



# Investigating Employee Green Behavior through Perceived Organizational Support for the Environment in the Hotel Industry: A Moderated-Mediation Analysis

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## Research Article

### Abstract

**Purpose** - This study investigates the role of perceived organizational support for the environment (POS-E) on employee green behavior (EGB). It also examines the mediating role of employee environmental commitment (EEC) and green work climate (GWC), as well as the moderating role of employee green awareness.

**Method** - Data were collected from 247 hotel employees located at Cox's Bazar, Bangladesh applying convenient sampling. Data were analyzed using the structural equation modeling (SEM) technique and SPSS.

**Results** - Findings reveal that POS-E positively influences EGB while EEC and GWC fully mediate the association between POS-E and EGB. Findings also show that POS-E on EEC and GWC is more significant when employees have greater ecological awareness.

**Implications** - The findings imply that the hospitality firms' ecological POS can improve employee green behavior. Employees' ecological awareness also plays an important role in such behavior.

**Originality** - The study contributes to the existing literature in the context of the hospitality industry by filling up the gap in exploring the mechanism through which POS influences employee behavior.

**Keywords:** Perceived organizational support, Environmental commitment, Green awareness, Green behavior.

## 1. Introduction

Employee green behavior (EGB) is an essential aspect that facilitates the implementation of sustainable strategic decisions and the environmental sustainability of an organization (Zhang & Liu, 2016). EGB is mainly important for environmental sustainability because of two reasons. First, employees are the key drivers in implementing organizational policies and rules in practice, to stimulate pro-environmental behavior at the workplace through developing green ideas and practices, demonstrating environmentally sustainable initiatives and intentions. Second, ultimately EGB emerges at the organizational level that promotes organizational sustainable performance (Felin et al., 2015). Pro-environmental behavior of employees substantially influences the effective management of the environment. This is due to EGB promoting the aggregate environmental performance of an organization (Lo et al., 2013). However,

previous studies have stated that perceived organizational support for the environment (POS-E) determines the success of employees' green initiatives, efforts, participation, actions, and contributions (Ramus & Steger, 2000). Thus, in order to inspire green behavior among employees, it is essential to understand that EGB is determined by POS-E.

Environmental POS stimulates green concern, values, and provokes pro-environmental behavior among employees that ultimately lead the organization to attain environmental management goals. It is the organization that through nurturing awareness, fostering commitment towards environmental protection, and a green work climate can enable individuals to understand the significance of environmental performance and stimulate green behaviors among employees. Moreover, organizations can render various pro-environmental supports to generate work attitudes and behaviors that influence employees to demonstrate sustainable practice. Besides, POS-E helps employees to give creative suggestions concerning an organization's operation in a green fashion (Lynch et al., 1999), while a lack of pro-environmental POS influences employees to behave in such ways which are detrimental to the organizations (Gibney et al., 2009). Such behaviors make employees responsible to implement corporate green initiatives and to contribute to the corporate environmental goals. All these indicate the importance of POS to foster employee green behavior in an organization. Despite the importance of POS for the environment to produce EGB, only a handful of studies have been conducted exploring the role of POS for the environment and employees' pro-environmental behavior. Furthermore, previous studies have hardly addressed EGB as an outcome of POS. Eventually, a lack of scholarly focus is pronounced on how POS for the environment could stimulate environmental commitment and green work climate (GWC) to enable employees to demonstrate pro-environmental behavior for better environmental protection. This research mainly contributes by providing a deeper understanding of how environmental POS promotes employee green behavior of hospitality organizations through environmental commitment and GWC. The study also contributes to the literature by exploring the moderating role of environmental awareness on the relationship between POS for the environment (POS-E) and environmental commitment, and GWC—that is, whether green awareness (e.g., low vs. high) can increase and/or decrease the role of POS-E on green behavior of employees.

Particularly, in the context of the hospitality industry, Bhatnagar and Aggarwal (2020) have suggested conducting further studies on POS-E and employee green behavior links in diverse contexts. Accordingly, other researchers (e.g., Cabral & Locahn Dhar, 2019; Rezapouraghdam et al., 2018; Umrani et al., 2020) asserted that it is essential to exploit the opportunity (due to the dearth of studies) by investigating the influence of environmental commitment and green work climate for the sustainability of hospitality industry. Similarly, recent researches also demonstrate an increasing tendency towards further studies in the hospitality sector to study pro-environmental behavior including different constructs. For instance, Umrani et al. (2020) investigated the role of GHRM (green HRM) on environmental outcomes in the Pakistani Hotel industry. Furthering that additional research is needed to explore other constructs that may essentially drive sustainable behavior. Accordingly, Asadi et al. (2020) studied the effect of green innovation on environmental performance in the Malaysian Hotel sector. Similarly, Bhatnagar and Aggarwal (2020) and Pham et al. (2019) recommended that sustainable performance could be expedited through several factors such as perceived organizational support for the environment, etc. Hence, this study aims to address the call for further recent studies by investigating POS-E and employee green behavior relationships through mediation and moderation mechanism.

Previous research into POS-E used meaningful work (Bhatnagar & Aggarwal, 2020) and self-efficacy (Kim et al., 2016) as mediators to study pro-environmental behavior and employee eco-initiatives respectively. However, few studies have attempted to examine the potential role of environmental commitment and green work climate for green behavior among employees. Notably, Tuan (2019) asserted that green work climate

is a key factor influencing the green behavior of employees. Accordingly, [Tian et al. \(2019\)](#) revealed that a pro-environmental work climate is an essential driver of employees' green behavior. On the other hand, [Yoon et al. \(2021\)](#) suggested environmental commitment is another driver of producing green behaviors among employees. Altogether, these studies offer a valuable understanding of the possible mediating role of green work climate and environmental commitment on pro-environmental behavior in a hospitality setting. In doing so, integrating studies on POS-E and green work climate and environmental commitment, this study contributes to this burgeoning field of research by examining green work climate and environmental commitment as mediators in the link between POS-E and green employee behavior.

Prior studies have studied the moderating role of green employee involvement ([Pham et al., 2019](#)), environmental concern ([Bhatnagar & Aggarwal, 2020](#)), environmental knowledge ([Saeed et al. 2019](#)), and perceived policy effectiveness ([Fu et al., 2019](#)). Other attitude-related moderators, such as environmental awareness has been mainly unaddressed in the existing literature. Previous scholarship guided by the conservation of resource (COR) theory, stated that employees' environmental behavior is positively affected by POS-E when employees have an elevated level of awareness about environmental safety ([Tuan, 2019](#)). Given this, this study aims to shed new light on this budding field of research by examining green awareness as the possible moderator in the association between POS-E and environmental commitment, and green work climate that perhaps will have a valuable contribution in this research context.

Based on the above, this study makes some unified contributions to the field of employee environmental behavior. Particularly, this study serves threefold objectives. First, this research contributes by examining the relationship between POS-E and employee green behavior focusing on green practices as a significant way to promote employee green performance in the hospitality industry from an emerging perspective. Second, our study makes a further contribution by studying the mediation of environmental commitment and green work climate on the relationship between POS-E and employee green behavior. Third, this research investigates the moderating impact of green awareness on the link between POS-E and environmental commitment and green work climate- that is, whether green awareness (e.g., low vs. high) could increase and /or decrease the effect of POS-E on employee environmental behavior.

## **2. Theoretical Background and Hypotheses**

### **2.1 Theoretical background**

This study is grounded on the theory of planned behavior (TPB) ([Ajzen, 1991](#)), which is an extension of the theory of reasoned action ([Fishbein & Ajzen, 1975](#)). This theory assumes that people's behavior toward the environment is determined by behavioral principles relating to the potential outcomes of behavior ([Vesely & Klockner, 2017](#)). However, relating to TPB, [Hines et al. \(1987\)](#) asserted that some situation factors such as social pressure, economic factors, and other issues also determine the green behavior of employees. On the other hand, guided by TBP, [Stern \(2000\)](#) suggested contextual, socio-demographic, contextual, and habitual factors affect people's green behavior. Against this backdrop, recent academic scholarship ([Bhatnagar & Aggarwal, 2020](#)) stated POS-E and green work climate ([Tian et al., 2019](#)) as valuable contextual factors having a significant influence on environmental outcomes. POS-E is the extent to which organizations appreciate employees' contribution toward environmental protection ([Lamm et al., 2015](#)). POS-E specifically indicates organizational support for green initiatives. Moreover, TPB also postulates that attitudinal factors such as commitment and awareness about environmental sustainability also influence the extent of green behavior ([Bamberg, 2003](#)), although some studies found no influence of positive green attitude on EGB. However, these inconsistent results are because of neglecting such contextual and attitudinal constructs in model specification. Based on the above, this study assumes that contextual variables and attitudinal factors are the proximal determinants of pro-environmental behaviors among employees. Previous studies in the hospitality sector applied conservation of resource (COR) ([Hobfoll, 1989](#)), and organizational citizenship behavior for the environment (OCBE) to study employee sustainable behavior in the hospitality sector. Recent scholarship applied TPB to study environmental

behavior in the private sector (Gkargkavouzi et al., 2019), in banking, HR managers, and administrators (Tian et al., 2019). Thus, underpinned by TPB, this study aims to investigate the mechanism by which POS-E influences employee green behavior in the hotel industry in Bangladesh.

### 2.1.1. Environmental POS

Recent studies have introduced a specific concept relating to the pro-environmental perceived organizational support (POS) or POS for the environment (POS-E). The POS-E aims to underpin sustainability with political and social aspects. POS-E is defined as "the specific beliefs held by employees concerning how the[ir] organization values their contributions toward sustainability" (Lamm et al., 2015, p. 209). Based on the POS, the POS-E assumes that organizations should allow employees to take decisions, and value the contributions of employees. POS-E is distinct from POS such that POS-E indicates a direct specification of organizations' corroboration for environmental sustainability, while POS presents general contributions. POS-E is similar to the concept of green engagement suggested by Bhatnagar and Aggarwal (2020) who also suggested that the business-sustainability link corroborated by the strong individual process leading to green participation at the organizational level is a field that future studies in the South-Asian context need to focus.

The assumptions suggested by POS-E indicate that the development of pro-environmental behavior among employees is the result of support extended by organizations providing a pro-environmental workplace to practice green initiatives. Gharkavouzi et al. (2019) and Wang and Xu (2017) provided solid ground to investigate organizational support theoretically. Researchers assert that the process of employee green behavior centers on the organizational context with different support that fosters sustainable behavior among employees (Gharkavouzi et al., 2019; Wang & Xu, 2017).

### 2.1.2. Employee green behavior

Employee green behavior is defined as "any behavior intended by the individual to have a positive impact on the environment" (Alisat & Reimar, 2015). According to Steg and Vlek (2009), EGB indicates actions and initiatives that benefit and save the environment. When employees perform any pro-environmental action in the workplace then they demonstrate EGB (Ones & Dilchert, 2013). They also revealed that EGB is any environment-friendly behavior that individuals perform in the organization. EGB includes conserving resources, working sustainably, influencing others towards sustainable behavior, taking sustainable initiatives, and avoiding environmentally harmful actions (Ones and Dilchert (2012). According to Norton et al. (2015), EGB also includes complying with rules and regulations, selecting green alternatives, and producing environment-friendly products. Other EGBs are turning off power switches while leaving and not in use, taking both-sided printing, and inspiring coworkers to go green (Norton et al., 2015).

A substantial amount of research on EGB has been conducted, but there are relatively few studies consisting of contextual factors such as POS-E and green work climate, competency-related factors, such as green awareness, attitudinal factors, such as environmental commitment to predict EGB in the hotel setting of a South-Asian emerging context. Moreover, there are differences in the mechanism linking POS-E and EGB. Furthermore, the POS-E and EGB link is in the nascent stage of its development. Thus, this study aims to study the role of POS-E on EGB via environmental commitment and green work climate. The study also examines the moderating effect of green awareness on the association between POS-E and environmental commitment, and green work climate.

## 2.2. Hypotheses development

### 2.2.1. POS-E and environmental commitment

There is substantial evidence of the association between general POS and affective organizational commitment. In line with this, academic scholarship persistently reported that affective organizational commitment is an obvious outcome of POS (Eisenberger et al., 2001; Kurtessis et al., 2017, Sluss et al., 2008). Although POS is a quite broad term and should be specified, POS-E is a more specific and new construct and has not been widely studied in terms of its relationship to employee green behavior, given this, there is a lack of empirical evidence. Several studies pinpointed the positive role of different environmental supports extended by organizations to promote environmental commitment among employees. For example, Lamm et al. (2015) first introduced the concept and opined that organizations aiming to promote environmental commitment are willing to provide autonomy to take decisions and utilize resources in a greener fashion, and provide the necessary support to capitalize on sustainable opportunities. A recent study highlighted that organizations facilitate environmental commitment among employees through sustainable administrations when competing on the basis of sustainable standards, and mounting pressure from stakeholders for sustainable performance (Hu, Fang, & Yu, 2020). Similarly, other studies stated that organizations promote EC by formulating and communicating corporate green codes and ethics (Nye & Hargreaves, 2010; Daily et al., 2009). Notably, a recent Indian study (Bhatnagar & Aggarwal, 2020) among adults in various industries reported that POS-E could make employees more empowered and sincere toward environmental protection which eventually improves their environmental commitment. The study also found that with POS-E employees are more interested to take eco-initiatives since it enriches employees' environmental psychology. Specifically, POS-E provides employees with environment-related knowledge, skills, abilities, and services that inspire employees to be more committed towards environmental conservation (Tuan, 2019). Thus, the following hypothesis is expected:

*H1: There is a positive association between POS-E and environmental commitment*

### 2.2.2. POS-E and green work climate

Green work climate (GWC) can be defined as “the shared perceptions among employees about procedures, processes, practices, and behaviors” (Maruping & Magni, 2012). GWC highlights shared perceptions among organizational employees that sustainable behaviors and synergy of efforts are essential to attain the green goals of the organization (Priyankara et al. 2018). GWC develops a shared psychological perspective among individuals relating to corporate sustainable norms and goals (Tuan, 2019). There is scanty literature on how POS-E drives a green work climate. However, previous studies argued that general POS is not enough to nurture a green work environment across the organization. Organizations must provide specific support and resources relating to promoting a green work environment. For example, previous research showed that organizations can play a key role to introduce lean operational practices successfully (Camuffo & Gerli, 2018), to bring necessary changes in the organizational processes in response to green issues (Dubey et al., 2015). In addition, it is the organizational responsibility to determine sustainable goals and objectives, allocate necessary resources, undertake interventions, and implement and measure the progress in this regard. Importantly, organizations can sustain a green work environment by providing essential support and resources, formulating relevant policies, and putting them into practices such that there would be integration between all green efforts and business and operational procedures (Dai et al., 2014).

Although nurturing a green climate is a costly and lengthy process, whenever organizations view green practices as valuable and have a positive attitude toward environmental conservation it would be beneficial for all concerned (Ye et al., 2013). Maintaining a pro-environmental work climate increases organizational reputation in the market and may enable it to gain a competitive advantage. However, organizational green intentions have a direct effect to shape the norms, values, goals, beliefs, and actions of all employees (Dai et al., 2014). Organizational green support can give a strong and clear indication that going green is the

right thing to do and incorporated sustainable efforts into a company's day-to-day operations ( Li et al. 2019). Thus, based on the above discussion, the following hypothesis is proposed:

*H2: POS-E has a positive impact on the green work climate.*

### **2.2.3. Employee Environmental Commitment (EEC) and EGB**

Environmental commitment is defined as “the extent to which employees integrate ecological issues into their business operations to reduce detrimental effects of business-related activities on the natural environment” (Hirunyawipada, & Xiong, 2018). EEC may provide additional advantages, such as increased revenue through introducing green products and services to eco-centric customers by charging premium prices (Leonidou et al., 2013). With environmental commitment, employees can establish congruence between organizational and individual green values that subsequently promote green behaviors among employees. Integration of such values stimulates employees to exert substantial effort for conserving the environment (Zientara & Zamojska, 2016). More importantly, Zientara and Zamojska stated that the salient feature of EEC lies in the fact that it is a target-relevant commitment, that is, EEC is a more relevant predictor of employee green behavior than the typical commitment. It may be due to the person–environment fit as underpinned by value congruence. Based on this feature, it could be assumed that employees who have an emotional affinity towards ecological issues might be willing to exhibit more pro-environmental behaviors. Environmentally committed employees would like to develop green products, and brands, and place them in the proper channel, to utilize market intelligence to attain greater margins (Morgan et al., 2009). Environmental commitment provokes employees to increase green requirements, invest in green projects, take proactive actions, and design environment-friendly processes and systems (Nath & Ramanathan, 2016). Thus, it is postulated that:

*H3: Environmental commitment is positively related to employee green behavior.*

### **2.2.4. Green work climate and employee green behavior**

Previous studies highlighted the importance of green work culture to promote pro-environmental behavior among employees. For example, Tian and Robertson (2019) reported that a green work climate is found to have a positive role in pro-environmental behavior. In line with this, previous research suggested that in order to stimulate green behaviors among employees an organization needs to promote a green organizational culture (Perron et al., 2006). Organizations must initiate sustainable efforts across the organization, particularly at the employee level. Since many of the previous environmental studies examined sustainable issues at the firm level, it is essential to investigate the environmental practices at the employee level (Li et al. 2019). Ultimately, employees are mainly responsible to implement pro-environmental initiatives undertaken by the organization and they are held accountable for the contamination caused by the usual operations of the organization (El Baz & Lagur, 2017). In view of this, recent scholarship focused on the importance of greening the work climate such that employees would be stimulated towards accomplishing their daily job duties and responsibilities in a greener manner (Park & Paiva, 2018). Developing such a workplace environment could develop an understanding among employees about how attaining sustainable goals and performances would be affected by carrying out their activities and maintaining environmental standards. Moreover, green culture was reported to be contributing to the motivation and instruction of the organizational employees towards demonstrating environment-friendly behavior (Yang et al., 2019). Hence, the expected hypothesis is as:

*H4: Green work climate has a positive influence on EGB.*

### 2.2.5. Mediation of EEC and GWC

Ordinary POS increases intrinsic motivation among employees because of feeling valuable and meaningful, they enjoy autonomy to exhibit more productive behavior (Chen et al., 2018) and new concepts and ideas. The same reasoning can also be applied to POS-E and EEC links, indicating that organizations with pro-environmental supports and resources that value employees who value ecological issues are likely to generate more green behavior among employees (Liu et al., 2020). POS-E improves employees' ability to deal with environmental challenges efficiently, thus POS-E could significantly influence how employees are devoted to green performance. When employees are committed to protecting the environment they intend to demonstrate better green behavior. Previous studies have established the mediation of organizational commitment on the association between POS for safety and employee safety behavior (Liu et al., 2020), and between environmental management strategy and organizational citizenship behavior in the hotel industry. However, environmental POS motivate employees to find solutions to daily work problems, overcome threats, and explore ways to address green challenges effectively whenever they are committed to the environment (Bhatnagar & Aggarwal, 2020). Furthermore, POS-E induces the employee to display more eco-initiatives and actions when they deeply feel committed to the sustainability of the environment (Robertson & Barling, 2012). Therefore, this study proposed the following hypothesis:

*H5: Employee environmental commitment has a mediating effect on the POS-E and EGB links.*

The green work climate (GWC) is defined as a workplace environment that is resource-efficient, environmentally sensitive, and socially responsible (Stringer, 2009). GWC aims to design sustainable workplaces and practices, undertaking sustainable strategies that are efficient and appropriate for the dynamic world of work and the benefit of the organization (Zu, 2013). Extant research showed that an organization with a green attitude could influence employee green behavior by nurturing a pro-environmental work climate (Norton et al., 2014). An environment-friendly organization provides support for an environmental protection system and formulates green policies that employees must comply with. POS-E develops perceptions among employees that they abide by rules and regulations to contribute to going green (Tian et al., 2019). Notably, a green work climate serves as a vehicle to align POS-E and employee green behavior. Moreover, with green support organizations could develop a pro-environmental work climate that may lead to suitable green behaviors among employees. Environmental literature in the hotel sector has not fully embedded the role of GWC as predictors and outcomes. Hence, it was expected GWC to mediate the association between POS-E and EGB. Given this, the following hypothesis was formulated:

*H6: Green work climate has a mediating effect on the POS-E and EGB link*

### 2.2.6. Moderation of green awareness

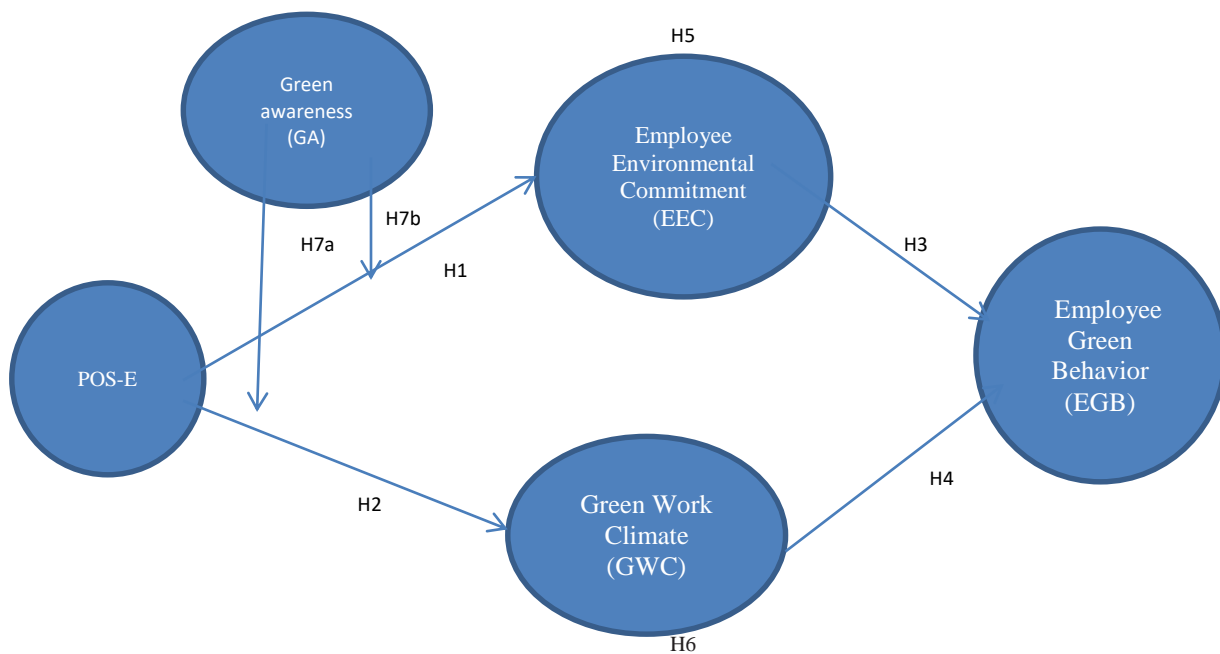
Green awareness (GA) is mainly related to "go green". The term refers to being aware of the natural environment and making choices that do not harm the earth (Peng & Liu, 2016). GA is defined as "the degree of an employee's environmental knowledge, ability to bring about positive changes in the environment by changing his/her pro-environmental behavior, and recognition of environmental problems and their causes" (Madsen & Uthøi, 2001). Green awareness includes the effects of air pollution (He & Liu, 2018), consciousness about energy consumption, environmental risk, and carbon footprint (Garcia et al., 2019). GA facilitates individuals to be aware of potential detrimental consequences on the ecology (Gadenne et al., 2009).

There is empirical evidence that green awareness improves employee green behavior (Fu et al., 2019). To promote green behavior among employees, there shall be strong feelings of awareness of the effects of various actions and behaviors of employees, and this awareness while interacting with environment-related supports, policies, and actions, triggers employees to be more devoted to eco-friendly behavior. Some previous studies argued that when individuals are concerned, well conscious, and have knowledge about

environmental pollution, the significance of green practices, and ecological degradation, they intend to show greater emotion toward ecological improvement (Gkargkavouzi, Halkos, & Matsiori, 2019). Accordingly, the effect of POS-E on creating a green work climate would be stronger whenever employees would have a higher level of awareness about ecological issues (Gaddenne et al., 2009). A study sampled from construction in Nicaragua reported that green awareness coupled with environmental support played a relatively stronger role in conserving biodiversity in a green work environment (Salomaa et al., 2017). Similarly, Bizzi (2017) showed that support for green contributions under the environmental awareness system may increase employees' ability to generate tangible environmental outcomes from green POS in a green work ambiance. In contrast, if environmental awareness declines, employees are intended to show less emotional attachment to environmental efforts and to develop an eco-friendly workplace (Stoverink et al., 2018). Hence, this study expected that green awareness may moderate the association between POS-E and EEC, and GWC:

*H7a: Environmental awareness strengthens the relationship between POS-E and EEC.*

*H7b: Environmental awareness strengthens the relationship between POS-E and GWC.*



**Fig. 1: Hypothesized relationships**

### 3. Methodology

#### 3.1 Participants and Procedure

This study collected data through a questionnaire survey over a period of three months from December 2019 to February 2020. The study sample participants from the hotel industry located at Cox's Bazar of Bangladesh, a South Asian context. Collecting data from a single industry and a single country setting reduced the potential effects in findings caused by differences in industry and country. Altogether, we recruited 350 employees offline drawing on the convenience sampling technique from the 30 hotels located in the Cox's Bazar. Cox's Bazar has the longest natural sea beach in the world with a length of 120 kilometers and has been facing a severe environmental crisis. All the respondents were asked to participate in the survey voluntarily and to give their opinions relating to measuring, employee environmental commitment, green work climate, green awareness, their perceptions about POS for the environment, and their pro-



environmental behavior. Respondents returned 283 surveys out of which after initial screening 36 were discarded due to their incompleteness making a useable sample of 247 (70.57%).

Of the primary sample of 247 respondents, 68% were male and 22% were female, 73% obtained a master's degree, and 62% were more than 35 years old. Most of the respondents were recruited from 4-star hotels (79: 32%), followed by 3-star (67: 27%), and 5-star hotels (52: 21%). The respondents were recruited from diverse functional departments such as accounts and finance (50: 20.24%), marketing (18: 7.28%), customer relationship (35: 14.11%), human resources, (43:17.4%), maintenance (28: 11.34%), operations (34: 13.76%), and others (39: 15.79%).

### **3.2 Measures**

The study developed a validated measurement scale to examine the independent, dependent, mediating, and moderating variables by adapting items from previous studies. Slight modifications were brought to the items without changing their original meaning. Five-point Likert scales (1 = strongly disagree, 5 = strongly agree) were applied to measure all the constructs. This study adopted a 7-item scale proposed by Lamm, Tosti-Kharas, and King (2015) to examine POS-E. A sample item includes "The organization values my environmental contribution". In order to measure employee environmental commitment, we adapted an 8-item scale developed by Allen and Meyer (1990). An example of an item is "I make environmental suggestions to improve work procedures". The green work climate construct was studied with an 8-item measure proposed by Norton et al. (2014). A sample is "Our company is worried about its environment". Green awareness was measured with a 5-item instrument adapted from Cabral and Lochan Dhar (2019) and a sample item is "The organization facilitates the use of environmentally friendly products". Finally, employee green behavior was assessed with an 11-item measure proposed by Cabral and Lochan Dhar. A sample item for EGB is "the employees in the organization try to learn more about the organization". The reliability coefficients for POS-E, environmental commitment, green work climate, green awareness, and employee green behavior were 0.829, 0.861, 0.848, 0.763, and 0.906 respectively.

### **3.3 Common method bias**

Since the study utilized cross-sectional data, there might be a concern about violating the data set with the presence of common method bias (CMB). The presence of CMB may influence or inflate empirical evidence concerning the relationships between the variables under study (Podsakoff et al., 2012). Consequently, the one-factor test was applied, and the results yielded five-factor output with eigenvalues greater than 1, where the first factor accounted for only 42.37% of the total variance explained. The study also applied VIF values to test the CMB, and the results showed that all the VIF values are less than 10 (Hair et al., 2017). Hence, based on the above, CMB was not a major concern.

### **3.4 Data analysis**

SPSS 22.0 and AMOS 22 were applied for descriptive data analysis, measurement model analysis, calculating fit indices, and structural equation modeling (SEM). First of all, descriptive analysis was carried out to get participants' information including reliability coefficients. The measurement model was evaluated to calculate the indices of the constructs and internal reliability and convergent and discriminant validity. Finally, the study performed SEM to examine the proposed hypotheses.

## **4. Results**

### **4.1 Descriptive statistics**

The descriptive analysis includes mean, standard deviation, and bivariate correlations of the constructs under study as depicted in Table 1. The result showed that POS-E was positively related to EGB ( $r=0.417^{**}$ ). The findings further demonstrate that green awareness had a positive influence on EGB ( $r=0.361^{**}$ ). In a similar vein, environmental commitment and green work climate were also positively

related to employee green behavior ( $r = 0.312^{**}$  and  $r = 0.294^{**}$ ). These significant positive influences indicate a substantial impact of POSE-E, green awareness, environmental commitment, and green work climate on employee green behavior.

**Table 1: Descriptive Statistics and Correlations**

S. N.	Constructs	Mean	SD	1	2	3	4	5	VIF
1.	POS-E	3.69	0.84	<b>0.829</b>					2.297
2.	EC	3.94	0.74	0.349**	<b>0.861</b>				1.905
3.	GA	3.79	0.82	0.307**	0.476**	<b>0.763</b>			2.176
4.	GWC	3.56	1.08	0.364**	0.271**	0.427**	<b>0.848</b>		1.684
5.	EGB	3.47	0.794	0.417**	0.312**	0.361**	0.294**	<b>0.906</b>	1.836

#### 4.2 Measurement model

In order to determine the internal consistency and validity of the constructs, the study calculated composite reliability (CR) and average variance extracted (AVE) (Hair et al., 2017) as shown in Table 2. The results show that CR values of the variables of interest were 0.829 and above, and greater than the cut-off value of 0.70. On the other hand, all the AVE values were between 0.782 and 0.847 and greater than the threshold limit of 0.50. The study also assessed the discriminant validity of the constructs using the HTMT Criterion (Henseler et al., 2015) and met the 0.85 limits (Kline, 2005). Hence, based on the results of CR, AVE, and HTMT, the internal consistency, reliability, and discriminant validity of the constructs were established. Furthermore, the multicollinearity of the latent constructs was also checked by applying variance inflation factor (VIF) (see Table 1) values and the result reported VIF values ranged from 1.684 to 2.297, which were less than 10, hence, confirming no presence of multicollinearity.

**Table 2: Convergent Validity and Reliability**

Constructs	CR > .60	AVE > .50
1. Environmental Perceived organizational support (EPOS)	0.829	0.847
2. Environmental Commitment (EC)	0.913	0.782
3. Green Awareness (GA)	0.887	0.827
4. Green Workplace Climate (GWC)	0.859	0.806
5. Green Employee Behavior	0.903	0.791

Note: CR (Composite Reliability), AVE (Average Variance Extracted)

After examining the validity and reliability of the constructs, the study compared a five-factor model with a four-factor model, a three-factor model, a two-factor model, and a one-factor model. The findings demonstrate that the five-factor model that includes POS-E, environmental commitment, green work climate, green awareness, and employee green behavior shows better fitness with the data set than other alternative models.

**Table 3: Discriminant Validity (HTMT Criterion)**

Construct	1	2	3	4	5
1. Environmental Perceived organizational support (EPOS)	<b>0.816</b>				
2. Environmental Commitment (EEC)	0.623	<b>0.739</b>			
3. Green Awareness (GA)	0.594	0.552	<b>0.825</b>		
4. Green Workplace Climate (GWC)	0.637	0.538	0.603	<b>0.761</b>	
5. Green Employee Behavior	0.583	0.617	0.572	0.486	<b>0.847</b>

The fit indices of the proposed model are as:  $X^2 = 967.24$ ,  $df = 422$ ,  $CMIN/df = 2.29$ ,  $RMSEA = 0.06$ ,  $NFI = 0.913$ ,  $TLI = 0.89$ ,  $CFI = 0.918$ . Thus, the results confirmed the uni-dimensionality of the constructs.

**4.3 Hypotheses testing**

The results as shown in Table 4 depicted that all the proposed hypotheses were supported. Particularly, the findings supported H1 indicating that POS-E had a significant positive influence on employee environment ( $\beta = 0.43^{**}$ ,  $p < 0.001$ ). Likewise, POS-E was found to be positively related to green work climate ( $\beta = 0.34^{**}$ ,  $p < 0.001$ ), thereby supporting H2. Further, results reported that environmental commitment played a significant positive role in employee green behavior ( $\beta = 0.19^{**}$ ,  $p < 0.001$ ) and supported H3. In supporting H4, findings reported a significant positive relationship between environmental commitment and employee green behavior ( $\beta = 0.24$ ,  $p < 0.001$ ).

**Table 4 Standardized coefficients of the hypothesized paths**

Hypotheses	Structural Path	Standardized Coefficients
H1	POS-E $\longrightarrow$ EC	0.43**
H2	POS-E $\longrightarrow$ GWC	0.34**
H3	EC $\longrightarrow$ GB	0.19**
H4	GWC $\longrightarrow$ GB	0.24**

Further, following the analytical procedure suggested in the literature (Baron & Kenny, 1986), a series of structural models were examined to measure the mediating of environmental commitment and green work climate on the association between POS-E and employee green behavior. Baron and Kenny suggested that there shall be a significant direct effect of POS-E on EGB (Model 1), the paths from the independent variable (POS-E) to mediators (environmental commitment and green work climate), and those from environmental commitment and green work climate to green behavior are significant, as presented by Models 2 and 4. Moreover, models that indicate a direct path from POS-E to EGB have no significant improvement in the model, including mediating variables (i.e., environmental commitment: Model 2 vs. Model 3; green work climate: Model 4 vs. Model 5). The results are shown in Table 5.

**Table 5: Standardized Path Coefficients**

Structural Path	Standardized path coefficients				
	Model 1	Mediator: EC		Mediator: GC	
		Model 2	Model 3	Model 4	Model 5
POS-E $\longrightarrow$ EGB	0.31**		0.07		0.11
POS-E $\longrightarrow$ EEC		0.51**	0.49**		
POS-E $\longrightarrow$ GWC				.58**	0.56**
EEC $\longrightarrow$ EGB		0.42**	0.36**		
GWC $\longrightarrow$ EGB				0.29**	0.24**

\*\*p < 0.001

Regarding the mediating effects, the results revealed that POS-E showed a significant direct relationship between POS-E and EGB ( $\beta = 0.31^{**}$ ,  $p < 0.001$ ). This direct effect of POS-E on EGB led to proceeding to the further step of the mediating process and the findings demonstrated a significant path between POS-E and environmental commitment ( $\beta = 0.51^{**}$ ,  $p < 0.001$ ) and between POS-E and GWC ( $\beta = 0.58$ ,  $p < 0.001$ ). Similarly, results revealed significant path coefficients from EEC to POS-E ( $\beta = 0.42^{**}$ ,  $p < 0.001$ ) and from GWC to POS-E ( $\beta = 0.29^{**}$ ,  $p < 0.001$ ).

Further, the study compared model fit indices of five alternative models as displayed in Table 6. The results demonstrated that all models obtained acceptable fit indices. However, the inclusion direct path between POS-E and EGB, as defined in model 3, did not show any significant improvement in the fitness of Model 2. This insignificant finding postulates that EEC and GWC have significant mediations in the association between POS-E and EGB. In this backdrop, Model 2 ( $X^2 = 561.46$ ;  $df = 192$ ;  $p < 0.01$ ;  $RMSEA = 0.062$ ,  $NFI = 0.903$ ,  $TLI = 0.930$ ;  $CFI = 0.939$ ) shows acceptable results considering model simplification (Brown,

1997). Furthermore, the findings also demonstrate that the full mediating model of green work climate, specified in Model 4, is consistent with the acceptable partial model fit as shown in Model 5 being relatively poor than Model 4. This reveals that Model 4, the full mediation model, would be a better selection than Model 5, the partial-mediation model. Specifically, the significant differences between the two models (Model 4 and Model 5) relating to the chi-square due to a decrease in one degree of freedom reveal the statistical significance of chi-square changes. Thus, the findings demonstrate that employee environmental commitment and green work climate fully mediated the relationship between POS-E and EGB, thereby confirming H4 and H5. In sum, the study postulates that POS-E can positively drive EEC and GWC which eventually improve employee green behavior. Concerning the mechanism, EEC and GWC demonstrated a significant influence in the mediating relationship between POS-E and EGB.

**Table 6: Comparative fit indices for models**

Mediator	Model	X <sup>2</sup>	df	RMSEA	NFI	TLI	CFI
EC	Model 1 (non-mediated)	467.28	112	0.068	0.906	0.926	0.937
	Model 2 (fully mediated)	561.46	192	0.062	0.903	0.930	0.939
	Model 3 (partially mediated)	578.92	191	0.061	0.903	0.929	0.940
GC	Model 4 (fully mediated)	642.74	211	0.056	0.903	0.937	0.946
	Model 5 (Partially mediated)	684.29	210	0.056	0.904	0.936	0.947

#### 4.4 Testing moderating effect

The study examined the moderated mediation of green awareness and EGB following the guidelines in the literature (Hayes & Preacher, 2014). Relating to the moderated mediation, H6 proposed that green awareness would have a moderating effect on the relationship between POS-E and EEM (H6a), and on the relationship between POS-E and GWC (H6b).

**Table: 7 Test of Moderation**

Predictor	Beta	t-value	p-value	F	R <sup>2</sup>	Change in R <sup>2</sup>
<b>a. Moderating effect of employee green awareness in the association between EPOS and EEC</b>						
EPOS	0.431	6.823	0.000	.347		
GA	0.425	4.407	0.000		0.321	0.073
EPOS×GA	0.288	3.491	0.012			
GA ±1 SD	Conditional effect	SE	t-value	p-value	LLCI	ULCI
Low	0.314	0.092	3.735	0.000	0.117	0.483
High	0.603	0.086	7.183	0.000	0.438	0.764
<b>b. Moderating effect of employee green awareness in the association between EPOS and GWC</b>						
EPOS	0.337	7.172	0.000	.347		
GA	0.324	5.834	0.000		0.243	0.051
EPOS×GA	0.261	3.629	0.010			
GA ±1 SD	Conditional effect	SE	t-value	p-value	LLCI	ULCI
Low	0.338	0.089	4.391	0.000	0.134	0.437
High	0.564	0.085	6.827	0.000	0.386	0.695

Note: LLCI=Lower limit confidence interval, ULCI=Upper limit confidence interval, POS=Perceived organizational support, PFS=perceived family support.

Particularly, the effect of POS-E on employee green behavior would stronger with high employee green awareness than with low employee green awareness. Findings demonstrated a significant interaction influence of POS-E and green awareness on both the employee environmental commitment ( $\beta = 0.288^{**}$ ) and on green work climate ( $\beta = 0.261^{**}$ ). Besides, statistical significance was tested and the interaction effect was plotted to further realize the effect (Jaccard et al., 1990). The findings depict that the influence of POS-E on EEC and GWC is relatively more significant for individuals who are exposed high levels of green behavior ( $\beta = 0.603^{**}$ , CI = 0.483, 0.764;  $\beta = 0.654^{**}$ , CI = 0.437, 0.695) than those who exhibited low levels of green behavior ( $\beta = 0.314^{**}$ , CI = 0.117, 0.438;  $\beta = 0.338^{**}$ , CI = 0.134, 0.386). Considering the above results, this study suggested that the role of POS-E on employee green behavior obtained fairly more significance through ecological commitment and green work climate for employees with high levels of environmental awareness than with low awareness. The results are displayed in Table 7.

## **5. Discussion**

This study investigated how POS-E leads to EGB. To attain this objective, the study hypothesized that POS-E is a significant antecedent of employees' green behavior, wherein employee environmental commitment and green work climate account for the association between POS-E and EGB. To examine the proposed hypotheses, we investigated the direct associations of the POS-E with EEM, GWC, and EGB. In particular, we tested the direct relations of EGB with EEM and GWC; the mediating role of EEM and GWC on the association between POS-E and EGB; and the moderating role of green awareness on the relations of POS-E with EEM and GWC. The results are evidenced in supporting all hypotheses given prior studies and theories.

The findings, hence, demonstrate that POS-E has a positive relationship with EEM, GWC, and EGB. These results indicate that employees working in the hotel industry with ecological POS are expected to demonstrate commitment towards protecting and helping to promote environmental sustainability by exhibiting green behaviors. EEM and GWC were found to mediate the association between POS-E and EGB. In this regard, employees recognize that providing pro-environmental POS is a good ecological corporate practice. As a result, they are likely to demonstrate a greater emotional involvement, belongingness, and attachment to environmental protection. They perceived that working in such organizations is meaningful as they are interested in environmental sustainability and abide by the ecological norms and standards through nurturing a pro-environmental work ambiance (Alice, Hon & Lu, 2010).

In addition, our findings suggest that POS-E tends to show more influence on EGB when employees make high scores on green awareness than when they make low scores. This may be due to the fact that when employees' pro-environmental efforts are in congruence with organizational green supports and policies. This enables individuals to be aware of the detrimental effects of their activities on the environment and hence, they are interested in initiating interventions to mitigate such adverse effects (Garcia et al., 2019).

### **5.1 Implications for theory**

Although previous studies in the hotel industry investigated the role of GHRM (Umrani et al., 2020), green innovation (Asadi et al., 2020), and POS for safety and commitment (Liu et al., 2020) to study employee green behavior, few studies exist linking specific POS that is POS for the environment (POS-E) in the hotel industry in a South Asian developing economy perspective. Against this backdrop, this study aimed to examine the role of POS-E on employee green behavior in the industry of Bangladesh. Attaining this objective, this study is expected to make three unique contributions in theory. First, this research integrates perceived organizational support for the environment to employee green behavior underpinned by the theory of planned behavior. The findings reveal that POS-E played a significant positive role in promoting employee green behavior when employees demonstrate environmental commitment and nurture a green work climate. Therefore, our study contributes to an extension of POS by highlighting that employee

ecological behavior could be promoted in the Bangladeshi hotel industry setting through pro-environmental POS.

Second, substantial research in recent literature devoted to highlighting the eco-initiative and psychological capital (Bhatnagar & Aggarwal, 2020), perceived behavioral control (Cop et al., 2020), managerial leadership and employee motives (Graves et al., 2019), individual commitment to energy conservation (Hu et al., 2020), and environmental concern and environmental responsibility (Urmani et al., 2020) as mediators in the hotel industry. Most of the previous studies, moreover, examined either one of the above mediators. However, no attempt has been directed to examine the mediations of EEC and GWC in a single study on the relationship between POS-E and EGB. Therefore, this makes further contributions linking POS for the environment to employee green behavior through the mediating effect of environmental commitment and green work climate in the context of the hotel industry in an emerging economy perspective. Notably, this work brightens that a greater commitment to ecology and a greener work environment considerably contributes to facilitating green behavior among employees.

Third, to provide a deeper understanding of the role of POS-E on EGB through environmental commitment and green work climate, the moderating effect of green awareness was studied integrating the planned behavior theory. Based on the theory, research postulated that when environmental awareness is in congruence with the supports and initiatives extended by organizations, then this will positively influence employees' intention to display more ecological behavior (Gkargkavouzi et al., 2019; Botetzagias et al., 2015). Guided by this insight, this study brightened the significance of employees' green awareness and how this matters in developing employees' environmental commitment and green work climate in the hospitality setting. Besides, this study contributed to illuminating green behavior literature by providing further evidence on the role of green awareness in improving pro-environmental behavior among Bangladeshi hotel employees across environmental commitment and green work climate.

## 5.2 Implications for practice

In addition to theoretical implications, the study offers some implications of results to apply to organizational practices. First, findings reveal that organizational efforts in the hotel industry are not only effective to improve environmental commitment and green culture but also to promote employees' green behavior. Considering this, findings imply that while extending support and formulating policies, hotel companies may also intend to integrate supportive aspects of HRM with environmental sustainability. In view of this, findings warrant the attentions of HR managers in the hospitality sector to craft policies to offer more support to stimulate employees towards exhibiting greener behavior. Particularly, organizations need to support employees to decrease the use of water, increase recycling, reduce consumption of energy, and include other green behaviors in the workplace. Other programs such as decentralization, empowerment, and corporate culture may also be adopted that might encourage employees to take green initiatives. Thus, to make the best use of organizational support for green behavior, hotel firms need to design POS-E such that it truly contributes to improving employees' ecological behavior.

Second, findings reveal that a hospitality company's green support improves EGB through EEC and GWC. This result suggests that the environmental practices of hotel companies may improve employees' environmental efforts when companies can stimulate the emotional attachment of employees towards environmental protection and create a pro-environmental work climate by rendering pro-environmental support. When individuals perceive their organizational support as useful, and significant, and value their green efforts, they intend to be more devoted and to sustain a greener ambiance across the organizations that ultimately influence them to be more ecological (Carrillo-Higuera et al., 2018). To facilitate better integration between POS-E and EGB, there should be frequent communication between employees and organizations management as management formulates policies and practices to provide POS, which is

essential to foster greening practices among employees (Cop et al., 2020). Also, hotel companies may establish an environmental reporting system where employees' ecological opinions and relevant information would be shared. Such a system gives easy access to employees about what both the organizations and employees have done, are doing, and will do in the future to protect the environment and to understand the firm's participation in environmentally beneficial activities.

The third implication is relating to the resemblance between organizational support, environmental norms, employees' emotional green attachment, and concern about environmental conservation. Previous research revealed that when employees notice congruence in their organizational support for eco-initiatives, develop green ambient across the organization, emotional engagement, and awareness, then they invest more time and energy in going green (Cop et al., 2020; Graves et al., 2019; Hu et al., 2020; Liu et al., 2020). This justification is in support of our results about the mediation of EEM and GWC linking POS-E and EGB. Thus, in order to augment the mediating role of EEC and GWC in promoting ecological behavior among employees, hospitality companies need to emphasize establishing green performance norms and aims of their organizational green supports and initiatives such that these match their employees' green norms and objectives. In this regard, hotel organizations need to provoke employees to share their ideas, suggestions, opinions, and remarks in the process of planning for POS-E. Given this, hotel companies can nurture a green climate, develop awareness, and improve commitment to behaving in a greener fashion.

### 5.3 Limitations and direction for future studies

Despite various theoretical and practical implications of the study, there are some limitations. First, since the utilized self-reported and cross-sectional data, there might be a concern for CMB, albeit the analysis did not report any risk of CMB. However, in the future, further studies may be conducted employing mixed methods collecting data from multiple sources to check the further validity of our findings in different contexts. Second, the study comprised employees as a sample from one industry and one country setting. Future research may include a larger sample from other service and manufacturing sectors, and make a comparison between them relating to POS-E and EGB. Third, as formulating environmental policies has become a crucial aspect of providing organizational support for greening employee behavior, further studies may investigate the role of green policies in integrating POS-E and green behavior. Finally, future academic scholarship should investigate the collective effect of organizational pro-environmental efforts and individual green efforts that contribute to attaining environmental performance goals. Such harmonization of two important aspects may benefit practitioners and researchers to get a deeper insight into how organizations' and employees' green efforts together attain green goals.

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