UNLOCKING EMPLOYEE GREEN BEHAVIOR: A MULTILEVEL INVESTIGATION OF PERCEIVES CSR, ORGANIZATIONAL IDENTIFICATION AND GREEN HRM

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ABSTRACT

Organizations find it difficult to stop environmental degradation and harm in the modern, globalized world because they are the main causes of this ecological degradation. The focus of researchers in the domain of sustainable growth and organizational behavior has been on how perceived corporate social responsibility (CSR) influences employee green behavior (EGB). Despite some early efforts, no concrete antecedents and processes have been documented in this growing discipline. Thus, by investigating how and under what circumstances perceived CSR influences EGB, this study contributes to the current debate in this area. This research investigates the impact of perceived CSR on EGB by the mediation mechanism of organizational identification (OID) and moderation of green HRM. The social exchange theory is employed in this study to develop hypotheses. In this investigation empirical analysis of the underlying framework is conducted by collecting multilevel data in two phases with time-based breaks from 415 employees of 83 stock exchange listed firms. Using Mplus, we performed multilevel path analysis and verified a significant favorable effect of perceived CSR on OID, which in turn leads to EGB. Furthermore, the contingency of green HRM enhances the indirect effect of perceived CSR on EGB via the mediation of OID. Current research uncovers a number of techniques that firms may use to strategically target employee green behavior.

Key words: Perceived CSR, Organizational Identification, Employee Green Behavior, Green HRM

1. INTRODUCTION

Environmental degradation is a major concern in the globe today, and experts recommend a systematic approach to address its catastrophic repercussions. Burning fossil fuels has an adverse effect on ecosystems, surging oceans with plastic trash, jeopardizing unlimited species and destroying forests (Anwar et al., 2020). As global environmental issues are increasing, businesses aim to use sustainable practices, striving to reduce inefficient utilization of resources and pollution without harming the environment (Afsar & Umrani, 2020). Yet, unpredictable weather conditions and air pollution in urban areas stand a serious warning of the earth's intensive loss of biodiversity owing to rigorous environmental contamination (Malik et al., 2020). Industries are harming the environment either intentionally or unintentionally (Fernández-Guadaño & Sarria-Pedroza, 2018; Lu et al., 2022). The lives of people and the functionality of businesses have been disrupted due to the combined effect of climate change and natural calamities (Tian et al., 2018). Owing to the impact of climatic variations, environmental issues have become prime focus of policies across the economies with distinct economic positions. Companies everywhere are stepping up to encourage eco-friendly behavior among their staff members endeavoring to enhance their ecological performance (Saleem et al., 2020). In the realm of organizational behavior, research on employee green behavior (EGB) is becoming increasingly pertinent and developing (Tian & Robertson, 2019). EGB, or environmentally beneficial behavior, is a term used to describe a certain type of pro-environmental behavior that employees engage in, within an organization (Norton et al., 2017).

Owing to the positive impacts of EGB, research has focused on identifying its

antecedents, including organizational identification (Wang et al., 2017), servant leadership with a focus on the environment (Mughal et al., 2024), corporate social responsibility (AlSuwaidi et al., 2021) and HRM practices (Yaun et al., 2024). Zhu et al. (2021) documented that the fundamental principles of green HRM practices hiring people who are dedicated to sustainability, developing ecological knowledge of the workers and incorporating environmental responsibility in HR frameworks are essential to this change. According to Alvarado and Toledo (2017), these methods comprise developing and improving eco-consciousness-promoting workplace systems, such as instituting green duties, offering suitable incentives for eco-friendly behavior by using tactics like green pay and reward. Research already conducted shows the mechanisms that have been developed to encourage environmentally friendly behavior among employees as well as the indirect relationships that explain why employees engage in environmentally beneficial actions. It places a heavy emphasis on their obligation to protect the environment as a social responsibility. The altruistic, compassionate, and voluntarist activities of employees are thought to be more suitable for addressing environmental challenges.

In spite of these research efforts on the antecedents of EGB it is still in its infancy (Saeed et al., 2019; Saleem et al., 2020) and at initial stage in developing and emerging nations like Pakistan. Consequently, knowledge of the mechanism through which businesses can instill EGB is likewise constrained and insufficient (Saleem et al., 2020). Regarding sustainable company practices, however, one important but less-researched topic is the connection between CSR and environmentally conscious employee behavior. There is a substantial knowledge gap on how green HRM practices intervene the relationship between employee green behavior and perceived CSR, despite the fact that several researches have looked into the effects of HRM practices and CSR independently on workers' outcomes. It is critical to investigate how these green HRM techniques encourage employees to internalize and display green behaviors. Doing so could provide crucial insights into the underlying mechanisms influencing how CSR

initiatives affect employees' behavior (Schuler & Tarique, 2007). Previous literature is lacking about theoretical understandings and boundary conditions of the relationship between green practices of organizations and EGB (Saleem et al., 2020; Aukhoon et al., 2024).

Generally, this investigation attempts to close these gaps in previous literature by examining the ways and circumstances in which perceived CSR can instill EGB in organizations. Through the mediation mechanism of organizational identity and the contingency impact of green HRM to the mentioned relationship, this research aims to investigate how perceived CSR originates EGB.

The present research expands on previous studies that examine the impact of CSR on diverse stakeholder outcomes, such as organizational performance and the promotion of eco-friendly attitudes and behaviors (Turker, 2009; Aguinis & Glavas, 2012). Regarding sustainable company practices, however, one important but less-researched topic is the connection between CSR and environmentally conscious employee behavior. There is a substantial knowledge gap on how green HRM initiatives act as a boundary condition on the relationship between employee green behavior and perceived CSR, despite the fact that several researches have looked at the effects of HRM practices and CSR independently on employee outcomes. It is critical to investigate how these green HRM techniques support employees to internalize and show green behaviors. Doing so could provide crucial insights into the underlying mechanisms influencing how CSR initiatives affect employees' behavior (Schuler & Tarique, 2007).

In the fields of HRM and organizational sustainability the current research offers both practical and theoretical implications. Theoretically, this research enhances the theory of social-exchange by assimilating concepts of perceived CSR, organizational identification and sustainable HRM procedures thereby enhancing the awareness that how individual behaviors can be influenced towards eco-sustainability by organizational practices and policies. This study enriches academic literature by presenting empirical research on how Corporate Social Responsibility projects are integrated with

organizational identification and green HRM procedures to encourage sustainable behavior among personnel. Practically, the research provides recommendations for HR professionals and managers by emphasizing the importance of integrating ecological values into main HR practices such as training, management, performance, compensation and recruitment. By assimilating environmental factors into their CSR techniques and by creating green HRM, institutions can improve their ecological performance and contribute to comprehensive green goals. This dual emphasis helps in achieving ecological goals as well as improves institutional reputation, employee retention and satisfaction, thereby exhibiting an integrated approach to assimilating sustainability into operations of business.

The remaining part is arranged in the following order: Theoretical Framework and Hypothesis Development are presented in section 2, section 3 shows data-collection and analysis techniques. Results are mentioned in section 4, section 5 describes discussion, limitations and future directions.

2. Theoretical Analysis and Hypotheses Development
2.1 Social Exchange Theory
According to Blau's (1968) investigation, SET (social exchange theory) helps us to understand how firms' good deeds like CSR affect their employees' attitudes. According to SET, social interaction is trade in which people want to maximize their relationships' benefits and reduce their costs (Blau, 1968). Cropanzano et al. (2017) found that when an enterprise participates in CSR activities, employees see it as a source of investment, feel obligated, and want to compensate the company. When employees believe that CSR activities are profitable, in line with their personal beliefs and help to address ecological concerns, they desire to compensate the organization by creating loyalty, productivity and involving in eco-friendly activities.

According to Renwick et al. (2013), green HR activities, by the alignment of individuals and organizational objectives, foster a work environment that prioritize sustainability and help the employees to take part in green projects. Moreover, Blau (1968) documented, social

exchange theory contends that powerful firms' culture which prioritizes eco-friendly activities shapes workers' attitudes and behaviors. Marshall et al. (2015) suggest that a powerful employee green culture that exists in the company work like a catalyst, reiterating the reciprocity principle and motivating workers to engage in nature friendly activities. Hence, SET helps us to understand how corporate social responsibility activities, along with green HRM practices and organizational identification, stimulate the workers' involvement in eco-friendly behaviors.

2.2 Corporate Social Responsibility
CSR is defined as context-specific organizational actions and policies that consider the triple bottom line of social, economic and environmental performance as well as the expectations of stakeholders (Aguinis, 2011, p. 855). Su and Swanson (2019) describe the term "corporate social responsibility" as an organization's voluntary participation in a variety of actions aimed at providing positive/valuables advantage to the ecology and human beings. This dedication is a prime example of the ongoing moral responsibility that businesses have to enhance the wellbeing of society through their business decisions (Ahmed et al., 2020).

Perceived CSR is defined as the "degree of employees' perception about the support provided by their employer to CSR-related activities" (Choi et al. 2014). Perceived corporate social responsibility (CSR) has been defined by Glavas and Godwin (2013) and Mahmood et al. (2021) as stakeholders' assessments of how a company's operations and strategies affect the interests of its primary stakeholders and the environment. Particularly, perceived CSR shows employees' subjective evaluations about the company's overall CSR efforts, which are imperative to understand the micro-level mechanisms of CSR (Ng et al., 2019). Recently, a growing movement among firms to adopt CSR strategies prioritizing suppliers, consumers, stakeholders and society has evolved (Parray et al., 2023). CSR strengthens economic growth and sustainable development by aligning with satisfaction of stakeholders and objectives of the organization. The transparency of an organization regarding its CSR activities to the stakeholders is very crucial to ensure their sincere efforts for the

improvement of climate and betterment of society. The consequences of Stakeholders' perceptions can widely impact the organization as if they perceive that the CSR efforts of the organization are not authentic and just symbolic so, they may show negative behaviors and harm firm's reputation (Latif et al. 2022). Among all the stakeholders, employees are the most valuable as they are directly linked to the organization therefore; the organization must take care of their perceptions because they are very important for the growth and success of the business.

Research indicates that participation in CSR initiatives significantly influences the development of environmentally conscious behaviors in workers, both inside and outside the workplace (Robertson & Barling, 2013). This effect emphasizes the sense of cultivation of pride and objectives among workers to invest in eco-friendly activities and influences them to exhibit environmentally responsible behaviors supported by Glavas (2016). Businesses that give higher importance to the CSR sometimes they integrate green HRM activities, like by executing cultivation activities and guidance concentrate on nature friendly practices. These practices lead to drive ecological awareness between workers (Renwick et al., 2013). Le and Nguyen (2022) describe that firm's CSR attempts towards stakeholder like customers, environment, suppliers, communities and employees enhance positive perception of the organization in employees' mindset, which leads to better employees' engagement and improve their organizational commitment. Businesses that give high importance to the CSR most of the time they implement green HRM strategies, like as providing training to employees and developing them with special focus on nature friendly practices. Such practices drive ecological awareness between workers. (Renwick et al 2013). CSR practices often include green HRM initiatives, which engage in the enhancement of nature friendly activities including green training programs, adjustable working hours and E-commerce (Jackson et al., 2020). Together, these programs support the development of sustainability in the workplace.

Employee pro-social behavior is greatly influenced by the recognition and advancement of corporate social responsibility initiatives (Vlachos et al., 2014). According to the De Roeck and Maon (2018), these motivations help to refine ecological situations and reduce man made damages. Employees feel obligated to support CSR programs by adopting pro-environmental actions when they perceive these initiatives favorably and find them to be consistent with their own beliefs and concerns. The social exchange process, which encourages employees to act in ways that support the organization's sustainability objectives, is based on this reciprocity (Blau, 1968). Moreover, CSR initiatives foster an atmosphere where employees' individual and company environmental goals interact by acting as a catalyst for the implementation of green HRM techniques (Renwick et al., 2013). On the basis of these finding we promote following hypotheses;

H1: Perceived CSR has significant positive impact on EGB

H2: Perceived CSR have significant positive Impact on Employees' OID.

H3: OID have significant positive impact on EGB

2.3 Mediation of Organizational Identification

According to Van Knippenberg and Sleebos, (2006) OID "reflects the psychological merging of self and organization. The more people identify with an organization, the more the organization's values, norms, and interests are incorporated in the self-concept". Organizational identification as the cognitive perception of employees' oneness to their related organization (Ibrahim et al., 2024: Ashforth & Mael, 1989) Le and Nguyen (2022) noted that firm's CSR attempts towards stakeholder like customers, environment, suppliers, communities and employees enhance positive organizations' image of the organization in the mind of employees, which leads to better employees' engagement and improve their organizational commitment. According to Aberson et al. (2000) employees judge their self-respect on the basis of social status of the company in which they work. Dutton et al. (1994) reported that employees will identify themselves more firmly with the organizations if they think or perceive that their respective organization have attractive and distinguishing characteristics, values and attributes as compared to other firms. So, CSR would magnify dignity and self -regard of employees just because they

think that organization applies that rules and regulations which are advantageous for different stakeholders such as environment, society and the employees (Roeck et al., 2016). Socially responsible efforts of the organizations are often respected and valued by the employees and they also feel pride of the distinctive activities of organizations before other stakeholders. This is particularly relevant in current scenario when society and especially stakeholders are well educated about ecological problems, in this situation if an organization avoided social responsibility the intensity of employees for organizational identification may decline. Consequently, employee's organizational identification is derived by his perceived CSR. Employees accept organizational policies, practices, goals and values as part of their own self-identity when their organizational identification is high. So, they demonstrate behaviors that assist organizations to accomplish their goals and values. Further, because discretionary behaviors and extra-role are affected by identification (Boiral et al., 2018), employees whose identification with the organization is strong may engage in green behaviors ((Kashyap & Chaudhary, 2019).The tendency of an employee engagement in green behavior is higher when his organizational identification is high, the reason is when employees perceive oneness with the organization they may psychically attribute their EGB's positive spillover from the organizations (Peng et al., 2020).

Employees' sense of responsibility to solve organizational environmental issues boosted when they have high identification with the workplace, and they internally motivated to show green behaviors (Paillé & Mejía-Morelos, 2014). If own values of employees are consistent with the values of organization, they strongly identify with organizational collective values. Moreover, when employees' personal values and values of the organization are congruent they realize a balance in personal and collective identity (Cheema et al., 2020). Organizations which diligently contribute to social responsibility activities and actively take part in social and environmental tasks, their employees perceive those firms advantageous (Kuo et al., 2012). Cheema et al. (2020) argued that when employees

feel pride, ownership and purposefulness they identify with that organization, owing to this identification they attempt to fit in organizational CSR values and behaviors that are not part of their regular duties. EGB is one of those behaviors that are voluntary, elective and discretional and employees find these behaviors match with social responsibility initiatives of the organization. Organizational identification will be high when employees strongly feel that collective goals surpasses individual goals and CSR initiatives of the organizations are purely directed to cope with environmental and social challenges (Afsar et al., 2018). So, a hypothesis is proposed as follows:

H4: OID mediates the association between perceived CSR and employee green behavior.

2.4 Moderation of Green HRM

Green HRM is defined as encompassing eco-friendly elements into HR policies and procedures. As businesses realize how important sustainability is to their operations, green HRM practices are becoming more and more common (He et al., 2021). They aim to promote environmentally conscious behavior among staff members through a range of tactics (Jackson et al., 2020). These tactics consists of green skills development programs, E-work and adjustable work hours. Beyond the scope of conventional HRM system the green HRM combine HR activities with eco-friendly objectives (Saeed et al., 2019). Workers who understand the benefits of supporting a company's CSR focus more on getting involved in green HRM initiatives and promoting ecological responsibility, such as hiring staff members who are committed to fostering an eco-friendly workplace culture and raising staff members' awareness of environmental issues, as suggested by social exchange theory.

According to the research of Suganthi (2019), organizations can improve the effectiveness of their resources, ecological performance and can achieve their goals by incorporating green HRM initiatives. By bringing personal and professional environmental goals into alignment, green HRM strategies work as a catalyst that amplifies the advantages of corporate social responsibility while enhancing the process of reciprocal exchange. Organizations create a positive

environment where employees see the company's commitment to environmental sustainability as sincere and genuine by combining green HRM practices with CSR objectives (Parray et al., 2023). Cropanzano et al. (2017) documented that according to social exchange theory workers reciprocate Perceived CSR activities with optimistic behaviors. By integrating professional and personal environmental goals, sustainable HRM initiatives work as a stimulant that amplifies the perceived advantages of CSR and strengthens the process of reciprocal exchange. According to Ong and Riyanto (2020), green HRM plays a critical role in forecasting employees' environmentally friendly behavior. Green HRM practices induce a sense of responsibility and commitment by developing a

work environment that values sustainability and offers opportunities for employee involvement in green initiatives. This motivates employees to involve in green behaviors as a means of reciprocal exchange (Renwick et al., 2013). Thus, by strengthening the relationship between CSR and environmentally conscious employee behavior, green HRM practices serve as a moderator inside the SET framework, influencing the dynamics of exchange among businesses. So, we can promote the following hypotheses by considering the discussion as a foundation;

H5: Group level green HRM moderates the indirect effect of OID on the relationship between perceived CSR and EGB, the effect is stronger when Group level green HRM is high than when it is low.

Fig. 1 Conceptual Framework
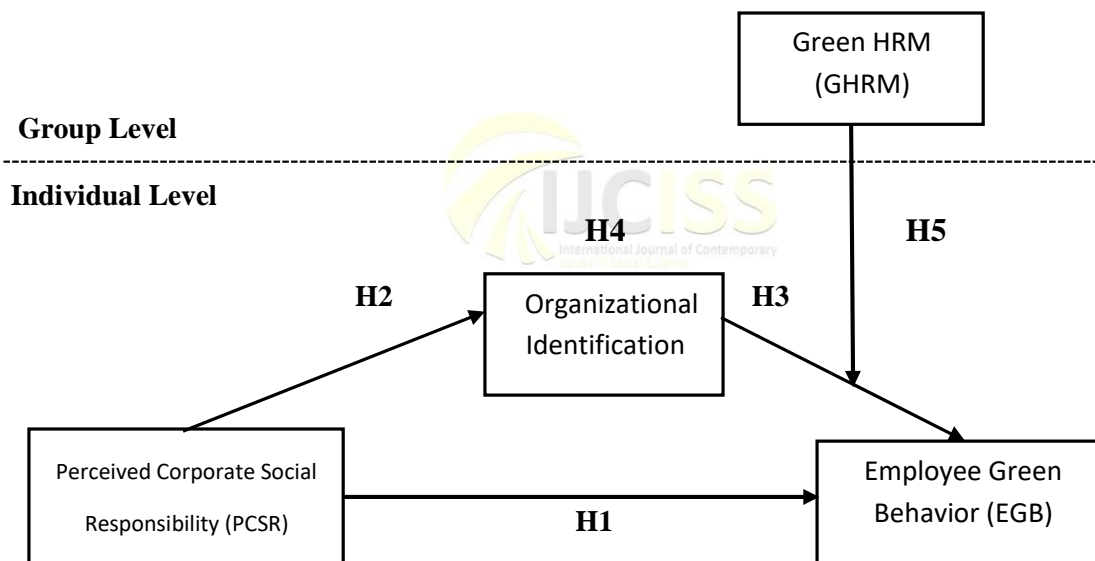
3. Methodology
3.1 Research strategy

In this paper, sampling is done in two stages. Firstly, 90 stock exchange listed manufacturing organizations were selected which actively engaged in CSR initiatives and also report their CSR activities online. Secondly, the top management of selected firms was approached to get permission of data collection. The researcher guaranteed the top management to

observe ethics in research and to maintain anonymity and privacy. Finally, after many reminders, got approval from 83 firms for primary data collection.

Then the researcher personally visited all these companies and with the help of HR department he pinpointed 300 work units (i.e. teams /groups/departments) with single manager/supervisor/leader of each. Time-lagged research design is used to collect data that is most

demanded in CSR studies (Mahmood et al., 2020). According to Podsakoff et al. (2003) the problem of method bias or measurement context effect may occur in one-time collected data for both dependent and independent variables. So, to avoid the problem of biasness, in this study data is gathered in two phases by carrying out 3 surveys at two different times with four week gap. At Time 1, two surveys were administered. Middle managers' survey-1 circulated 166 questionnaires among middle managers who were randomly picked to assess Green HRM and got back 109 questionnaires (response rate 66%). In employees' survey-1 1500 questionnaires were distributed among randomly picked out six employees per 250 randomly opted work units to measure OID and also requested employees to mention the name of their immediate boss. In this survey, 858 questionnaires (response rate 57%) were received back. At time 2, two surveys were carried out. Middle managers' survey-2 circulated 143 questionnaires among middle managers and ask them to rate Employee Green Behavior of their subordinates and got 104 questionnaires (response rate 73%) back .In Employee survey-2, 858 questionnaires were handed over to those employees who responded in first survey to rate their perceived CSR and 592 questionnaires returned (response rate 69%).After excluding incomplete questionnaires our useful data sheet that is completed from all aspects included 100 surveys of middle managers and 415 surveys of employees.

3.2 Measures
Well established measurement scales were used in this study. it incorporated a 5-point Likert scale to get responses of the questionnaires. The survey included four key variables: Perceived Corporate Social Responsibility, Organizational Identification, Employee Green Behavior and Green Human Resource Management.
Perceived CSR is assessed through Maignan and Ferrell's 29-item, five-point Likert scale, which ranges from 1 (strongly disagree) to 5 (strongly agree). Example of the sample item is: "My Company encourages staff members to pursue further education." The scale demonstrated Cronbach Alpha's value of 0.93, which depicts that the scale is highly reliable. The measurement of Organizational Identification is done by

making use of six items scale (1 being strongly disagree to 5 being strongly agree) created by Mael and Ashforth (1992). The sample items include: "When someone criticizes my organization, it feels like a personal insult," For this scale, the value of Cronbach Alpha was 0.81. Employee Green Behavior is measured by employing a thirteen-item scale, taken from Robertson and Barling (2013). The sample items are "I choose double-sided printing when feasible." The scale demonstrated high reliability, having an alpha's value of 0.89, which shows its internal consistency and reliability in measuring different aspects of eco-friendly behaviors. Green HRM practices were measured by six-item 5-point Likert scale, from 1 = not at all to 5 = very much, developed by Dumont et al. (2017). The sample item is "My Company sets green goals for its employees". This scale demonstrated robust internal consistency, with alpha coefficient of 0.88, affirming its reliability in capturing Green HRM practices within the surveyed organizations.
Respondent's age, gender, qualification and organizational tenure were incorporated as control variables because of their ability to affect the association of other variables. These variables were selected owing to their relevance in the existing research regarding corporate social responsibility and environmental behavior (Dumont et al., 2017; Wang et al., 2017). The age of respondents was measured as a categorical variable, dichotomous scale was used to know the gender of respondents with value 0 for female and 1 for male, and finally education of participants and organizational tenure were calculated in years.

3.3 Analysis strategy
A measurement model's proper specifications revolve around the distinction between reflective and formative measures, which is necessary to assign meaningful linkages in the structural model. Previous studies have focused on developing and validating theories and empirical criteria models of measurement (Saleem et al., 2020). Empirical investigations provide a crucial foundation for content validity, specifically to find misspecifications in the model. According to Coltman et al. (2008) three theoretical (the type of the construct, the direction of causation

between the latent construct and the items, and characteristics of the items) as well as three empirical (item correlation, item-construct relationships, and measuring inaccuracy) factors to differentiate between formative and reflective approaches. In light of these distinctions, we treated all the constructs as reflecting measures. For example, every latent construct was present regardless of the measures used, every item contributed to a common theme, and modifications to the constructs also affected modifications to the item measures. Additionally, treating all the constructs as reflective was validated on empirical grounds. This study used the Cronbach Alpha, MSV (maximum shared variance), AVE (average variance extracted) and confirmatory factor analysis to determine measurement error (if any) and establish discriminant validity, reliability, internal consistency and convergent validity for each of the constructs.

SPSS was used to calculate descriptive and inferential statistics as well as preliminary data analysis were made. Using Mplus, we performed confirmatory factor analysis to determine the validity of group-level and individual-level constructs including green HRM, Perceived CSR, OID and EGB. Mplus provides fresh perspectives on data analysis using a variety of models and estimators' options, including processed multilevel, cross-sectional, and longitudinal data. Right now multilevel data were examined in the study. Mplus was thus employed to analyze the data.

4.   Results and Analysis
4.1 Reliability and Validity of Scales
Table 1 show the validity and reliability estimations for each construct of the scale and there were no problems in this respect. Convergent validity was confirmed by the average variance extracted values, which were more than 0.50.

Table 1. Reliability and Validity of scales

	Items	Alpha	AVE	MSV
Level 1 (Individual)				
Perceived CSR	29	0.986	0.66	0.45
Organizational Identification	6	0.871	0.72	0.37
Employee' Green Behavior	13	0.853	0.50	0.49
Level 2 (Group Level)				
Green Human Resource Management	6	0.702	0.61	0.25

Notes: Alpha = Cronbach Alpha, AVE = average variance extracted, MSV = maximum shared variance.

Discriminant validity was created because the MSV was lower than the average variance recovered. Further the value of Cronbach Alpha is greater than 0.70 which verified strong internal consistency of all the constructs. Alpha coefficient value for perceived CSR measured

against 29-items was 0.986. OID was measured by six items, with a Cronbach alpha of 0.871. EGB is assessed using thirteen-items, with an alpha coefficient value of 0.853. Finally, six-item scale was applied to assess Green HRM, and the Cronbach alpha was 0.702.

4.2 Descriptive Statistics

Table 2. Descriptive statistics.

	Mean	SD	SK	Kur.	1	2	3
Level 1 (Individual)							
1.Perceived CSR	3.62	0.22	0.19	0.34	1		
2.OID	3.69	0.26	-0.73	0.38	0.665**	1	
3.EGB	3.71	0.21	-0.33	1.14	0.765**	0.864**	1
Level 2 (Group level)							
4.Green HRM	3.70	0.26	-0.51	1.67	0.651**	0.766**	0.842**

Note: : ** $p < 0.01$, SD = Standard deviation SK = Skewness, Kur = Kurtosis, , Perceived CSR = Perceived Corporate Social Responsibility, OID = Organizational Identification, EGB = Employee Green Behavior, Green HRM = Green Human Resource Management.

The inferential and descriptive statistics are displayed in Table 2. For every variable, the values such as mean, kurtosis, skewness and standard deviation fell within the normal range. The values of Skewness and Kurtosis ranging from -2 to +2 which shows the data is normally distributed. Additionally, because the kurtosis and skewness values fell within an acceptable range, all the variables demonstrated normalcy. Our bivariate correlation results indicated that there were no multicollinearity problems with our data. Discovered both moderate and strong correlations and the correlation coefficients likewise followed the recommended paths.

Table 3. Summary of Direct and Indirect effect.

			BC 95% CI	
	Coefficient	Significance	Lower	Upper
Individual->Individual				
Perceived CSR->EGB	0.59	0.00	0.70	0.79
Perceived CSR->OID	0.44	0.00	0.72	0.85
OID->EGB	0.75	0.00	0.68	0.73
Perceived CSR->OID->EGB	0.81	0.00	0.29	0.37
Individual∗Group->Individual				
OID∗Green HRM->EGB	0.86	0.00	0.49	0.65

Note: Perceived CSR = Perceived Corporate Social Responsibility, OID = Organizational Identification, EGB = Employee Green Behavior, Green HRM = Green Human Resource Management.

4.3 Hypothesis Testing

Table 3 provides an overview of direct and indirect results. We tested hypotheses and used bootstrapping with a 95% confidence interval. A favorable and statistically significant impact of Perceived CSR on EGB of 0.59 (95% CI [0.70, 0.79]) was observed in the research, which confirmed the direct effect of individual-level Perceived CSR on individual-level EGB. Consequently, EGB increases by 0.59 units for every one-unit increase in Perceived CSR. Thus H_1 is accepted. Additionally, a positive and statistically significant effect of Perceived CSR on OID at 0.44 (95% CI [0.72, 0.85]) was noticed in this study, which confirmed the direct impact of individual-level Perceived CSR on individual-level OID. Thus, OID increases by 0.44 units for each unit increase in Perceived CSR which validates H_2.

Moreover, our findings offered empirical backing for H_3, which postulated that EGB is positively influenced by OID at 0.75 (95% CI [0.68, 0.73]). Consequently, for each additional unit of OID, EGB grows up by 0.75 units. Moving

on to H_4, this proposed that OID mediated between perceived CSR and employee green behavior. H_4 is supported by an indirect impact (β = 0.81, 95% CI = 0.29; 0.37).

In the final hypothesis, Group level green HRM moderates the indirect effect of organizational identification on the relationship between perceived CSR and employee green behavior. In light of the moderating impact, the combined effect of group-level Green HRM and individual level OID on EGB was proven to be a statistically significant and positive at 0.86 (95% CI [0.49, 0.65) which validates H_5.

5. Discussion and Conclusion

This research explores the complex relationships between Perceived CSR and employee green behavior and the mediating effect of OID with the interaction of green HRM practices in light of Social Exchange Theory.

Firm's perceived CSR shapes workers' attitudes and actions (Ozkan et al., 2023), CSR is crucial for employees to engage in environmentally sustainable behavior (Li et al., 2023). According to this notion, research has shown that employees' green behavior is positively impacted by their perceptions of CSR (Aukhoon et al., 2024; Ansari & Irfan 2023; Turker, 2009). When employees perceive that their company contributes in green programs, they also show green behaviors (Ahmed et al., 2023; Raineri & Paille, 2016). Our research unequivocally supports the first hypothesis, which holds that employee green behavior is positively impacted by corporate social responsibility. This finding aligns with a large corpus of previously published studies; results unequivocally demonstrate the significant influence that corporate social responsibility has on fostering favorable green conduct on the part of employees. So, our findings are not only consistent with the current literature by showing the significant positive association between perceived CSR and EGB, but also expand the discussion of this relationship on multilevel. According to social exchange theory employees reciprocate the organization's CSR efforts by engaging in green behaviors, demonstrating a sense of loyalty. Further, it is

also noted that along with EGB perceived CSR also leads to OID.

Similarly, this study's findings strongly support Hypothesis 2, which posited that perceived CSR positively affects OID. Perceived CSR increases OID by fostering a sense of purpose and shared values, leading to increased employee engagement (Roy, 2024). This investigation illuminates a noteworthy and positive relationship between perceived CSR and organizational identification leading to positive social categorization and enhances pride among employees.

The current study affirmed the findings of previous research on the link of OID with employee green behavior (Zafar et al., 2023; Peng et al., 2020). This study found that employees who firmly identify with their concerned organization are more committed to its goals, feels proud on their organization and they are more likely to influence by social norms and expectations so they engaged in green behaviors. So hypothesis 3 accepted.

This research extends and corroborates the existing body of literature on the relationship of perceived CSR with EGB, elucidating the mediating role of OID. The results of this investigation reveal that OID positively mediates the relationship between perceived CSR and EGB by fostering a sense of reciprocal obligation where employees feel indebted to the firm's responsible actions for society and they respond with environmentally friendly behaviors. Through OID employees perceive their organizations CSR initiatives as a valuable resource, leading to a sense of gratitude and commitment, which motivated them to engage in green initiatives (May et al., 2021).

Lastly, the significance of this study is further augmented by our results about the boundary condition of green HRM on the relationship between OID and EGB. When employees observe that GHRM policies and practices reflect the company's commitment to promoting environmental preservation they will also be motivated to work towards the company's green goals (Moustafa & Montaser, 2024). This conformity with the body of research highlights the significance of green HRM in encouraging employees to act sustainably (Akhoon et. al., 2024).

5.1 Theoretical Implications

Our study has significant theoretical ramifications when viewed from the standpoint of social exchange theory. According to SET, people interact socially in organizational settings, weighing the advantages and disadvantages of their choices. In this perspective, this study reveals that CSR actions are the precious resources provided to the employees by their organizations. When employees regard their company's proactive participation in CSR practices, it strengthens their belief that they will receive important resources, encouraging dedication and reciprocity. Further, organizational identification also strengthens employees' reciprocity motivation. Additionally, our research emphasizes the moderating effect of green HRM, demonstrating how human resource management can become an essential channel for converting CSR principles into actual employee actions. This highlights how crucial green HRM practices are from an organizational point of view in helping to match employee behavior with company's values. The findings of this research highlight the critical role that social exchange theory plays in deciphering the complex multilevel connections that encourages environmentally conscious conduct within businesses. All things considered, our research provides insightful information to companies looking to improve their sustainability initiatives through an awareness of and application of social exchange principles.

5.2 Practical Implications

This study offers a number of helpful implications to the managers. Businesses can improve EGB by evaluating employee environmental awareness and organizational identity.

Since most employees accept instructions from management and follow their guidance, top executives should foster a green environment if they desire their workforce to exhibit green habits. Organizations should focus on CSR initiatives and management should clearly communicate their green vision in the mind of employees. To be more precise, in order to achieve their objectives for sustainable growth, organizations need to focus on the moral conduct of their HRM managers. Moreover, hiring practices and an organization's sustainability plans need to be integrated by human resource management. For example, during the interview process, questions on ethics and the environment may be observed, and candidates may be asked to assess their ethical principles and environmental consciousness.

5.3 Research Limitations and Future Directions

Although present investigation has made meaningful contributions, it is important to acknowledge some limitations that illuminate key concepts for future research. The first drawback is that we only took into account one boundary condition that is Green HRM which strengthens OID's effect on EGB. Other contextual factors or individual differences that might influence this relationship, such as servant leadership that is environmentally specific (Afsar et al., 2018), responsible leadership (He et al., 2021), individual green values (Dumont et al., 2017), moral identity (kuenzi et al., 2020), and perceived organizational support, would be interesting to investigate. This study develops a framework to derive EGB. It would be noteworthy to analyzing how EGB affects an organization's financial and environmental performance. It would also be interesting to investigate additional variables, such as organizational trust (May et al. 2021) and employee well-being (Ahmad et al. 2020), in order to better understand the instillation of EGB. Alternative theoretical frameworks, such as social information processing theory (Salancik & Pfeffer, 1978) and social cognition theory (He et al., 2021), are two examples of theories that may be particularly relevant in this context. Ashforth and Mael (1989) used social identity theory to demonstrate how context-specific actions and policies of organizations that consider stakeholder expectations as well as social, economic, and environmental performance strengthen OID and reduce negative workplace behavior of employees. Furthermore, future studies might include multilevel mechanisms and boundary conditions to better understand the causes and effects of EGB.

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