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### **Research Article**



# Linking Employee Ecological Behavior to Environmental Performance: The Mediating Role of Environmental Responsibility and the Moderating Role of Environmental Concern

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#### **Declaration of interests**

The authors confirm the absence of any financial or personal conflicts of interest.

#### **Abstract**

This study investigates how employees' ecological behavior influences environmental performance, focusing on the mediating role of responsibility and the moderating environmental environmental concern. Data were collected from 339 employees working in hotel chains situated in the tourism regions of Pakistan. Empirical analysis using structural equation modeling techniques, indicate that employees who engage in ecological behaviors significantly contribute to higher levels of environmental responsibility. In turn, this sense of responsibility leads to improved environmental performance. Furthermore, the study finds that when employees exhibit a strong concern for environmental issues, the positive impact of ecological behavior on environmental performance is further amplified. These findings have practical, theoretical, and policy-level implications. Theoretically, the research extends the understanding of environmental citizenship behavior by establishing the mechanism through which ecological behavior affects organizational environmental outcomes. Practically, it highlights the importance of fostering ecological values and a sense of responsibility among employees to achieve better environmental performance. At the policy level, the study offers guidance for developing environmentally responsible workplace practices and frameworks that promote environmental awareness and accountability across organizational settings.

**Keywords:** Employee ecological behavior; environmental responsibility; environmental concern; Environmental performance; Pakistan.

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#### 1 INTRODUCTION

Every organization wants to improve its environmental performance (EP) by improving employee ecological behaviour (EEB) and making its employees more responsible. To gain a competitive advantage, organizations are continuously implementing effective environmental protection practices through efficient waste and contamination handling (Al-Sabi et al., 2024; Tariq et al., 2020). EEB refers to the engagement of employees in atmosphere-friendly actions and activities to protect the atmosphere. In developing countries, a small number of organizations pay attention to EEB, especially in the hospitality sector, which plays a crucial role in the overall business industry. Therefore, the hospitality industry is making more efforts regarding the green natural environment, such as consumption of water and industry, reduction of waste, and awareness of people about the green environment (Paillé & Meija-Morelos, 2019). In greening any industry, the contribution of employees is considered the main source for ensuring exceptional EP and promoting environmental performance (Zaman et al., 2025).

Primarily, medium- and small-sized hotels face more environmental problems, including water, waste, and energy-consuming management. Despite this, developing an aptitude for environmental awareness and the use of durable articles are also central concerns in reducing complications. The non-serious behaviour and lack of contribution of employees to greening efforts have been the main complications in achieving EP (Aftab & Veneziani, 2024; Jiang et al., 2025). In the job descriptions of employees, EEP and its contributing factors are not demanded but undertaken voluntarily to protect the atmosphere from spoiling due to unsuitable business activities. Consequently, the workforce's accountability towards voluntary actions that enhance environmental well-being plays a dynamic role in overall business environmental performance (Bigiotti et al., 2024).

Although previous researchers have conducted a study on the impact of EEB, no one has observed the effect of EEP on EP in the presence of a mediating variable, which is environmental responsibility, and questions about contributing factors to securing the natural environment still need to be answered (Chan et al., 2017). As a result, the researcher wanted to conduct in-depth investigations regarding EEB and overall EP in the presence of ER in the hospitality industry. The excellence of business EP is highly influenced by the positive attitude of the workforce towards a green environment and productivity strategies to reduce atmospheric issues (Fu et al., 2024). The ability of organizations to offer healthy living circumstances for citizens is an essential feature in the era of increasing greenhouse gas emissions (Fu et al., 2024; Siddiqi et al., 2025).

Consequently, this research study provides useful consideration concerning EP-donating factors and fills the gap of previous studies by clarifying the effect of EEB on EP, including the moderating role of environmental concern and the mediating role of environmental responsibility (Zhou et al., 2024). The given study has the following objectives: The primary goal of the study is to investigate the impact of employee ecological behavior on environmental performance in the hospitality industry. The second goal of this study was to analyze the mediating role of environmental responsibility in the correlation between EEB and EP. The third objective of this study is to examine the moderating impact of environmental concern on the correlation between EEB and EP (Jiang et al., 2025).

This study is substantial for the hospitality and tourism sector, as it provides useful strategies to defend the environment and reduce harmful business operations. This study is useful for workforces who are unaware of the green atmosphere and its benefits. Researchers have focused on enhancing and supporting worker involvement in the cleaning environment. The scope of the study was also extended because of the moderating effect of EC and the mediating role of ER on EP (Bekar et al., 2025). The research article also addresses environmental problems, such as the utilization of natural resources, and provides management recommendations to decrease the impact of natural disasters.

The significance of this study lies in its timely contribution to the growing discourse on organizational sustainability by focusing on the behavioural dimensions of environmental performance. In an era of escalating climate concerns, regulatory pressures, and increasing societal expectations, organizations are under constant scrutiny to adopt environmentally responsible practices. Yet, much of the existing literature emphasizes structural or technological solutions, often overlooking the vital role that employees' individual behaviours play in influencing environmental outcomes. By investigating how ecological behaviour among employees impacts environmental performance—particularly through the lens of responsibility and concern—this study brings to light the human-centric mechanisms that drive sustainability from within. Ultimately, this research not only fills an empirical gap but also encourages a shift from top-down mandates to fostering a culture of shared environmental stewardship within organizations.

This paper begins by introducing the research problem, objectives, and theoretical foundation related to employee ecological behaviour and environmental performance. It then presents a comprehensive literature review and

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hypothesis development based on relevant theories. The methodology section outlines the research design, data collection, and analysis techniques, followed by a detailed presentation of results. The paper concludes with a discussion of findings, implications, limitations, and future research directions.

#### 2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

#### 2.1 Organizational citizenship behaviour toward the environment

Organizational citizenship behaviour toward the environment OCBE is defined as discretionary and individual social attitudes that are not clearly acknowledged by the conventional reward mechanism and that entirely contribute to an extra-productive environmental regulation by hospitality firms (Zhao & Zhou, 2021), which is connected with, but definite from, OCB (Amir et al., 2025; Pham et al., 2019). It differentiates OCBE from other similar constructs or items, such as routine sustainability or environmental attitude, worker green attitude, and OCB. OCBE primarily occurs in the workplace. Second, OCBE is an elective and energetic attitude initiated by the workers. Third, the main goal of OCBE is to contribute to environmental performance and sustainability and incidentally benefit mainly from the sustainability and environmental performance of the firm. The theory offers an effective theoretical foundation for forecasting how management affects employees' eco-friendly attitudes and influences a firm's EP (Najam, 2025). This theory explains workers' willingness to work behaviours as well as actions that are far away from their job explanation and help the environment of the firm (Chan et al., 2014; Noor Faezah et al., 2024). Consistently, this theory promotes eco-friendly values and evokes eco-friendly attitudes among employees of the industry that lead the sector towards the attainment of its EP objectives. Remarkably, green or eco-friendly duties enable workers to forecast the significance of environmental regulation and evoke pro-environmental attitudes, which further drives them about the atmosphere (Manuel et al., 2024).

### 2.2 Employee ecological behaviour and environmental responsibility

Chan et al. (2014) explain EEB as the contribution of workforces in environment-friendly engagements to safeguard the atmosphere. Every worker is responsible for effectively contributing to environmental enhancement. The literature emphasizes greening programs concerning EEBs that directly impact employees' responsibility regarding the environment. Employees lacking involvement in the green environment can result in a negative outcome, which consequently decreases overall employee ER (Noor Faezah et al., 2024). Different environmental measures consist of direct and indirect procedures, direct are scalable effects of business services on the surroundings, and indirect measures comprise the implementation of a firm's policies and strategies for achieving healthy surrounding objectives as well as enhancing moral reasoning. Tariq et al. (2020) conducted a study on tourism which concludes that tourists have a strong environmentally friendly attitude by avoiding disposable objects have a preference for consuming environment-friendly utensils. The devotion of employees to address environmental challenges develops a better EEB, which also helps improve efficient ER (Sahar et al., 2025). Additionally, the OCBE theory supports the relationship between EEB and ER, also helps employees to showcase ecological attitudes, and ultimately boosts the ER of employees. As a result, the following hypothesis was developed:

H1: Employees' ecological behaviour positively affects their environmental responsibility.

## 2.3 environmental responsibility and environmental performance

Many ecological researchers consider ER an individual duty, as it is a moral dispute. In developed countries, employees are highly responsible for social and environmental well-being; if they do not satisfy their atmospheric duties, they may feel guilt. Thus, employee ER is strongly linked to EEP; as a result, the industry's environmental performance is also enriched. Noor Faezah et al. (2024) explain that the influence of ER on EP is from central environmental administration as well as the compulsion of external stakeholders (Dilla et al., 2019). This is because ER is the personification of the combination of ecological protection into the strategic management of the firm; it is also a representation of the requirement for green services by stakeholders (Huynh, 2020). Motivated environmental plans and administrations should be combined with environmental innovation to make environmental ecological efforts a practical activity (Jabeen et al., 2025). Furthermore, OCBE theory encourages effective performance at a place of work that helps teams to be more responsible and ultimately boosts the environmental output of a company. Thus, in light of the above arguments, this study proposes that:

H2: Environmental responsibility positively affects environmental performance.

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### 2.4 Employee ecological behaviour and environmental performance

EEB concerns employees' attitude towards the improvement of a green atmosphere, which is essential for overall business performance. Previous research highlights employees' attitudes towards a protective environment, indicating a positive relationship between EEB and EP. Tariq et al. (2020) shows that inadequate employee behavior is the main cause of environmental disputes which can only be solved by bringing deviations in workforce behavior. Umrani et al. (2020) identified some important measures that could help improve the green atmosphere. Numerous dealings, such as switching off the lights when leaving rooms or offices, avoiding disposables, preferring reusable utensils, assisting the workforce in greenery actions, and taking strict actions to secure the natural environment, are effective guidelines that promote the EP of an enterprise (Sahar et al., 2025). These guidelines are key elements of the EEB that impact business environmental performance. Naz et al. (2021) organizations, where employees efficiently utilize resources, avoid waste, and prefer recycling, are more productive towards the EP of the business (Noor Faezah et al., 2024). Many administrations are taking crucial steps to improve employees' ecological behavior. Consequently, the EP of an organization is also upgraded using regulatory measures. Furthermore, this relationship between EEB and EP is supported by the theory of OCBE, which explains that for effective EP, employees' serious attitude towards green practices is necessary. Based on the above arguments, we propose the following hypothesis:

H3: Employees' ecological behaviour positively affects their environmental performance.

## 2.5 The mediating role of environmental responsibility

Green practices in organizations enable the workforce to learn about atmospheric safety skills and atmospheric management systems and help them pay more attention to eco-friendly issues. Tariq et al. (2020) indicated that awareness programs related to green actions and atmosphere responsibilities facilitate the workforce to understand the value of EP. Therefore, the ER directly impacted the overall EEB and EP (da Silva et al., 2025; Siddiqi et al., 2025). Many organizations feel gratified to implement green safety actions and to make employees more responsible. Hence, the interdependence of EEB on EP is strong in the existence of environmental responsibility. Cukor and McGinn (2006) found that green responsibility and management are more likely to lead to increasing EEB (Large & Thomsen, 2011), explaining that ER and dynamism or regulation capability are directly linked to ecological behaviour, which further affects the overall EP of the firm or hotel. Therefore, ER is a significant driver of EP and EEB (Nguyen et al., 2024). The relationship between EEB and EP, along with the mediating role of ER, supports OCBE theory. Moreover, OCBE theory provokes effective performance at a place of work that helps teams to be more responsible and ultimately boosts the atmospheric output of a company. Therefore, in the light of the above discussion, the given study proposes that.

H4: Environmental responsibility positively mediates the relationship between EEB and EP.

#### 2.6 The moderating impact of environmental concern on the nexus between EEB and ER

Environmental concerns have been initiated, including environmental standards, environmentally friendly steps, and eco-friendly activities. In the theoretical literature, EC is considered an employee's attentiveness and knowledge concerning the unwanted and harmful results of a practice that is not atmosphere friendly. Thus, the impact of EC moderate the relationship btw EEB and ER. (Al-dweeri et al., 2017; Nazir et al., 2024), of the production industry described that healthy practices encourage green or ecological behaviours between employees which highly compels them answerable or liable for the secure environment as well as increases pro-environmental attitudes and behaviors at the job and in personal life (Huynh, 2020; Shaukat et al., 2023). It is more apparent from the past literature data that designations in a workplace are structured in a way that encourages workers to understand major environmental concerns and to offer effective coaching to educate them regarding ecological regulation, which will enhance their dealings towards efficient environmental responses and attitudes (Tam & Chan, 2017). Furthermore, interdependence between EEB and ER, along with the moderating effect of EC, is also supported by the theory of OECB, since OECB increases extra-role job attitudes between employees, which makes them sparer towards ecological job attitudes and finally makes them worried about the surroundings and their environment that accidentally invoke their EC(Hong & Jeon, 2025; Kherazi et al., 2024). Thus, we propose the following hypotheses:

H6: Environmental concerns significantly moderate the association between EEB and ER

### 2.7 The moderating role of environmental concern in the relationship between EEB & EP

Environmental concern is erected, which is multi-level and comprises environmental values, environmentally friendly steps, and eco-friendly behaviours. In academic literature, EC is considered an employee's awareness and

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knowledge concerning undesirable and harmful results of a practice that is not environmentally friendly and extremely valued by the employee. Similarly, (Tariq et al., 2020) demonstrated that green initiatives enable firms to advance ecological behaviors by involving workers in green practices that directly influence EP. It is also evident from the literature that several green or ecological steps have a direct impact on the EEB level, which further affects the EP of the firm (Shaukat et al., 2023; Tam & Chan, 2017). Likewise, this interdependence between EEB and EP is also supported by the theory of OECB, since OECB increases extra-role job attitudes between employees, which makes them sparer towards ecological job attitudes and finally makes them worried about the surroundings and their environment that accidentally invoke their EC. In light of the academic arguments discussed above, the researcher believes that EC improves EEB among employees, which further encourages them to fight for enhanced EP in the firm. Therefore, the researcher believes that the moderating variable EC plays a stronger role in improving the interconnection between EEB and EP (Amir et al., 2025). Thus, we formulated the following hypothesis.

H5: Environmental concerns significantly moderate the association between EEB and EP.

#### 2.8 Research Framework

The following Figure 1 shows the hypothetical model of the study.

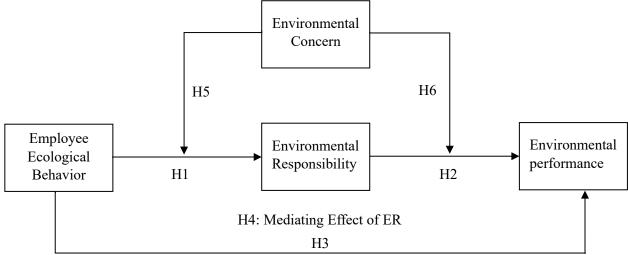


Figure 1. Research Framework

Source(s): Authors' Own Work.

### 3 METHODOLOGY

The methodology section explains the approach and philosophy of research, research design, methods used to obtain results, population sample, and method of data collection for the measurement of variables. A cross-sectional strategy was used to analyse the hypothesized model. A representative sample was identified from medium and small hotels and the tourism industry, in which a list of 60 hotels was selected to obtain records for analysis. Of the 60 hotel chains, 45 were local and 15 were international. Sample data were gathered from 339 workers, including waiters, front receptionists, event planners, and employees. Sampling is a procedure in which researchers interpret population-based outcomes from a sample portion of the population. Tariq et al. (2020) explains that previous researchers mostly followed both non-probability and probability for gathering observation from the sample. The features of the sample population were unfamiliar; therefore, the method chosen for this study was not feasible. Consequently, the records gathered from Pakistan will not limit the use of this research. The hotel and tourism sectors were chosen because, in the service sector, it is the most imperative sector of the service segment, which plays a crucial part in country profit generation and provides opportunities for employment and business advancement. In this study, the hotel industry was selected for data collection. Hotels with less than 200 employees and a minimum of 100 rooms were considered medium and small hotels.

A professional cover letter was written in which the scope, purpose, and implications were designated and sent to the administration and controlling department with an appeal and influence request to employees at different designations, such as frontline management, middle line management, and a few departments to contribute to the survey. These workers have different backgrounds, cultures, genders, and characteristics. It is assured to the hotel management that the data and information gathered from the workforce will remain confidential and apply only to this research. Data

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collected from the respondents were analysed using SPSS and AMOS by applying CFA to confirm data reliability and validity, whereas SEM was performed to test the study hypothesis.

### 3.1 Questionnaire design and measurement

The data provides information about how employees' environmental behaviour is implemented owing to atmospheric responsibility and attitudes towards green safety actions. A comprehensive five-point Likert scale (strongly disagree = 1, strongly disagree = 2) was used to compute the responses. The EEB variable was tested using a five-item (1-5) scale. These figures have been modified with the help of (study) work. The alpha value of the responses is (0.884). The variable environmental responsibility was calculated with the help of five scale items ranging from 5 = strongly agree to 1 = strongly disagree. These ER items were measured using the method described by (DesJardins, 1998). A total of 0.927 alpha values were generated through ER responses. A five-point Likert scale was used to estimate environmental concern items from (Weigel & Weigel, 1978). The EC item had a value of (0.740). By using a 5-item scale of Likert, the EP variable was measured on a five-point Likert scale. The procedures used to calculate the values were those of (Hsu & Zomer, 2014). Overall, 0.876 alpha values were produced from the EP items.

#### 4 RESULTS AND ANALYSIS

#### 4.1 Demographics

The study sample consisted of 339 respondents, Table 1 present the profile, of whom 54.6% were male and 45.4% were female. This gender distribution reflects the greater proportion of male employees working in hotels located in tourism areas of Pakistan. In terms of age, 43.1% of the participants were 26 years old or younger. Regarding work experience, the majority of respondents (48.4%) had between 2 to 4 years of professional experience. All data were collected from employees and administrative staff in the hospitality sector to assess their ecological behaviour and its influence on the environmental performance of their respective hotels.

Table 1. Profile

		Frequency	Percent
Gender	Male	185	54.6
	Female	154	45.4
	Total	339	100.0
Age	Less Than 25 Year	112	33.0
_	25 to 35 Years	146	43.1
	35 to 45 Years	66	19.5
	More Than 45 Years	15	4.4
	Total	339	100.0
Experience	Less than 2 Year	60	17.7
-	2 to 4 Year	164	48.4
	5 to 7 Year	86	25.4
	More than 7 Year	29	8.6
	Total	339	100.0
Education	Bachelor	37	10.9
	Master	149	44.0
	Associate degree	40	11.8
	Other	113	33.3
	Total	339	100.0

Source(s): Authors' Own Work.

### 4.2 Evaluation of measurement model

Table 2 provides an outline of the reliability statistics of all the composites as well as their measures. These also include the merits of factor loadings of all indicators, average variance extracted (AVE), composite reliability, and Cronbach's alpha, as suggested by (Xie & Hayase, 2007). Furthermore, indicator dependability is also computed largely by considering square measure loadings as recommended by (Gill et al., 2021). It is clear that all indicators and composites are above the lowest admissible values. From the table, it is clear that all factor loadings are higher than the lowest required merit of 0.70, and the measure's reliability merits are higher than 0.4, which is the lowest threshold value. Likewise, CR is higher than the lowest admissible value of 0.6, and the Cronbach's alpha of every composite is



higher than 0.7, which is admissible. Moreover, AVE represents the convergent validity (CV) of dormant variation, which requires being higher than 0.5, which is the lowest admissible range (Kim et al., 2019).

**Table 2:** Composite reliability and convergent validity

Constructs	Items	Loading	CR	AVE	MSV	Cronbach's Alpha
Environmental	EC1	.720	0.742	0.500	0.349	0.740
Concern	EC2	.482*				
	EC3	.690				
	EC4	.684				
Employees	EEB1	.638	0.887	0.533	0.349	0.884
Ecological	EEB2	.526*				
Behavior	EEB3	.736				
	EEB4	.747				
	EEB5	.787				
	EEB6	.804				
	EEB7	.824				
Environmental	ER1	.840	0.927	0.647	0.210	0.927
Responsibility	ER2	.692				
	ER3	.805				
	ER4	.807				
	ER5	.786				
	ER6	.804				
	ER7	.884				
Environmental	EP1	.871	0.877	0.641	0.260	0.876
Performance	EP2	.806				
	EP3	.740				
	EP4	.780				

**Note.** Items EC2 and EEB2 were excluded from further analysis due to low outer loadings (< 0.60), which could affect the convergent validity of the constructs. All constructs demonstrated acceptable composite reliability (CR > 0.70), average variance extracted (AVE > 0.50), and Cronbach's alpha (> 0.70), indicating good internal consistency and convergent validity.  $EC = Environmental \ Concern; \ EEB = Employees' Ecological Behavior; ER = Environmental \ Responsibility; EP = Environmental Performance; <math>CR = Composite \ Reliability; \ AVE = Average \ Variance \ Extracted; \ MSV = Maximum \ Shared \ Variance. \ Source(s): Authors' Own Work$ 

#### 4.3 Descriptive Statistics

Discriminant validity or DV is computed by considering the common factor of AVE merits for every synthesized individually and then contrasting the linked values with another dormant varying. All AVE (square root) values in the above table were higher than the comparison associations. The statistical outcomes below confirm the favourable connection between the research variables. The results also confirmed that EEB was directly linked to EP and ER.

Table 3: Mean and discriminant validity.

Constructs	Mean	SD	ER	EC	EEB	EP
ER	3.256	0.912	0.804			
EC	3.120	0.968	0.407**	0.651		
EEB	3.086	0.943	0.322**	0.591**	0.730	
EP	3.280	0.919	0.458**	0.510**	0.349**	0.801

**Note.** Diagonal values (in bold) represent the square root of Average Variance Extracted (AVE), confirming discriminant validity when greater than the inter-construct correlations. All correlations are significant at the p < 0.01 level (\*\*). ER = Environmental Responsibility; EC = Environmental Concern; EEB = Employees' Ecological Behavior; EP = Environmental Performance; SD = Standard Deviation. **Source(s):** Authors' Own Work.

#### 4.4 Confirmatory factor analysis (CFA)

The CFA method was implemented using AMOS software to evaluate the model fitness level. To confirm the fitness and strength of the models, we employed different techniques with different arrangements. The outcomes of the CFA analysis indicated that the study model was a good fit because all the indicators were within the threshold range, that is, GFI = 0.90, RMSEA = 0.068, and CFI = 0.933.

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Table 4.	Confirmatory	Factors	Analysis
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CFA Indicators	CMIN/DF	GFI	IFI	CFI	RMSEA
Threshold Value	≤ 3	$\geq 0.90$	$\geq 0.90$	$\geq 0.90$	≤ 0.08
Without Modification	4.096	0.830	0.863	0.862	0.096
With Modification	2.537	0.907	0.933	0.933	0.068

**Note.**  $CFA = Confirmatory\ Factor\ Analysis;\ CMIN/DF = Chi-square/degrees\ of\ freedom;\ GFI = Goodness-of-Fit\ Index;$ IFI = Incremental Fit Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation. Source(s): Authors' Own Work.

#### 4.5 **Hypotheses testing**

SEM was used to examine the study hypotheses, and the outcomes of the path evaluation are presented in Table 5. The outcomes presented in Table 5 indicate that EEB has a direct and positive impact on ER ( $\beta = 0.28$ , t = 5.51, p < .00), which supports Hypothesis 1. Likewise, it is evident from the outcomes that ER is directly linked to EP ( $\beta$  = 0.34, t = 6.72, p < .00), supporting hypothesis 2. EEB has a 22.1 percent significant impact on EP, which proves H3.

**Table 5: Structural Equation Modeling** 

Hypothesis	Hypothesis	Beta	S.E	C.R.	P value	Supported
H1	$EEB \rightarrow ER$	.287	.062	5.517	.000	Yes
H2	$ER \rightarrow EP$	.340	.051	6.724	.000	Yes
Н3	$EEB \rightarrow EP$	.221	.060	4.369	.000	Yes
H4	$EEB \rightarrow ER \rightarrow EP$	.098	.022	-	.010	Yes
H5	$EEB \times EC \rightarrow ER$	.107	.045	2.117	.034	Yes
Н6	$ER \times EC \rightarrow EP$	.118	.051	2.367	.018	Yes

*Note.* EEB = Employees' Ecological Behavior; <math>ER = Environmental Responsibility; EP = Environmental Performance;EC = Environmental Concern; S.E = Standard Error; C.R. = Critical Ratio. Source(s): Authors' Own Work.

Moreover, EEB had a significant indirect effect on EP through ER ( $\beta = 0.098$ , p < .010). To examine the moderating effect of the EC AMOS moderation method, Table 5 provides the coefficient of the correlation term, which is EEB  $\times$  EC, which indicates that EC directly influences the correlation between EEB and EP ( $\beta = 0.107$ , t = 2.117, p < .034), and the EC influence between ER and EP was also significant ( $\beta$  = 0.118, t = 2.367, p < .018. (See figure 2 and 3 for the graphical presentation of the moderating impact). Figure 2 presents the high and low moderation of EC between EEB and ER, which demonstrates that EC has a positive influence.

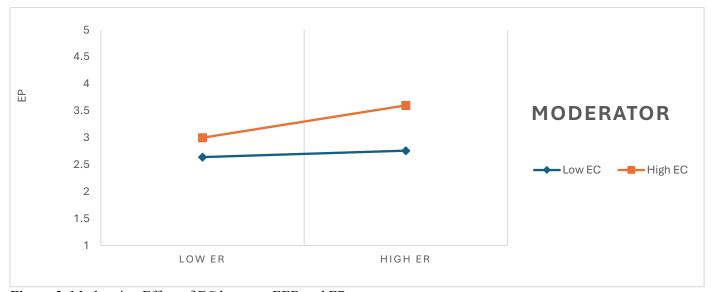
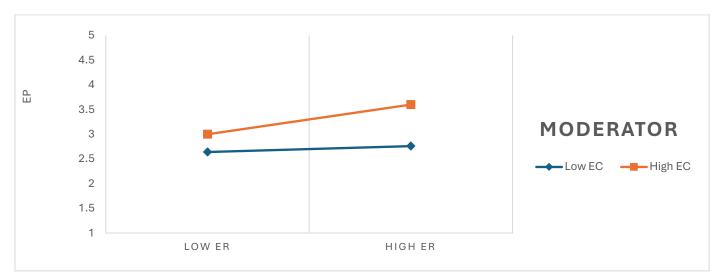


Figure 2. Moderating Effect of EC between EEB and ER **Source(s):** Authors' Own Work.

Figure 3 demonstrates that EC has a positive moderating effect between ER and EP when respondents are more concerned about the environment, leading to positive environmental performance outcomes.

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**Figure 3.** Moderating Effect of EC between ER and EP **Source(s):** Authors' Own Work.

#### 5 DISCUSSION AND CONCLUSION

#### 5.1 Discussion

To the best of the researcher's knowledge, this investigation is one of the preliminary attempts to analyze the connection between an employee's ecological attitude and the EP of a business by advising ecological practices as a modern approach for enhancing the environmental outputs in the hotel and tourism industry. The research also extends the scope and importance of prior studies on EEB and EP by adding the effect of OCBE theory in the motor industry under the theoretical framework. Second, the current research contributes to the study on whether ER moderates the connection between EEB and EP. Thirdly, this exploration pays to the study of whether EC mediates the correlation between EEB and EP. Moreover, the research also describes how EC and responsibility affect overall company green performance in a sequential manner. Fourth, the study's findings strengthen the dispute that the green performance model sector can be increased by influencing employees' attitudes, actions, and practices. In addition, previous research has shown that employees' deep apprehension and interest in environmental issues, and how effectively dealing with these problems results in a high and positive ecological responsible attitude, which further facilitates firms to attain EP.

Paillé and Meija-Morelos (2019) revealed that EEB motivates and encourages employees to participate in healthy and environmentally friendly programs and practices to enrich the atmosphere of the motel industry. As per our expectations, this conclusion confirms that EEB positively affects EP in the hospitality sector. (Amrutha & Geetha, 2021) show that EEB is an important and valuable factor that helps to activate ecological duties and responsibilities among employees, which in turn impulsively strengthens ER (Wijethilake & Lama, 2019; Zhu & Sarkis, 2007). In other words, green practices among employees that help solve environmental issues such as pollution, wastage of water, consumption of extra energy, etc., raise atmospheric errands. In this way, employees put extra effort into improving the overall healthy EP (Chan et al., 2014; Noor Faezah et al., 2024). It is more obvious from the literature that descriptions in an office structured in a way that inspires employees to understand major environmental distress and to provide effective coaching to educate those regarding ecological regulation buildings will enhance their dealings and encourage participation in inefficient environmental attitudes (Steblianskaia et al., 2023; Tariq et al., 2020).

#### 5.2 Conclusion

The current research investigates the interrelation between EEB and EP in Pakistan's tourism and hospitality industries. In addition, the mediating role of ER between EEB and EP was examined. The moderating impact of EC on the nexus between EEA and EP was also investigated. The overall data were gathered from 339 employees of 60 medium and small lodges functioning entirely in Pakistan's tourist places. CFA and SEM were used to evaluate the data using SPSS and AMOS, respectively. The results indicated that EEB had a direct impact on EP. Moreover, these findings confirm that EEA and EP are significantly mediated. Furthermore, the results confirmed that the EC strengthened the correlation between the EEA and EP. The outcomes suggest that medium- and small-sized lodges and hotels must pay extra attention to workers concerning their ecological behavior, which completely ensures the protection of natural surroundings.

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### 5.3 Implications

### 5.3.1 Theoretical implications

The results of this study substantially contribute to the present knowledge regarding EEB and environmental regulation in several ways. Primarily, based on the philosophy of OCBE, the results of contemporary studies reveal a strong interrelation between EEB and EP. Thus, the contemporary analysis contributes to enlightening the practice of OCBE and recommends that the EP of business firms, hotels, and guesthouses can be enhanced and increased, mainly by highlighting the concepts of green steps. Second, even though the EC is mainly regarded as an essential part of the proecological attitude, but to the best of information, zero determinations have been organized in order to identify the mediating role of ER in the association between EP and EEB (Shaukat et al., 2023). Hence, this study contributes by relating EEB and EP entirely through the mediation of ER in the tourism and hospitality sector.

### 5.3.2 Policy implications

Our research findings revealed the importance of ECs and how significant they are in improving hotel and firm EP, so this research provides useful guidelines for policymakers to effectively set regulations and policies regarding the hospitality sector. Moreover, the study also contributes to developing policies regarding EP by offering a thorough overview of the impact of ECs and ER in encouraging effective hotel EP. Specifically, concerning tourism and hospitality literature, (Gilal et al., 2019) stimulated some policy advancements in employee management to improve the outlook of the tourism industry as a significant job environment and facilitate the enhancement of working conditions.

#### 5.3.3 Practical implications

Useful regulatory implications can be derived from current research findings. Initially, the given research recommends that to fight against some serious environmental problems, the hotels and tourism firms should exercise and encourage ecological attitudes across their functional area or line. This will possibly offer an incentive for a sense of honor to workers in considering how their firm and hotel play an important role in guarding the environment. Thus, hotels and firms are motivated to exercise ecological behavior if they want to attain their environmental goals.

### 5.4 Limitations and recommendations

Despite its important contributions, this study has certain major limitations. According to (Chan et al., 2017), administration exercises vary across firms, nations, and industries. Observing the current research in light of this discussion, it may be possible to conclude that ecological steps and behaviors will also vary across firms, nations, and industries, as well as developed and developing economies (Shaukat & Ali, 2023). Subsequently, the results of the given research constitute limited generalization, as it concentrates on one specific sector, such as the hospitality sector, in a single terrestrial area such as Pakistan. Therefore, future studies should focus on validating the results of this research across industries and cultural environments. Moreover, the current study employed ER as a mediator between EEB and EP; therefore, if another mediator is used in the given model, the association may become more significant and robust.

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