitment, and recognition through ideas and strategies supporting employees to accomplish the company goals (Ahmad et al., 2021; Iftikar et al., 2022; Pandey et al., 2025). Organizations have started a variety of initiatives to help consumers and workers in BPO's call center (which is work under information technology industry) to adopt greener practices. The call centers companies has also changed to better recognize the benefits of adopting green practices and their effects on larger information systems (Ojo & Raman, 2019). Software development and IT-enabled services for data centers, technical service/call centers, and telecom services make up the majority of the Pakistani information technology industry. Prior studies have be done on the banking industry and manufacturing industry in Pakistan (Li et al, 2023). There is need to study at how green training and green rewards and compensation affect employee performance (Moradeke et al, 2021).

Thus, the study's objectives is to improve the organization awareness on GHRP by investigating how green HR practices affect worker performance. Since "green training" provides IT workers with the necessary gears to integrate Implementing eco-design techniques. (Pinzone et al., 2019). Providing both the development of human resources includes both formal and informal education to improve employees' abilities, skills, and attitudes. Programs objective to increase work ethic, provide incentives, and offer training, promotions, and transfers. (Aboramadan et al, 2022). Green HR methods may solve a significant issue with employee performance and benefit Pakistan's IT industry. HR skills increase employee engagement and save operational expenses (Yong et al., 2019). Employee performance is a challenge for firms, and employee performance is an issue in the BPO's call center which is regulatory body of information technology industry. In Pakistan's fast growing technology changes, environmentally friendly practices improve performance and

increase productivity for businesses. Another significant issue is the adoption of "green practices," which refers to how staff members engage in the sustainability process and encourage others to embrace eco-friendly initiatives like pollution control. No guidance or training was given by staff members. Still, there isn't enough involvement. Employee performance is the issue facing the IT sector as it is linked to employee engagement (Chandani, 2016). Implementing environmentally friendly methods may raise sustainability objectives, enhance performance, and boost productivity for firms in Pakistan's rapidly expanding IT sector (Agostino et al, 2021).

Enhancing individual abilities lead to enhance organizational performance outcomes, such as improved performance through green activities, which is the goal of GHRPs. Appelbaum et al, (2000) initiated the same concept in their Ability-Motivation-Opportunity (AMO) Theory, which serves as a basis for our study hypothesis.

2. Green HR Practice's and Employee's Performance

The term "green HR practices" refers to HR concepts that place a strong emphasis on management's accountability for improving employees' environmental work, skill development, and practice and structure stability (Zhang et al, 2024). According to the literature, performance is more significantly impacted when green activities are coupled (Mousa et al, 2020) with the use of GHRP's policies. Agencies may proactively foster effective environmental and overall performance by incorporating practices into HR strategies that support the development of good attitudes, behaviors, and performance outcomes (Farrukh et al, 2022). Performance is the quality and quantity of work employees perform, and high job satisfaction leads to loyalty and increased performance. Employees are crucial for company progress, innovation, and products. A quality company fosters a good work life, producing qualified and competent employees (AlZgool et al, 2021). Long-term performance can be improved by green training, incentives, and company culture that strengthen employees' environmental commitment (Rijal et al, 2023). Job performance measures work accuracy, speed, and employee effectiveness, influencing promotions, cash prizes, tasks, and terminations. Leadership and motivation significantly impact employee happiness and performance (Ramanayake et al, 2022).

The fact that Green HR practices, which are informed by the ability- motivation-opportunity (AMO) theory, foster employee training and performance-based rewards therefore supports the premise based on the data presented in the study.

H¹: Employee performance is significantly impacted by green training and development.

H²: Employee performance is significantly impacted by green rewards and compensation.

3. Green HR Practice's and Employee's Engagement

Work engagement is a result of supervisors and effective human resource management techniques, such as green rewards and green training, which inspire employees and improve their ability to engage in constructive green activities and generate new green ideas (Aboramadan, 2022). Since they represent the cornerstone of an organization's value and necessary for accomplishing objectives, employee engagement is critical for organizational success, especially in the information technology sector (Atiku et al, 2024). Recent studies discovered a favorable correlation between GHR practices and work engagement, with studies suggesting that a positive perception of GHR practices boosts work engagement, despite the limited research on green engagement (Karatepe et al, 2022). AMO theory suggests that employees form a dedicated connection with employers when both sides follow the rules regarding trade and exchange, leading to increased work engagement (Ari et al, 2020). By offering training, career development, and remuneration, HR practices may improve employee engagement and encourage reciprocal behaviors (Saragih et al, 2020).

According to this study, which employs the Ability-Motivation Opportunity (AMO) hypothesis, GHRPs can have a favorable impact on employee engagement by increasing positive emotions, absorption, perseverance, job performance, and goal orientation (Iftikar et al, 2022). The ability, motivation, and opportunity components of the AMO theory offer a conceptual foundation for comprehending how Green HR practices improve engagement.

H³: Employee engagement is significantly impacted by green training and development.

H⁴: Employee engagement is significantly impacted by green rewards and compensation.

4. Employee's Engagement and Employee's Performance

A key component of organizational success is employee engagement, which includes zeal, dedication, and emotional investment. Beyond job happiness, it includes how workers view their roles, contributions, and alignment with the goals and values of the company (Gallup, 2023).

Participation from employees is critical to the success of the business since it demonstrates dedication to its values, duties, and motivation among coworkers (Ahmad et al, 2021). Employee performance is influenced by their ability to fulfill organizational duties, reflecting the organization's standard. Green training, rewards, and organizational culture enhance environmental commitment, improving long-term performance (Pandey et al, 2025). The Ability-Motivation-Opportunity (AMO) framework reveals Green HR impact on repercussions for attitudes and actions, such as green hiring, training, performance evaluation, and incentives job description, organizational culture, union role, organizational learning, and green health and safety (Khan et al, 2022). Work and behavior determine performance, improving decision-making and responsibility. Performance is influenced by work that is in line with strategic goals, customer happiness, and the economy (Schleu et al, 2021). Employee engagement refers to an employee's positive status in their work environment or company. It varies across organizations and can be the antithesis of job fatigue. Engagement leads to higher organizational performance. Employee involvement is influenced by self-association with job roles, persistence, and deepening in work activities, supported by psychological experiences that encourage individual attitudes, behavior, and engagement (Margaretha et al, 2021). Engaged employees contribute to increased productivity, customer satisfaction, and profitability, highlighting the importance of engagement as a driver of business success (Islam et al, 2021). This link between Employee Engagement and performance is widely accepted among senior executives and HR practitioners (Islam et al, 2021).

H⁵: Employee Performance is significantly impacted by employee engagement.

5. Mediating Role of Employee's Engagement

Employee engagement is acknowledged as a crucial component to enhance involvement and a highly active contribution to the growth of an operational business (Kerdpitak & Jermstittiparsert, 2020). Employees that are actively involved in service leadership are more accountable,

committed, and offer superior customer service. This link between employee engagement and service quality emphasizes how crucial it is to develop a committed and motivated team (Shin et al, 2020). Companies aim to enhance their competitiveness by ensuring employee satisfaction and productivity. However, this is less relevant when employees feel satisfied with work demands and not motivated for organizational performance. According to several research now under publication, employee engagement (EE) has a good impact on employee performance (EP), and employee engagement has a favorable impact on EP (Nguyen et al., 2021).

Improving an organization's overall performance is an EE's primary objective. EE study shows its value in HRM by establishing its connection to organizational performance (OP), employee outcomes, and production (Tensay et al, 2020). The dedication and emotional investment that workers have in a company, as well as their genuine dedication to their work and capacity to help it succeed, is known as employee engagement (Nayak et al, 2020). Maintaining employee loyalty, finishing work on schedule and with quality, enhancing their reputation inside the company, and embracing a feeling of organizational involvement are all models of employee engagement. Asghar et al, (2020) and Obchonka et al, (2023).

An innovative approach that incorporates environmentally friendly practices into HRM plans and initiatives is called "green HRM." (Pham et al, 2020). The term "employee engagement" describes a person's participation, contentment, and excitement for their job, which includes personal presence, active performance, and a connection to both their work and others (Albrecht et al, 2020).

Employee engagement is a crucial mediator that influences performance results by serving as a motivating factor, according to studies (Aboramadan et al, 2022). Employee engagement is crucial for an organization's long-term success, as it involves active, loyal, and psychologically robust employees who enjoy their work. Employee performance is influenced by various factors such as work environment, corporate culture, job placement, welfare of employees, disciplinary training, emotional intelligence, job satisfaction, competency, and leadership style (Rijal et al, 2023). Engaged and motivated employees are more likely to engage in environmentally friendly behaviors, leading to improved performance and higher-quality social interactions, according to social exchange theory, creating a mutually beneficial situation for both parties (Khan et al, 2022).

H⁶: Green training and development and employee performance are mediated by employee engagement.

H⁷: Green reward and compensation and employee performance are mediated by employee engagement

6. Theoretical Framework

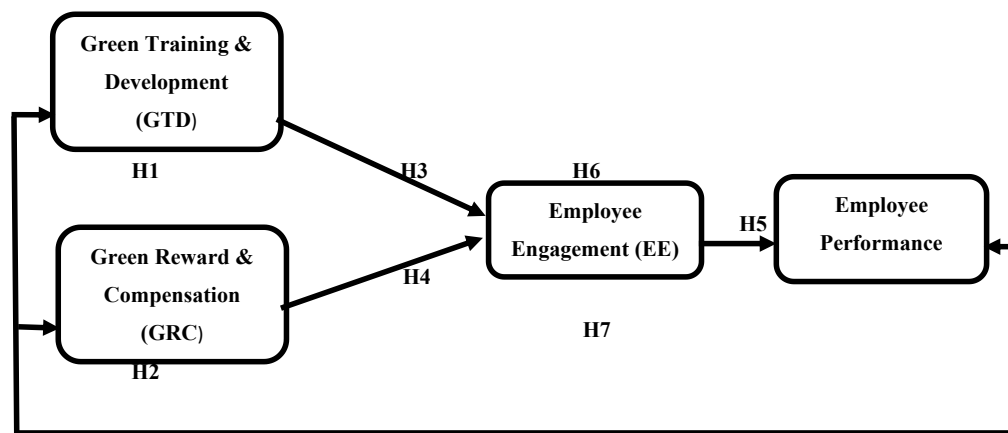


Figure 1

7. Methodology

This study uses a quantitative approach to investigate how employee performance is affected in the Pakistani primary regulatory companies such as BPO's call centers in order to determine the impact of Green HR practices.

7.1 Population & Sample

We collected data in Pakistan's BPO'S call centers which is sub body of information technology industry using a cross-sectional study approach in an uncontrived atmosphere. There are three lac people living there and 1700 employees in Rawalpindi and Islamabad. An estimate of the sample size was made using Krejcie and Morgan's formula (Krejcie & Morgan, 1970). For the study, at the 95% confidence level of the observed value, a sample size of 314–384 is adequate. Furthermore, according to Sekaran (2009), according to Hair et al. (2011) the number of variables to be examined and the sample size from previous studies may be used to calculate the sample size. However, the sample size of 370 is enough, and the smart PLS (SEM) approach have been

used for analysis in this study. The study gathers data from respondents using the quantitative approach through the use of the non-probability convenience sampling technique. A link to a questionnaire was shared with personnel in the BPO's call center, and questionnaires were distributed to them in person in order to gather data.

The respondents consisted of 313 (84.6%) males and 57 (15.4%) females. In terms of age, 48.6% were between 18 to 22 and 23 to 27. As far as education was concerned, 7.8% held Bachelor's degrees and 21.6% held Master-level degrees, 70.5 % had achieved an M.Phil. or higher qualification. The majority of the respondents had work experience of 10 to 15 years (213, 57.6%), 28.6% had work experience of less than 5 years (106) and remaining 51 (13.8%) participants have work experience of 15 to 20 years. 200 employees were single (54.1 %) and 45.9 %) 170 were married.

7.2 Variable and Measurement Scale Description

In this study, the constructs have been evaluated using five-point Likert scales, with 1 denoting "strongly disagree" and 5 denoting "strongly agree." For **Green HR practices** eight-item scale was adopted from (Dumont et al., 2017) and (Tang et al., 2018). The sample scale items were "My company provides employees with green training to develop employees' knowledge and skills required for green management (green training and development)", and "My company relates employees' workplace green behaviors to rewards and compensation (green compensation and reward). It was determined that the total scale's Cronbach's alpha value was 0.969. **Employee Engagement** was measured using nine-item scale was adopted from (Schaufeli & Bakker, 2003). The range of Cronbach's alpha for the different nations is between .72 and .90. An example of an item: At my job, I feel strong and vigorous, When I get up in the morning, I feel like going to work. Further, **Employee Performance** was measured using ten-item scale was adopted from (Primi et al., 2016). Sample item: I perform hard tasks properly, I try to update my technical knowledge to do my job, I do my job according to what the organization expects from me.

8. Results

This study examine employee performance, employee engagement, and green HR practices. Regression analysis, correlation analysis, and descriptive analysis of the data was conducted using SPSS software. The PLS-SEM analysis's was used for the results. Structural model analysis and measurement were employed. The determining model demonstrates the validity of the data acquired and its excellent quality. The correlations suggested by our research model are evaluated for significance by the structural model. The smart PLS software was used.

8.1 Control Variable

According to the prior research, demographic factors such as age, educational attainment, marital status, employment history may affect the study variables hence controlled (Abrahamse & Steg, 2009).

8.2 Measurement Model

The measuring model was assessed in order to determine the validity and reliability of the constructs. The quality of the concepts is evaluated by the measurement model's results. Once quality is assessed using factor loadings, validity and reliability are added. As everyone knows, formative constructions are those in which the measurements cause the latent construct, whereas reflecting constructs are those in which the measured variable is produced by the underlying construct. Latent variables are the cause of the measurements used in this investigation. It is a reflecting measuring model as a result. A major component is allocated to each item in the correlation matrix based on how well it interacts with factor loadings. The range of these integer values is -1 to +1.

First, the model's values are higher than the permitted minimum of 0.50 for each item's factor loadings (Sarstedt, 2016). Although factor loading larger than 0.7 is recommended, the effects of deleting the item on convergent validity and composite reliability will be examined rather than having indications automatically eliminated. When eliminating objects with outside loadings ranging from 0.40 to 0.70 increases the average variance extracted (AVE) or composite reliability over the recommended threshold, they are often taken into consideration. Composite reliability,

Cronbach's alpha, and rho-a were evaluated using statistics, and both were higher than the suggested threshold of 0.700 (Sarstedt, 2021).

Table 1: Loadings of CR and AVE of all Constructs

Construct	Item's	loading's	AVE	CR
GTD	GTD1	0.90	0.87	0.95
	GTD2	0.95		
	GTD3	0.95		
	GTD 4	0.93		
GRC	GRC1	0.80	0.74	0.88
	GRC2	0.88		
	GRC3	0.85		
	GRC4	0.90		
EE	EE1	0.06	0.21	0.42
	EE2	0.62		
	EE3	0.69		
	EE4	0.25		
	EE5	0.16		
	EE6	0.55		
	EE7	0.44		
EP	EP1	0.82	0.81	0.97
	EP2	0.86		
	EP3	0.89		
	EP4	0.93		
	EP5	0.89		
	EP6	0.94		

EP7	0.92
EP8	0.92
EP9	0.92
EP10	0.87

Note. GTD: Green training & development, GRC: Green reward & compensation, EE: Employee Engagement, EP: Employee Performance

The Average Variance Extraction (AVE) must higher than 0.5 as per the suggested threshold (Sarstedt, 2016). AVE for our constructs is displayed in Table 1 which is greater than 0.5 except for EE. Furthermore, with Cronbach's alpha between 0.728 and 0.899 and composite reliability statistics between 0.816 and 0.923, the pointers' reliability is more than double that of a reliability criterion of 0.70. Cronbach's alpha and composite reliability analysis has been completed and is shown in Table 1.

To demonstrate that distinct assessments of distinct ideas shouldn't be too connected, psychologists employ the idea of discriminant validity. Secure discriminant validity is demonstrated by a higher square root of AVE than any other connection. Table 2 displays the discriminant validity standards for every item.

Results from the HTMT are shown with the discriminant values. If the discriminating validity score is less than 0.8, it indicates that the discriminant validity of the construct may be confirmed. A significant discriminant validity is therefore demonstrated by our data. As viewed below. It clarifies whether or not the variables in our study deviate from one another. Hair et al, (2011) stated that even though several of the items still have loadings below .70, they have been kept for more study since removing them might seriously impair the constructs' content validity and reliability. The HTMT ratio for the constructions is displayed in Table 2. All of the values are evidently significant, and discriminant validity has been demonstrated.

Table 2: Heterotrait monotrait ratio (HTMT) Matrix

	EP	GRC	GTD		
EE	0.468				
EP	0.320	0.900			
GRC	0.316	0.312	0.864		
GTD	0.348	0.283	0.748	0.935	

Note. GTD: Green Training & Development, GRC: Green reward & Compensation, EE: Employee Engagement, EP: Employee Performance.

A given object must have large loadings associated with its individual build relatively any new construct. When the real circumstance arises, discriminant validity problems arise. Details on cross loadings are shown in the following tables.

Table 3: Cross loadings development. GRC: green reward & compensation, EE: Employee engagement, EP: Employee performance

	EE	EP	GRC	GTD
EE2	0.62	0.12	0.17	0.17
EE3	0.69	0.21	0.15	0.20
EP4	0.28	0.93	0.27	0.26
EP6	0.3	0.94	0.31	0.32
GRC2	0.27	0.23	0.88	0.62
GRC4	0.28	0.23	0.90	0.56
GTD3	0.31	0.28	0.71	0.95
GTD4	0.29	0.27	0.72	0.93

Note: GTD: green training &

8.3 Structural Model

The structural model should be assessed in order to determine the statistical significance of the link between the components. To test the hypothesis, the t-value is determined using the

bootstrapping method. Bootstrapping is the most recent method for determining the importance of the path coefficient using t-value estimations.

Table 4: Beta Coefficients, Mean. STDEV, T Values

	Beta Coefficient (β)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
EE -> EP	0.240	0.249	0.059	4.065	0.000
GRC -> EE	0.118	0.118	0.067	1.752	0.040
GRC -> EP	0.199	0.209	0.097	2.046	0.020
GTD -> EE	-0.021	-0.027	0.072	0.287	0.387
GTD -> EP	0.718	0.738	0.044	16.32	0.000
GTD -> EE -> EP	0.136	0.148	0.030	4.575	0.000
GRC -> EE -> EP	0.124	0.137	0.030	4.209	0.000

Note. GTD: Green Training & Development, GRC: Green reward & Compensation, EE: Employee Engagement, EP: Employee Performance

There is a strong correlation between the amount of green training and development a firm provides and employee performance. The aforementioned evidence makes it clear that GTD has had a significant impact on EP (H^1). Furthermore, it comes to the conclusion that employee performance, receiving fair compensation, and receiving green rewards are strongly correlated. According to the table's results, GRC has a significant impact on EP (H^2). As per hypothesis 3, the findings in the above table demonstrate that GRC performs somewhat better than EE in terms of effect, as evidenced by the mentioned numbers. There is no discernible relationship between employee engagement and green training and development (H^3). Green rewards and incentives are directly tied to employee performance thus confirms hypothesis 4 (H^4). Hypothesis 5 was also confirmed that EE has a major influence on EP. It evaluates the degree of relation between employee performance and engagement (H^5)

8.4 Mediation Analysis

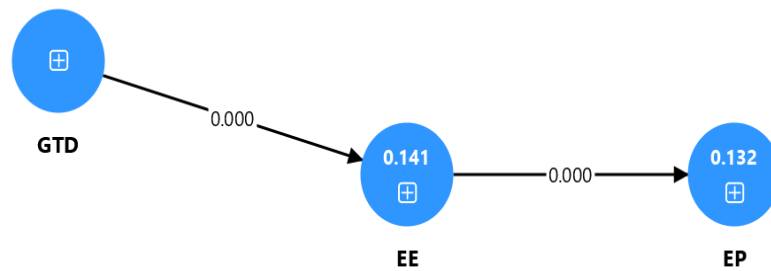


Figure 2

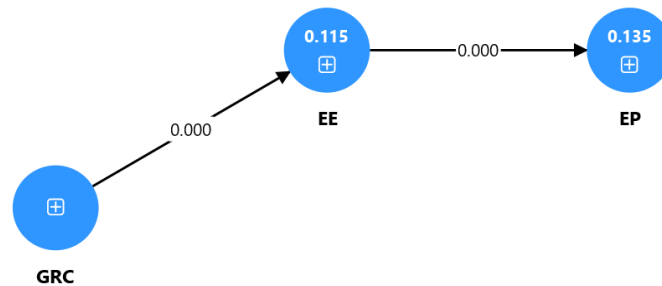


Figure 3

Mediation analysis was performed to assess the mediating role of EE on the linkage between GHRP and EP. The results reveals that the total effect of GHRP on EE was significant ($\beta = 0.126$, $t = 4.575$, $p = 0.000$). The indirect effect of GHRP on EP through EE was found significant ($\beta = 0.124$, $t = 4.206$, $p = 0.000$). This shows that the relationship between GHRM and EP is partially mediated by EE (H^6 , H^7).

9. Discussion

The purpose of the current study was to determine the impact of green human resources on employee performance in Pakistan's technology sector. Employees in the IT industry were chosen as research participants in order to determine the connection between worker engagement and output. The objective of this research's to investigate the direct and indirect effects of Green HR practices on employee performance through employee engagement. The claim that the data in these datasets demonstrates how GHRPs raises worker productivity. A key factor in the relationship between an employee's performance and general HR procedures is employee participation. The results are consistent with previous research. Energy-efficient facilities, remote meetings, and telecommuting are just a few examples of green HR practices in the BPO's call centers employees that may drastically lower the sector's carbon footprint and support long-term sustainability objectives.

Green training and development are positively correlated with employee performance (EP). (GTD) is demonstrated by the findings. First research objective should be match to the analysis results in which green training give employee performance a boosting effect. Accordingly, earlier researchers discover the similar related situation in China's IT industry. Additionally, compared to other emerging nations, the adoption of green HR practices will be distinct discover the similar relationship situation in China's IT industry. Furthermore, compared to other developing nations, this country will adopt green HR practices differently (Sharma et al., 2018). The study's findings show that green training and development has a major influence on staff performance, supporting the theory (Daily et al, 2012). The study suggests that since green actions should support both company and country transformation, companies should ensure that employees are aware of green practices and provide useful training. The green development of the IT sector supports both organization improvement and higher competitiveness globally (Alraja et al, 2022).

The study's second findings should support the original concept. Thus, the findings indicate that employee performance (EP) and green reward & compensation (GRC) are related. Additionally, earlier research produced some pertinent findings. Giving employees incentives can significantly boost an organization's performance (Jabbour et al, 2016). In line with previous research findings, the study demonstrates a strong correlation between green reward & compensation (GRC) and employee performance (EP). The study also found that providing green incentives increases

employee commitment, so it is crucial for businesses to reward sustainability (Masri et al, 2017). Researchers propose that although green involvement offers chances for ecological organization activities, which improves employees' overall performance, green recruiting, training, performance management, and remuneration focus on strengthening employees' green abilities (Rizvi et al, 2021).

Since of this, previous research confirms these findings since GTD has no effect on employee engagement (EP). Consequently, the research may apply GTD to boost employee motivation, which in turn boosts corporate productivity. The results seem to indicate that green training and development is insufficient to boost employee engagement; thus, the objective not aligned to hypothesis because more attention should be paid to education and training. They can assist prepare new eco-friendly employees by allowing current employees to develop a variety of work experiences (Aboramadan, 2022). In addition to following laws and regulations, green HRM promotes employee participation in volunteer green projects. Businesses gain from this strategy by lowering expenses, recruiting and keeping green workers, and enhancing operational efficiency. Additionally, it increases one's advantages in work (Arasli et al, 2020). To improve environmental management and encourage green behavior among employees, organizations must apply Green HRP's activities. Employees that feel their training is inadequate perform worse and are unable to accomplish their goals, which is detrimental to the company. Since green training frequently doesn't address their main responsibilities or objectives, employees frequently feel it is pointless and has little impact on their level of involvement. A person may be too preoccupied with study and project work, leaving little time or energy for being environmentally conscious. Green training's impact on employee dedication can be difficult to quantify, making it difficult to determine its effectiveness or areas for development. If feedback and green training are not provided to employees, they may lose motivation and become less engaged in their work.

According to findings research objective should match with hypothesis that employee engagement is significantly affect with reward and compensation policy which is given by the company. Researchers discovered that green awards increase employee loyalty, which was corroborated by previous research. According to the report, managers have to give extra incentives and bonuses to staff members who adopt green practices (Islam et al, 2021). According to the study, green rewards have a big impact on worker engagement. Dumont et al, (2017) GRC has been shown to have a

favorable impact on employee engagement. Work engagement, green HR practices, and green incentives were revealed to be significantly positively correlated by the study. Green incentives have a good impact on employees (Ari et al, 2020).

One of the key factors that directly affects employee performance is employee engagement. The results indicate that employee work engagement is significantly impacted. Employees' performance in Pakistan is significantly impacted by their level of engagement at work. Research indicates that when employees are responsible and actively involved, the team accomplishes its goals and employees become more productive (Paliga et al, 2022). Tisu , (2020) said that workers who are engaged find their occupations appealing, engaging, and relevant. They also show enthusiasm and joy when their companies support their personal performance, which shows that work engagement has a satisfactory effect on worker performance. The findings of earlier research in this area show that opinions on the relationship between employee participation and performance are divided. Staff engagement has a significant impact on staff production, according to evidence (Rashid et al, 2022). Second, there is no obvious impact of employee participation on performance (Lim et al, 2021). The main objective is to enhance the mediating role which is directly link towards employee performance hence the findings results are match with our objective that employee performance is significantly impacted with employee engagement.

The results show that employee performance (EP) and green training and development are favorably connected through the mediating influence of employee engagement. In order to determine if green training improves employee performance, the first study goal should align with the analysis findings.

The findings indicate a positive relationship between green reward and compensation and employee performance (EP), with employee engagement acting as a mediating factor. The initial research aim should be in line with the analytical results to determine if green compensation give to employee in regard their achieves its enhances employee performance. Accordingly, earlier research identifies a comparable problem in Pakistan's technology industry. Call centers will also adopt green HR practices differently than other businesses.

10. Theoretical Contributions

The most current research advances theory in a number of ways. The study found that GHRP causes employees to perform better. Accordingly, this study supports the previous study's conclusions that GHRP influences employee performance and suggests that similar findings be retested in different contexts in future research (Bednall, 2014).

Second, the AMO hypothesis proposes that employee engagement acts as a mediator between the direct and indirect effects of GHRP on employee performance. This is the first research of its kind to investigate whether an underlying link is mediated by employee engagement (Bowen, 2004). GHRP gives workers a sense of empowerment, which motivates them to put in greater effort at work. The study addresses a significant research gap on certain HR practices and evaluates the impact of GHRP on employee performance by concentrating on employee engagement. The purpose of this study is to examine how employee engagement affects Green HR practices both directly and indirectly through employee performance. Employee engagement is a crucial component in the connection between an employee's performance and standard HR practices. The findings align with earlier studies. Among the green HR practices used by BPO call center personnel include green construction, virtual meetings, and telecommuting. These practices have the potential to significantly reduce the sector's carbon footprint and promote long-term sustainability goals.

HRM has been found to be strongly associated with a number of factors of workers' attitudes and actions at work. In order to assess the outcomes of certain activities, such as the impact of creative behavior, many of these studies used a variety of HRM activities. By examining the function of employee engagement—which had not been previously examined—the current study investigated how GHRP influences employee performance.

In line with the goal of the study, the AMO theory offers insightful information on how GHR practices might enhance academic staff dedication and behavior in the IT industry (Ali et al, 2022). According to the Ability, Motivation, Opportunities (AMO) hypothesis, human resources ought to concentrate on employee abilities, rewards, and chances to improve productivity and corporate social responsibility (Yu et al, 2020). GHRP's and employee performance should be linked in different ways. First, using the lens of GHRP's and employee engagement, our work examines the

mediating function of EE as an underlying mechanism of the theory of attitude. Second, our research supports the idea that EE acts as a mediating factor between EP and GHRPs. The study's theoretical underpinnings, assumptions, research methodology, and findings are covered. We conclude our study by going over the findings, ramifications, restrictions, and potential avenues for further investigation.

11. Practical Implications

For managers, executives, and staff members who deal with IT, the research's conclusions have some real-world applications. Improving the involvement of employees entails recognizing the significance of employee engagement. The present study is being conducted in the context of information technology, where employees use technology to boost engagement and perform better. G-HR procedures are essential for encouraging sustainability and creating a work environment that embraces and incorporates eco-friendly activities, which improves ecological performance and employee happiness (Kalogiannidis et al, 2021). According to the literature, employee engagement and performance are positively correlated with green HR practices. However, these results should be included in future research. G-HR procedures encourage eco-friendly mindsets, which improves corporate ecological performance and employee happiness.

It's critical that the company assigns the worker a variety of jobs. This implies implementing the new methods, strategies, and technologies. Employee technology performance will ultimately increase as a consequence of innovation producing new ideas and insights, like green technology, which improves performance. Since feedback and discussion may have a good effect on employees' reactions, an open communication strategy is advised to boost employee engagement and modify GHRPs.

The company has to help employees take advantage of technological advancements. Training and continuing education should be promoted by sector policies. The staff give them rewards. The performance of employees will also be affected. Lastly, the policies of organization hierarchy remain same at all levels, especially in HR sector. Green HR practices promote sustainability in the workforce. This study synthesizes empirical research to align employee development, engagement, and performance improvement in organizations. It proposes an upward gain spiral

model, incorporating resource caravan and exploring theoretical implications. Future research will evaluate the effectiveness of each construct.

Green practices may boost employee performance and support sustainable growth with the help of this study's useful insights. The significance of incorporating green HRM practices into corporate strategies—like eco-friendly hiring procedures and environmental training initiatives—is emphasized. By implementing GHR principles, which necessitate significant employee empowerment, the study indicates that GHRPs in emerging economies can improve their effectiveness. Employee engagement programs are proven to improve motivation and performance, leading to increased attendance, productivity, and job satisfaction. These initiatives provide possibilities for professional growth, accomplishment recognition, and employee feedback, strengthening the relationship between employees and the company. By designing and implementing programs tailored to employee needs, these programs offer opportunities for employee feedback, professional development, and achievement recognition. Effective engagement programs not only inspire workers but also increase their dedication to the organization's objectives, which eventually helps it succeed in the long run.

12. Limitations and Future Research

The recent study suggested a number of limitations for further investigation. First, a cross-sectional design was employed. In the future, data analysis will require a longitudinal design. Second, the current work examines a uni-dimensional entity. Future studies can make advantage of the evaluation of the many GHRP aspects. Additionally, additional GHR components are used in the study to connect the association in subsequent research. The study recommends that future research take into account perceived organizational support for sustainability, green employee engagement, the moderating role of leadership style, and the green HR practices recommended in the literature on employee performance (Li et al, 2023). The study highlights social responsibility for future research because there aren't many studies on the subject, and it finds ways to improve employee performance in the health industry through green innovation and risk management techniques.

Future studies might concentrate on the three topics listed below: First, investigate in a group context the relationship between job performance and work engagement. Second, longitudinal

research can confirm the causal link between an increase in employee performance and the growth of psychological capital. Finally, the influence process theoretical model may be examined using qualitative research. Future research should examine how the GHRP operates and what it does in developed and developing nations, how green citizens behave, and how for-profit and non-profit organizations operate. This literature review examines the impact of Green Human Resource Management (G-HRM) practices on employee green attitudes, satisfaction, behavior, and organizational green performance, aiming to guide leaders in adopting strategies that align with unique organizational challenges and opportunities (Majid et al, 2023).

Employee involvement was examined as a mediator in the study's analysis of the connection between performance and Green Employee engagement. To find out more about the underlying mechanisms, future studies might look at other mechanisms like employee motivation, innovation, or green organizational culture (Islam et al, 2021).

13. Conclusion

The results of this study demonstrated that GHRP improves employee performance. Regarding the connection between GHRPs and worker performance. GHRM is a crucial management practice that aids organizations in reducing their carbon footprints and promoting business sustainability. According to the study, engagement serves as a mediator between GHRPs and improved employee performance. By emphasizing environmentally friendly initiatives, offering training, and rewarding green behavior, green HR practices may increase employee engagement, contentment, and devotion while also promoting a green culture inside the company. The paper proposes that green HR approaches, such green training, may encourage employee green behavior and company social obligations by using the ability motivation opportunity theory. This research could help organizations improve employee performance and contribute positively to the community. The environment and businesses both gain from green HR practices, which strike a balance between profit and the environment. They increase worker involvement and provide benefits for long-term sustainability. These practices are globally relevant and can create positive outcomes, paving the way for future research.

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